An Investigation Into the Perceptions of Pre-service Teachers on Effective Teaching Methods for Large Classes

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Abstract

The primary purpose of the study is to investigate the perceptions of pre-service teachers on effective teaching methods for large classes. The design adopted in this study was descriptive survey research design. The researcher studied pre-service teachers' perceptions for three dimensions (demographic information, effective teaching methods, class size and learning). The pre-service teachers' perceptions questionnaire was used as a survey tool in this study. The subjects used for this study were (200) pre-service teachers who were selected by simple random sampling technique from Monywa and Mandalay Education Colleges. The data obtained from pre-service teachers were analyzed by descriptive statistics for each question. In addition, independent samples *t*-test was used to compare the pre-service teachers' perceptions towards effective teaching methods for large classes in terms of gender and specialized subjects. According to the results, there is no significant difference between male and female pre-service teachers' perceptions towards teaching methods. Then, the study indicated that there is no significant difference between science and arts classes. And then, challenges faced by teachers for teaching large classes were determined. Finally,preferences for teaching methods were explored.

Key words: perceptions, effective teaching methods, large classes

Introduction

Education is the gradual process of acquiring knowledge and a preparation for life. Teaching and learning should be inseparable, in that learning is a criterion and product of effective teaching. In essence, learning is the goal of teaching. Someone has taught unless someone else has learned. Teaching is part of a whole that comprises the teacher, the learner, the disciplinary content, the teaching/learning process, and the evaluation of both teacher and learner.

The teacher's goal is to help students grasp the development of knowledge as a process rather than a product. Teachers must use methods that emphasize the imparting and acquiring of basic information and skills. Although various teachers use various teaching methods, clear communication is the basis of all of them. Although well-planned and well-delivered lectures are tried, non-lecture learning activities are becoming increasingly common in most college classrooms today because they offer a different way for non-verbal learners to learn.

The teacher will have to take into consideration the size of the classroom.Effective management of large class is a popular topic among faculty in higher education. The advantages of large class include decreased instructor costs, efficient use of faculty time and talent, availability of resources and standardization of the learning experience. However, there are significant disadvantages to large class, including strained impersonal relations between students and the instructor, limited range of teaching methods, discomfort among instructors for teaching large classes(MacLeod, 1998, as cited in Carpenter, 2006).

Handling large classes to facilitate effective teaching and learning was too difficult. Teaching and learning as well as classroom management becomes ineffective because teachers were predisposing to more stress in handling students (World Bank, 2005, as cited in Gobena, 2013). Therefore, teachers should use effective teaching methods in order to be effective in teaching large classes. This paper would detail the pre-service teachers' perceptions on effective teaching methods for large classes in selected education colleges.

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Objectives

The specific objectives of this study were described as follows:

(a) To compare the perceptions of pre-service teachers towards effective teaching methods for large classes in terms of gender and specialized subjects.

(b) To determine the challenges faced by the teachers of large classes.

(c) To order from the most effective to the least effective teaching methods according to the perceptions of pre-service teachers.

Research Questions

The research questions were as follows:

(a) Is there a significant difference between the perceptions of pre-service teachers in terms of gender and specialized subjects?

(b) What are the challenges faced by the teachers of large classes?

(c) What are the most effective teaching method and the least effective teaching method according to the pre-service teachers'perceptions?

Scope of the Study

This study is geographically restricted to Sagaing and Mandalay Regions. Only (200) participants who are second year students from selected education colleges were included. This study dealt with five teaching methods that are effective for large classes. They are lecture method, cooperative learning, demonstration method, discussion method and problem solving method.

Definition of Key Terms

Perception

Perception is the action of seeing and perceiving through the sensory organs. It is a process of perceiving discrimination and transmitting stimuli from the surrounding through human sensory organs interpret and store them in the brain (Gobena, 2013).

Method

A method is an overall procedure or process to achieve certain goals (Borich, 2014).

Review of Related Literature

Effective Teaching Methods

Teachers need to consider the best teaching method. There are various types of teaching methods which have been designed by education experts. Today's teacher uses methods to enliven and enrich traditional teaching. Different methods of teaching have been proposed by different educational thinkers in education. Among the methods of teaching, lecture method, cooperative learning, demonstration method, discussion method and problem solving method are effective for large classes (Kerr, 2001, as cited in Jobo, 2016).

Lecture method is a very common method of teaching. It means methodical presentation of an idea through speech. It is also known as chalk and talk method. This is a teacher-centred method. In this method, the teacher, an active participant, and the students will be the passive learners. Dhand (2010) expresses that lecture method is a very traditional method. Its history goes back to the period when there was no printing. Knowledge was communicated by the teacher to the students orally.

Cooperative learning is the most powerful way to increase achievement, enhance self-esteem, develop respect for other students and increase student motivation. Cooperative learning has been increasing in popularity in all subjects. Cooperative learning, a form of collaborative learning, is an instructional technique in which students work in groups to achieve a common goal (Borich, 2014).

Demonstration method is the most effective way to teach an occupational skill. The two essential teaching skills are needed for teachers who teach with demonstration method. They are the ability to demonstrate and the ability to explain. Both are vital to the success of either an operation lesson or an information lesson. Demonstration method is similar to lecture method as far as direct communication of information and ideas from the teacher to the students but it is dissimilar to it because it uses a visual approach to examine information, ideas and processes. Students observe real situation and working (Siddiqui, 2009).

Discussion method is a type of learning activity whereby pupils exchange idea through discussion among themselves under the guidance of a teacher. Discussion is a thoughtful consideration of the relationships involved in the topic problem under study (Siddiqui, 2009). The use of discussion techniques and group procedures can be viewed in terms of means and ends. As means, they are processes and strategies used to achieve some specific instructional objective related to course content. As ends, they are valuable learning experiences in themselves, providing their own rationale for use and analysis (Sang, 2003).

Problem solving is recognized as an important life skill involving a range of processes including analyzing, interpreting, predicting, evaluating and reflecting (Anderson, 2009). It is the process of moving from a situation in need of resolution to a solution, overcoming any obstacles along the way. The purpose of problem solving method is to foster social, emotional and intellectual development of students.

Challenges Faced by Teachers of Large Classes

Large classes present special challenges to the teacher. According to Kennedy and Siegfried (1997, as cited in Gobena, 2013), teaching in large class has unique challenges including difficult to control the quality of student learning, dealing with student diversity, effectively dealing with formative evaluation, maintain attention and getting authentic student-centred learning. Teaching in large classes can save human and material resources to ease the problems caused by the lack of teaching staff.

Preferences for Teaching Methods

In terms of students' preferences for teaching methods, a study by Qualters (2001, as cited in Carpenter, 2006)suggests that students do not favor active learning methods because of the in-class time taken bythe activities, fear of not covering all of the material in the course, and anxiety about changing from traditional classroom expectations to the active structure. In contrast, research by Casado (2000, as cited in Carpenter, 2006) examined perceptions across six teaching methods: lecture/discussion, lab work, in-classexercises, guest speakers, applied projects, and oral presentations. Students most preferred lecture/discussion method.

Materials and Methods

The primary purpose of this study is to determine pre-service teachers' perceptions on effective teaching methods for large classes. The research design for this study was descriptive research design. This study was conducted in Sagaing and Mandalay Regions. There are two education colleges in each region. Among them, one education college from

each region was randomly selected. Participants in this study were selected by using simple random sampling method.

In this study, quantitative data were collected through questionnaire. In order to collect information related to teachers' perceptions on effective methods of teaching large classes, a self-administered structured questionnaire was developed. There are (40) statements in the questionnaire. Before the pilot test, the instrument items were modified according to the expert guidance. After that, the pilot study was conducted in Yankin Education College. Based on the pilot study, some items were revised for clear understanding. And then, the main study was conducted in Mandalay and Monywa Education Colleges.

The quantitative data were analyzed by using the Statistical Package for Social Science (SPSS) to generate descriptive statistics such as percentage, standard deviation and mean. The analysis was conducted using frequency tables. In addition, independent samples *t*-test was used to compare pre-service teachers' perception towards teaching methods in terms of gender and specialized subjects.

Results/Findings

The independent sample *t*-test was used to find out whether pre-service teachers' perceptions towards teaching methods differ according to gender. The results are given in Table 1.

Table 1.*t-Values for the Perceptions of Pre-service Teachers Towards Teaching Methods in Terms of Gender*

Dimension	Gender	*N*	Mean	Standard Deviation	*MD*	*t*	*df*	*Sig.* (2-tailed)
Lecture Method	Male	100	13.63	1.66	-.10	-.427	198	.670(ns)
	Female	100	13.73	1.65				
Cooperative Learning	Male	100	16.13	2.59	-.72	-2.061	198	.041*
	Female	100	16.85	2.34				
Demonstration Method	Male	100	15.77	2.25	-.46	-1.485	198	.139 (ns)
	Female	100	16.23	2.13				
Discussion Method	Male	100	15.65	2.36	-.31	-.966	198	.335 (ns)
	Female	100	15.96	2.17				
Problem Solving Method	Male	100	15.14	2.14	-.21	-.735	198	.463 (ns)
	Female	100	15.35	1.89				
Overall	Male	100	76.32	8.37	-1.8	-1.586	198	.114 (ns)
	Female	100	78.12	7.66				

Note. $*p < .05$, ns = not significant

According to the results, there was no statistically significant difference between the perceptions of male and female pre-service teachers' towards teaching methods. However, there was a statistically significant difference in cooperative learning only. This indicated that male pre-service teachers' perceptions towards cooperative learning were more positive than females.

In order to determine whether there was a significant difference between pre-service teachers' perceptions towards teaching methods in terms of specialized subjects, independent sample *t*-test was also used. The subjects were divided into two groups: science and arts. The results are given in Table 2.

Table 2.*t-Values for the Perception of Pre-service Teachers Towards Teaching Methods in Terms of Specialized Subjects*

Dimension	Specialized Subject	*N*	Mean	Standard Deviation	*MD*	*t*	*df*	*Sig.* (2-tailed)
Lecture Method	Science	100	13.72	1.47	.8	.342	198	.733 (ns)
	Arts	100	13.64	1.82				
Cooperative Learning	Science	100	16.62	2.08	.26	.737	198	.462 (ns)
	Arts	100	16.36	2.85				
Demonstration Method	Science	100	16.30	1.83	.6	1.945	198	.043*
	Arts	100	15.70	2.48				
Discussion Method	Science	100	16.00	2.07	.39	1.218	198	.225 (ns)
	Arts	100	15.61	2.45				
Problem Solving Method	Science	100	15.50	1.82	.51	1.796	198	.044*
	Arts	100	14.99	2.18				
Overall	Science	100	78.14	6.65	1.84	1.622	198	.106(ns)
	Arts	100	76.30	9.19				

*Note.***p*< .05, ns = not significant

According to the results, there were significant differences in demonstration method and problem solving method. Overall finding indicated that there was no significant difference between pre-service teachers' perceptions towards teaching methods in terms of specialized subjects (See Table 2).

Table 3 pointed out that the major challenges faced by teachers in teaching large classes included ensuring students pay attention, getting students to participate, difficulties in assessment, identifying weak students and finishing class syllabus on time.

Table 3.*Challenges Faced by Teachers in Large Classes*

Challenges	Mean
Ensuring that students pay attention	2.7
Getting students to participate	2.7
Difficulties in assessment	2.4
Identifying weak students	2.6
Finishing class syllabus on time	2.9

*Note.*1-1.49 – never, 1.5-2.49 – sometimes, 2.5-3.49 – usually, 3.5-4 – always

The most effective and least effective teaching methods were presented in Table 4.

Table 4.*Preferences for Teaching Methods*

Rank	Teaching Method	Frequency	Percentage (%)
Most Effective	Cooperative Learning	88	44
	Discussion Method	52	26
	Demonstration Method	40	20
	Problem Solving Method	12	6
	Lecture Method	8	4
Least Effective	Lecture Method	134	67
	Problem Solving Method	34	17
	Demonstration Method	26	13
	Cooperative Learning	4	2
	Discussion Method	2	1

In terms of most effective teaching methods for large classes, cooperative learning was rated the most effective 88 (44%). On the other hand, lecture method was rated the least effective 134 (67%). Therefore, it can be interpreted that cooperative learning was the most preferred among students and lecture method was the less popular with students.

Discussion

The results of this study indicated that there was no statistically significant difference between the perceptions of male and female pre-service teachers towards teaching methods. This result got from this paper is consistent with the finding of Gobena (2013), experiences, ages and sexes did not have any perceptual difference in teaching large class sizes. Table 1 showed that pre-service teachers' perceptions towards cooperative learning had a significant difference. It is assumed that this might be because male pre-service teachers have former experience like cooperative learning in high school level.

The results also pointed out that there was no statistically significant difference in overall finding between the perceptions of science and arts-specialized pre-service teachers towards teaching methods. Table 2 pointed out that science-specialized students' perceptions towards demonstration and problem solving methods were more significantly different than arts. It is assumed that this might be that science subjects such as physics, chemistry and mathematics can be taught by demonstration and problem solving methods.

This study further indicated that major challenges faced by teachers in large classes included. Table 3 showed that getting students to participate (M =2.7), getting students to pay attention (M=2.7), assessment challenges (M=2.4), identifying weak students (M=2.6) and finishing the syllabus on time (M=2.9). In this study, the mean values were categorized into 1-1.49 (never), 1.5-2.49 (sometimes), 2.5-3.49 (usually) and 3.5-4 (always). Therefore, getting students to participate, getting students to pay attention, identifying weak students and finishing the syllabus on time are the challenges usually faced by teachers in large classes. However, the challenge in assessment is sometimes faced by teachers of large classes.

Finally, the results also indicated that 44% of pre-service teachers responded cooperative learning as the most effective method. Table 4 showed that 67% of pre-service teachers responded lecture method as the least effective. Therefore, it is advised that large classes should attempt to include constructive, active teaching methods in their courses.

Based on the discussion above, the following suggestions are given for further studies. First, this study was geographically restricted to Sagaing and Mandalay Regions and only two education colleges were selected to carry out this study, it may not be able to represent the whole country. Thus, conducting a larger research in other education colleges in different regions or states is highly recommended to validate the present results.

Second, this study deals with only five methods: lecture method, cooperative learning, demonstration method, discussion method and problem solving method. Therefore, many other methods that are effective for large classes should be used to find the results.

Third, this study was carried out with questionnaires for collecting data. Hence, conducting the research not only with interview but also with observation checklist is highly recommended in order to give a reliable and valid result.

Lastly, it was found that interactive teaching methods are more effective than lecture method. No study is perfect in one time effort. Therefore, substantial pedagogical research and development will be required to implement effective teaching methods for large classes.

Conclusion

The major purpose of this study was to determine the perceptions of pre-service teachers on effective teaching methods for large classes. The design adopted in this study was descriptive research design. Quantitative method was used to compare pre-service teachers' perceptions in terms of gender and specialized subjects. Two sample education colleges were selected by the use of simple random sampling method to carry out the research. The subjects were (200) second year students from Monywaand Mandalay education colleges. The instrument used in this study was a questionnaire. The test items were analyzed by reliability statistics with Cronbach's Alpha coefficient (.87).

According to the results of the study, there were no significant differences in terms of gender and specialized subjects. This paper also indicated that the challenges usually faced by teachers of large classes are ensuring students pay attention, getting students to participate, identifying weak students and finishing class syllabus on time. The challenge in assessment is sometimes faced by teachers of large classes.

The results also showed that pre-service teachers prefer cooperative learning to other methods and lecture method is the less popular than others. Overall, the findings indicated that pre-service teachers perceived methods that involved active learning as the most effective methods. Therefore, structured, controlled collaboration (e.g., cooperative learning) would probably be most comfortable to students as opposed to uncontrolled, unstructured experiences (e.g., lecture method).

Acknowledgements

Foremost, I would like to express my sincere gratitude to Dr. Saw Pyone Naing (Rector, Sagaing University of Education), Dr. Myat Myat Thaw (Pro-Rector, Sagaing University of Education), who gave me permission to carry out this paper. Then, I want to express my honourable thanks to Dr. Soe Than (Retired Professor, Department of Methodology, Sagaing University of Education), Dr. Wai Wai Oo (Associate Professor and Head of Methodology Department,Sagaing University of Education) and Dr. MiMiGyee (Professor and Head of English Department,West Yangon University) for their valuable advices and information for my study.

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