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Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 19:10 October 2019**
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Perceptions and Effects of Large Classes in Higher Education in India

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Abstract

Large classes, i.e. classrooms with a large number of students, are becoming the norm at all levels of education. These classes have often been associated with a variety of problems, and this paper aims to examines the impact of large classrooms on higher education in India. The main purpose of this paper is to understand the current system of education, and suggest measures, if necessary, to maximise students' learning in large classes. A survey was conducted, and questions were posed to teachers and students to understand their thoughts and perceptions regarding large classrooms and to identify gaps which could be filled. While smaller classrooms may be beneficial to aspects like attitude towards learning, active participation, and immediate feedback, with some modification, these could be ensured in larger classes as well. These suggestions would help in enabling students to learn better and harness their skills to the maximum potential.

Keywords: Large classes, Higher education, Students, Teachers, Education, Learning

Introduction

In a populous country like India, classrooms with a large number of students are the norm, especially in higher education. This size may be linked with a decrease in cognitive skills like retention and learning. Students may be negatively impacted, and the education imparted to them may not be satisfactory.

The purpose of the present study was to understand whether the class strength affects the process of higher education for students in India, and to determine what changes can be made based on other factors affecting the same. India's population is currently at 1.3 billion and is increasing. For all intents and purposes, it can be assumed that class sizes are only either going to stagnate or even increase in response to higher demand. Hence, this paper does not look at reducing class sizes as a solution to the problems posed.

Literature Review

Smaller class sizes have generally been linked with better performance, with more individual attention and better student-teacher interaction being cited as one of the key factors for this. A range of problems have been linked with larger class sizes, including lower student

involvement, increased reliance on the lecture method of teaching, lower performance, and a decrease in the level of understanding and retention of the course material (Joe Cuseo, 2007). An argument against smaller classes is that frequent interruptions may lead to disjointed teaching (Amita Gupta,2004). However, it has been noted that these interactions would allow for a student to have their demands met instantly, thereby making the learning environment more conducive. A bad attitude towards learning may also be the factor for decreased participation in classes and ineffective learning methods (Taofeek Ayotunde Yusuf et al., 2016). However, we cannot quickly conclude that large class sizes as the size may be linked with an increase in student enrolment due to positive factors like economic development and empowerment. This rapid increase in student enrolment has been termed 'massification', and it can be seen as an opportunity to educate more students (Hornsby et al, 2014; James Arvanitakis, 2014).

With a larger class size, teachers may find themselves becoming more dependent on lectures as the sole method of teaching, and this can adversely affect a student's ability to process the information on a deeper level (Joe Cuseo, 2007). Lecture-based teaching isn't to be seen as unnecessary or problematic as they enable real-time interaction with the instructors as well as among like-minded peers (Sarah French and Gregor Kennedy, 2016; Jonathan Wolff, 2013). However, in large classes where this interaction is harder to implement, the retention of the material being taught can be less than 10% (James Arvanitakis, 2014). The noise level in a classroom rise significantly in larger classes, also hindering the instructors' ability to teach effectively (Victor Ajayi et al., 2017).

Methods used in smaller classes to engage students and teach effectively are not easy to be replicated in larger classes. The virtual creation of smaller groups, through activities or online learning, can be implemented to harness the advantages of learning amongst fewer students. Blended learning seems like the ideal path forward to maximize the efficiency of teaching and learning in large classrooms (J.D. Snowball, 2014).

Objective

The primary aim of the study was to identify whether students and teachers felt that large classes were hindering their ability to perform better. In addition, questions were also posed to identify how best to bridge the gap.

Research Methodology and Tools

A survey was conducted, where different questions were posed to a set of 100 students pursuing their undergraduate degree in India, and 80 professors teaching these students. The responses were collected online using via a questionnaire created using Google Forms and the corresponding statistical data visualisations obtained were used for analysis.

Results

Defining a Large Class

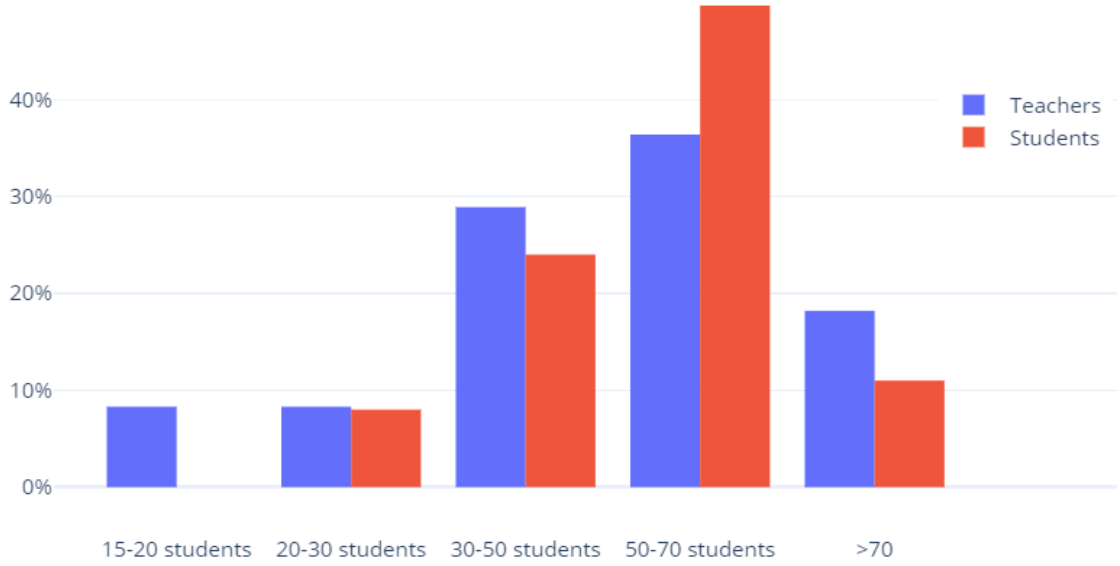

Figure 1: Number of students constituting a large class, according to students and teachers

There is no single definition of a large class, it varies from individual to individual based on various factors like prior experience, economic background, or region of schooling. In general, colleges have a higher number of students in a class, but students who have become accustomed to classes with larger classes at a school level may not find the difference in class size to be significant. This is applicable for teachers as well. More than half of the students stated that a class with 50-70 students could be classified as a large class. Almost half the teachers were also of the same opinion.

All students unanimously agreed that a class with fewer than 20 students would be a small class, however more than 10% of the teachers felt that even classes with 15-20 students could be termed as large. This could be because no student surveyed had studied in a school with fewer than 15 students, and only 1% had studied in a school with fewer than 20 students in a class. Teachers may have a slightly different perception of what constitutes a large class because nearly 90% of them had prior experience teaching smaller classes.

Rote Learning

The basis of rote learning is based on the memorization of information through repetition. Memory is often used as an indicator of intelligence with more marks being awarded to students who can quote facts verbatim. Newer techniques which emphasize on understanding the concept and deep-learning are more effective for a student to study better, both in terms of performance as well as personal satisfaction.

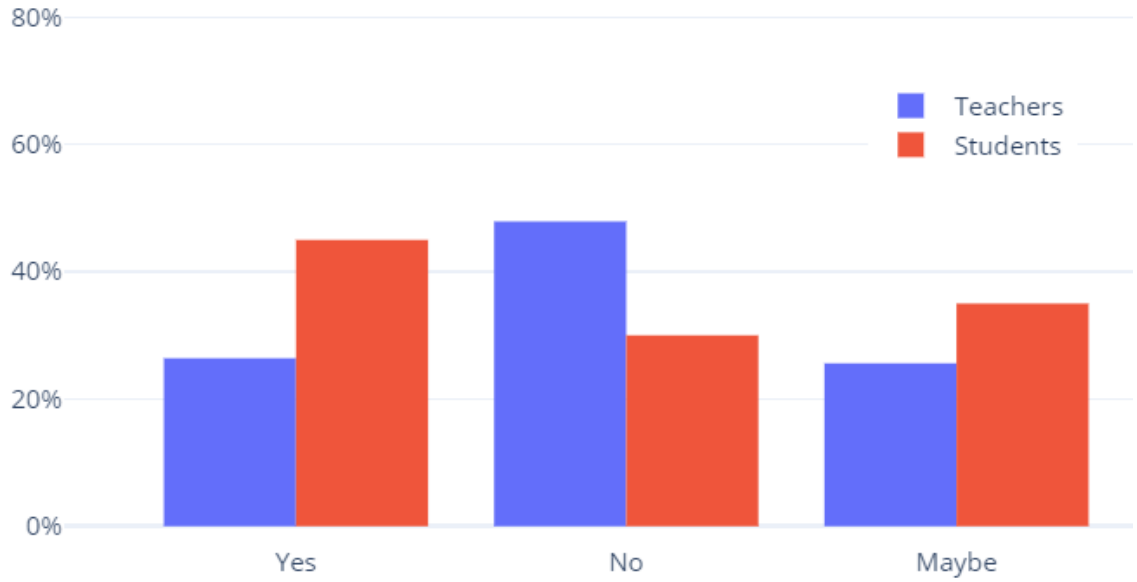

Figure 2: Opinion on whether rote learning is prevalent in colleges

However, in large classes, it can be significantly harder to enable deep learning as individual attention cannot be easily given. Students may find themselves resorting to merely memorizing the material for the sake of scoring better in tests and exams. When asked if the method of teaching in colleges reinforce rote learning, only 30% of the students felt like it did not. On the other hand, nearly half the teachers believe that their students comprehend the material in depth and do not need to memorize unnecessarily.

Interaction in Large Classes

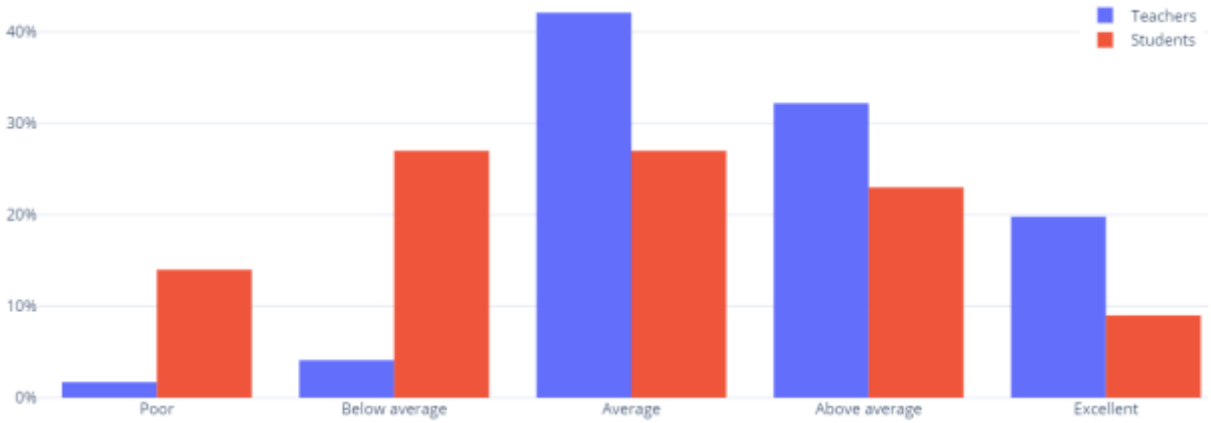

Figure 3: Opinion on level of interaction between teachers and students

The general level of interaction between the teacher and their students were average – not very poor, but not very high either. A higher level of interaction is linked with better understanding of the subject, active listening and engagement enable the student to retain and understand the subject better.

From the survey, it is noted that teachers perceive the level of interaction to be higher than what the students feel. Many students feel that the level of the interaction is poor, or below average, however a very few teachers feel the same way. This can be because teachers are basing their perception of the few students who do participate in class and may not be taking into account the higher number of students who do not interact with them.

Most students believe that they would be able to interact more effectively and participate in classroom discussion in a smaller classroom, which is supported by Cuseo's study (2007). While most teachers are also of the same opinion, nearly 25% of teachers feel that reducing the number of students in a classroom will not change the level of participation. This could be because teachers expect their students to be self-motivated and do think that external factors play a part in how much a student interacts with their instructor; they could believe that if students wanted to participate, they would.

Discipline in Large Classes

Maintaining discipline in a classroom involves a two-pronged approach: the first would be to ensure discipline by setting in place certain measures, and the second is to make the classroom environment better so that students feel motivated to listen and learn. The amount of noise in a class, the students' attention paid to the teaching and their punctuality are a few factors towards assessing the level of discipline maintained by the students (Yusuf et al., 2016).

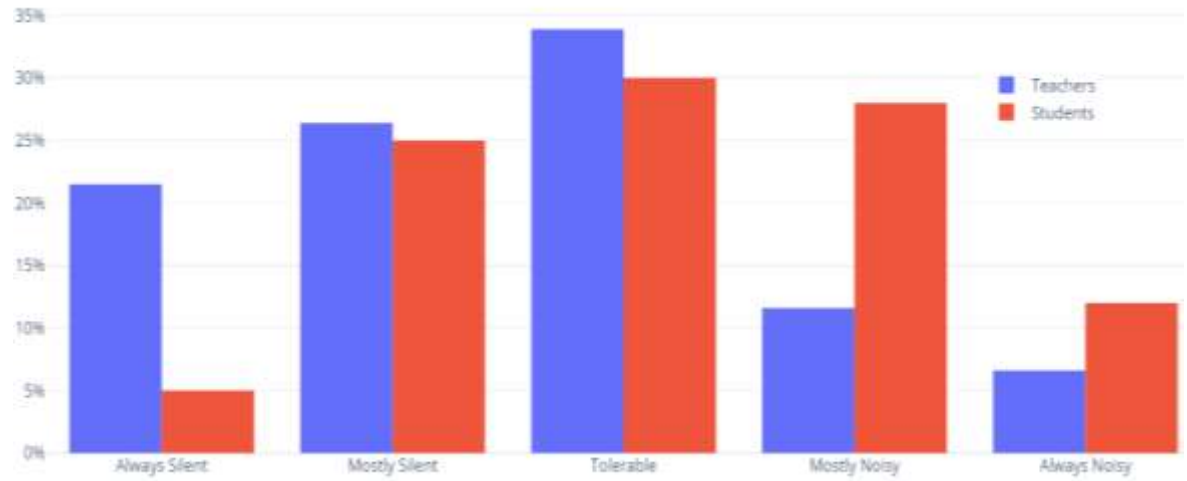

Figure 4: Rating the average level of noise in a class, according to teachers and students

Teachers were asked to rate the level of noise in their classrooms, and almost half of them felt that their students were not very disruptive. However, more than a quarter of the students felt that their classrooms were too noisy. Students may be more aware of the level of noise in the classroom since they are in the midst of it.

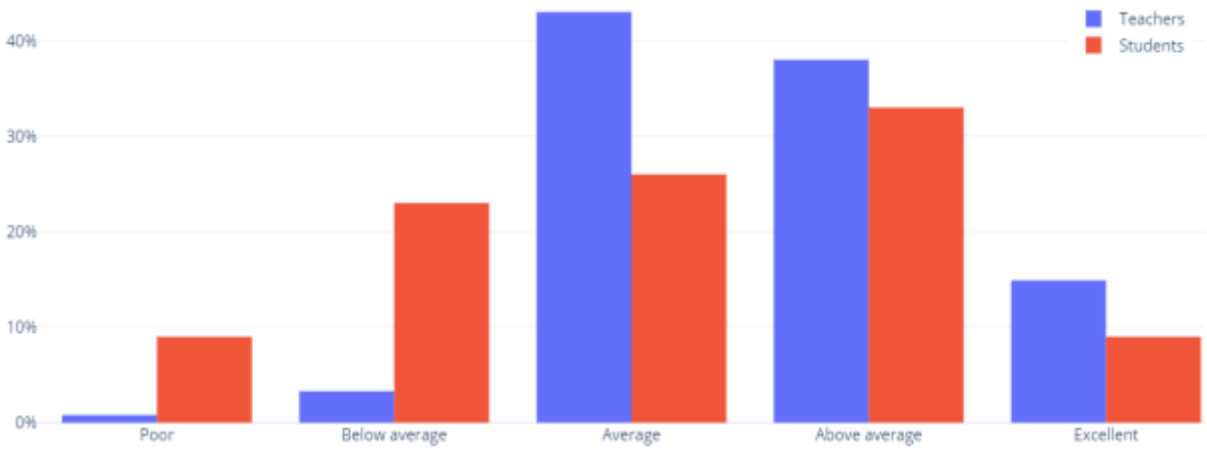

Figure 5: Attention paid by the students in the class

A lower level of noise is not always an indication of better attention as it is possible for students to not be focussed without indulging in inter-personal conversation. A majority of students paid attention to most of the class, as confirmed by both teachers and students. However, more than 30% of the students stated that they were not very attentive in their classes, while less than 5% of the instructors believed this to be true.

Both students and teachers were asked how these trends might vary in a class with fewer students. Teachers were split in their opinion about the noise level, with half stating that it would decrease in a smaller classroom, while the other half believed that it would not. About 60% of the students believed that the noise level would decrease in smaller classrooms. In a smaller classroom, teachers may be able to point out the source of noise more easily, ensuring that fewer students engage in interpersonal conversations

Students and teachers almost unanimously agreed that smaller classes would provide platform for better learning. Teachers would also be able to give more individual attention to the students, and immediate feedback would be possible.

Teaching Style

By far, the most important factor affecting learning would be the teaching style implemented by the teacher. This would include the learning environment, the method of teaching, and the approaches towards enabling efficient learning.

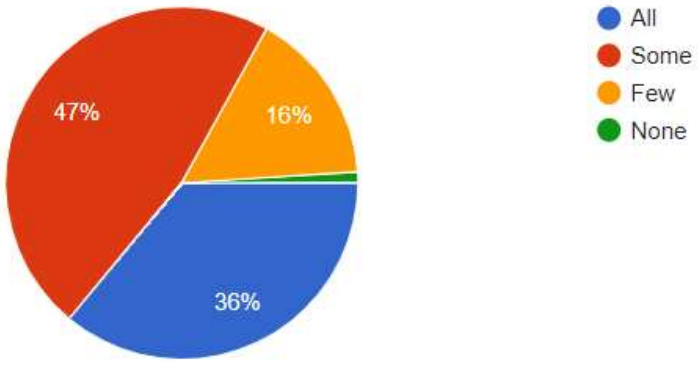

Figure 6: Proportion of classes relying solely on lectures, according to students

The lecture method teaching is the most predominant, with the teacher being a conveyor of information while the students have to listen and understand. Only 30% of the teachers felt that lectures did not occupy most of their teaching time in class. 15% of students stated that very few of their classes did not rely entirely on lectures for imparting information.

Most teachers stated that they supplemented their teaching with technology. When asked about the forms of technology they did use, PowerPoint presentations was the most common response, with 90% of the teachers using slides and presentations to teach in class. Other widely used supplementary teaching methods included videos and digital assignments. However, despite the efforts made by teachers, only 22% of the students felt that these resources were being used effectively.

While presentations do count as involving technology in teaching, they may not necessarily act as a supplement to the existing style. These presentations may merely act as a collection of concise points from the course material, and teachers may tend to read out from these slides as they would from a textbook. By extension, students too would prefer learning from these slides as opposed to notes made in class, textbooks, or online material. Deep learning is hard to achieve.

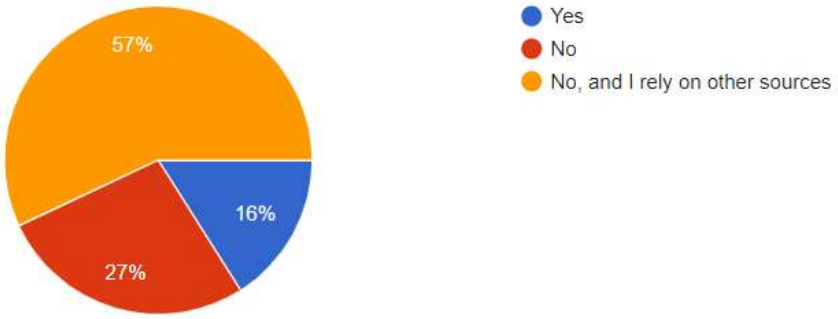

Figure 9: Students' on whether classroom teaching is enough to learn effectively

Discussions

Educational institutes are failing at providing their students a good learning experience, which can only be detrimental for the country's progress. The country needs well-trained minds to move forward, but if students are not satisfied with their education, their attitude towards learning more, as well as their potential to grow is affected.

When students were asked whether they are satisfied with the teaching in their classes in general, a resounding 70% said that they weren't. Almost 95% of the students feel like they would be able to learn better in classrooms with fewer students. Based on the insights obtained from the survey, it is evident that the qualities students desire from their learning experience are more predominant in smaller classrooms.

Hornsby and Osman (2014) observed a global massification of education. This, coupled with India's mammoth yet ever-increasing population, reducing the number of students in a class is not a viable solution. Increasing the number of classes to allow for fewer students in each would mean having to find capable instructors for the courses, which is a difficult task. An alternative would be to split the number of students under a single teacher into different classes. But, with more classes, teachers would also have less spare time, and will also affect their interest in the subject, consequently that will affect their quality of teaching.

It is observed that a better attitude towards learning at a lower level can benefit the attitude at a higher level of education. While it may be difficult to find accomplished teachers for advanced courses in college, it would be much easier to gather efficient teachers for basic subjects at a lower level of education, like primary and middle school. This would allow for the creation of more classes, with fewer students per class. The drawback to this is that it would require a widespread implementation to be effective with private and public schools.

The techniques used in smaller classes may not be directly utilizable in a large classroom, but they can be simulated using other techniques. Students want more than just lectures from teachers, especially as all the information being conveyed in class could be obtained and learnt more effectively from online. Instead of resigning themselves to this phenomenon, teachers could use this to their advantage. By assigning coursework prior to the class which can be done by the student themselves, teachers can more efficiently use their time in the class on practical activities that can result in better learning. The time spent on lecturing can now be devoted to discussions, practical work, solving related problems with the teacher's guidance, lab work, and interaction.

Interaction with all students and delivering immediate feedback (in the form of answering questions or assessing a student's performance) can be difficult in large classes. What teachers could do is to divide the students into smaller groups among their peers – this would simulate the setting of a smaller classroom, with teachers having to deal with a few

groups instead of a mass of individual students. Students may also feel more comfortable in an atmosphere that is slightly informal and may bring them to participate more.

For basic courses where practical experience may be enough for a student to learn, instead of forcing students to spend time memorizing material that is not beneficial to them, the assessment could be done in the form of activities or assignments. A pass/fail grade could also be awarded based on the student's active participation in class.

Additional training may be required for teachers to be able to adapt with change as it is not easy task to expect the learning methodology of decades to change overnight. It is not the sole responsibility of the teacher; students too need to be open to suggestions and will be expected to put in the effort.

To be truly successful, a constructive feedback system for both teachers and students needs to be initiated. In the present situation, there is a communication gap, with teachers having highly varying perceptions regarding their students. This was observed from the inconsistent statistics when teachers were asked for their beliefs about their students and the students answering the same questions. This gap needs to be bridged, especially if changes are being made to what was previously established. Students need to be able to tell their teachers whether they are able to learn effectively in class, and teachers need to convey to their students what changes they need to make for the teacher to help them understand the course better.

Conclusions

The education system in place right now has come a long way but is still flawed and is not doing justice to all its students. Students need to be able to enjoy learning, for the sake of conceptual understanding, not for the singular purpose of writing an exam. When students are spending a majority of their day in a classroom, a tangible, satisfactory output needs to be gained.

It is both the teachers' as well as the students' responsibility to make the most out of education, however, as the educators, teachers do need to ensure that their students are able to learn efficiently in the classroom. Large classes are here to stay, and it must be ensured that they do not hinder a student's ability to learn and utilize their skills to their maximum potential.

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