Peer Teaching Approach in ELT to Engineering Students

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Abstract

The purpose of this paper is to highlight a framework for peer teaching and learning of English as a Foreign Language in engineering institute within India as English is not considered a core subject in technical institutes. The students consider that their sole aim is to pass the final examination which leads to miserable failure in fetching a job for themselves. Large class rooms stands as a bottleneck in peer teaching. It could be overcome by a small size classroom where effective peer teaching possibly will take place with minimum interference from the teacher and learner autonomy. The teacher just needs to facilitate and engage the students in productive language learning process.

Keywords: Peer teaching, LS, ELT, peer tutoring, peer collaboration.

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1. Introduction

It has been observed that in the last few years the concept of "peer teaching" has gained momentum in college and university education. "Peer teaching" probably has been in existence for as long as we have had schools in our society. So it is not a new concept, it has been there for ages. An educational set up with the shortage of staff asked their best pupils to help those with lesser abilities and was a slow learner. It appeared that one of the first successful attempts to formalize this kind of peer teaching was made in 1798 by Joseph Lancaster, who directed a school for the poor to adopt the peer teaching method. And it is also an old culture in Oxford and Cambridge where peer teaching is encouraged.

However, the current focus on peer teaching in university course is immense; there are both pragmatic reasons and reasons of principle. If we look at the most pressing pragmatic reason, it is the university funding, which has led to an imbalance in the student-teacher ratio. The huge class strength stands as a bottleneck in the effective delivery of information. Moreover, the government-funded public education has been a miserable failure. It produces ineffective, spiritless and passive graduates who have neither the motivation nor the skills to fetch a good job or succeed. As a result, private sector education is growing by leaps and bounds. There is even a move toward privatization of the public educational institutions in India, where the public sector universities are ready to give autonomy to the private educational institutions so that the rising student population can be managed. Many countries face this university fund crunch which has made the teachers to teach more students without deteriorating in the quality of teaching. This has prompted the teacher to find out new strategy that might assist to cope with large student numbers without increasing their overall workload. It needs to be mentioned here that a teacher of English in technical institutes in India, apart from teaching English are also given other courses to teach which is not their specialisation . Peer learning looks promising because the role of the teacher is reduced to a greater extent. It increases student learning with less input from the teacher.

In peer teaching, teachers go through a process in which they collaboratively plan, teach, observe and analyse how much learning takes place inside a classroom and how effective it is.My paper aims to share how peer teaching is adapted in learning English in a large engineering classroom in India and what the initial reactions of the learners were. It is observed that "…large classes at tertiary level create particular problems for staff and students alike, many of which can contribute to less effective teaching and learning (Catherine Mulryan ,2010)."

The endeavour of peer teaching and learning suggests that peer teaching, best used in union with other teaching and learning methods. It has great potentials and possibilities for both student "teacher" and student "learner", especially if one seeks for inclusive growth of the teaching – learning process. It is also effective in developing active participation and cultivates skills in cooperation and social interaction (Barbara Goldschmid and Marcel L. Goldschmid, 1976). Further research is necessary to validate the understanding that self- peer- and co-assessment need to be trained as independent skills (by students and tutors) and that assessment systems have to be developed to perpetrate further integration of learning and assessment as remarked by D. Sluijsmans F. Dochy G. Moerkerke ,1999. Boud, David, Ruth Cohen, Sampson, Jane, 1988 focussed on three rudimentary questions:

1) What is peer learning and what is it good for?

2) How can it best be fostered?

3) What issues need to be considered by teachers and students?

The skill of self-, peer- and co-assessment is very important in the development of lifelong learning and the development of autonomous individuals (Sambell & McDowell, 1997).

2. Setting

The setting for this study is an engineering classroom within a university located in Chennai, India. The university provides intensive English language programmes consisting of modules like Effective English, Basic English, English for Engineers, etc. spread across two semesters. Apart from this the University also provides courses like soft skills classes all throughout the eight semesters. The university has 19 teachers for English and 1300 students in total. It provides 4 hours of lessons a week to a single B.Tech/M.Tech batch of students and each teacher teaches between 12 and 16 hours per week.

3.Data collection

This study was both qualitative and quantitative in design. The researcher collected the data through questionnaires, observations and interviews. Quantitative because it helped the researcher to measure the data which were expressed in numerical form, such as size and even duration. The use of statistics facilitated to generate the data and subsequently analyze this type of data add credence or credibility to it.This data is overall seen as more reliable and objective because it could be measured. Qualitative data was collected in the form of observation, as the researcher wanted to see the initiation, process and the end result of peer teaching in large classrooms. The researcher interviewed the respondents personally and online. The participants were 39 teachers and 309 students involved in the LS process. They had different levels of experience and qualifications. The questionnaire was sent online as well as face-to-face. Two set of questionnaires were prepared. One was directed to the students and the other was addressed to the teachers. The aim of the questionnaire was to explore the effectiveness of the use of peer teaching or near peer teaching in the teaching and learning of English in large engineering classrooms in India.

1) Peer teaching is good/bad for you

2) Peer teaching is effective/ineffective in English classrooms

3) What issues needs to be considered by teachers/students?

4) Use of self, peer and co-assessment in peer teaching

The focus is on the teaching-learning of English but many of the ideas are applicable widely. English is not a core subject in engineering institutions in India but it is a highly relevant course to the students in higher education. Students are from various heterogeneous backgrounds so peer teaching helps in involvement and engagement of the students. The participants were the learners involved in the peer teaching or peer tutoring process and also a questionnaire was administered to 39 teachers asking their views on the effectiveness of giving learner autonomy through peer teaching. Independent variables related to the research questions as curriculum design and syllabus related needs in language learning context were taken into consideration. The academic and professional needs and its fulfilment was also a significant point discussed with the respondents. The findings are discussed in detail. A total of 309 undergraduates ranging in age from 18 to 27 years were assessed on measures of intrinsic and extrinsic motivation to learn English, interest, and positive affect. The student sample was collected from an engineering college in Chennai. Students and teachers came from various backgrounds like rural, urban and peri-urban part of India. The paper focuses peer teaching or peer tutoring among the student community.

4. Implementation

The students belong to separate slots and the classes begin from 8 am.The strength of the class is approximately 65-78. Four teachers adopted peer teaching after its initial introduction to the group. First, each of those teachers was given the freedom to conduct the classrooms but with minimum interference.

In the classroom, effective collaboration with peers has proven itself successful and stood as a unique powerful learning strategy. Research also indicated that peer learning activities typically yield positive results for both tutor and tutee. It enhances team-building spirit and more supportive relationships; greater psychological well-being, social competence, communication skills and self-esteem; and higher achievement and greater productivity in terms of enhanced learning outcomes. One more advantage is that students in groups do not face any inhibition with each other because of their similar age and ability. They encourage each other to ask questions, explain and justify their opinions, articulate their reasoning and elaborate and reflect upon their knowledge. These benefits can be achieved only by active and well-functioning learning teams. However, it doesn't guarantee that placing students in groups and peer activities students will engage in effective and meaningful collaborative learning because it has been observed by the researcher that while some peer groups seem to react naturally, others struggle in areas like participation, leadership, understanding and encouragement. The most effective instructors teach the student not only the cognitive skills to learn the subject but also the social skills, emotional intelligence and people skills so that they could communicate well within the team and outside as well.

The researcher observed that student involvement is an essential aspect of meaningful learning; however, the question is, in a classroom filled with 65 -78 students, can the teacher do justice to the peer learning process? In the past eight years the teacher- researcher has been successful in including active and cooperative learning by instilling project-based learning, cooperative learning, problem-based learning, case studies so on and so forth.

The peers also had to assess themselves. In a study described by Burnett and Cavaye (1978) fifth year medical students had to assess their peers as part of the examination. They also were asked to assess their own performance. In this research project, the researcher gave autonomy to the students to develop their own assessment criteria. The student had to come up with a rubric with a precise explanation and validating their style of assessment. After this "brainstorming" a Group Project Peer- and Self-assessment sheet was established. It was also a self-assessment sheet since every student had to include himself as well in the assessment. Each member of each group completed the sheet after turning in their papers. The students also were asked to give written feedback on this way of assessment. Students preferred written evaluative comments to number ratings and some preferred verbal feedback. Strachan and Wilcox (2007) recommend however that it is important to give the student an active role in the development of assessment criteria. The process is thereby equally important as the product for the quality of learning.

The teacher-researcher focuses on classroom-based pedagogies of engagement, particularly cooperative and project-based learning. First, the teacher-researcher instructed the students to go outside the classroom and meet their fellow mates casually. Once they knew each other they select the group in which they felt comfortable in.But the teacher-researcher made sure that they did not belong to the same community, language etc. The trajectory was pre-set by the teacher-researcher so as to minimise confusion. The objective was made such that the group should accommodate one and all, it should be dynamic. In this, a few fun activities like dance, music, art, literature helped a lot. After forming the groups, they selected a team leader as a representative of the group. They even named the group, with some fun element like 'The back benchers', 'Love me knot', 'Speed', 'Power' etc. The learners are also allowed to have group within groups. The teacher-researcher helped them in finding a relevant project topic on social issues and from this point the teacher –researcher took a back seat and urged the students to take over it. The teacher acted just as a facilitator. The teacher facilitated in the project by informing them about how to frame questions in a questionnaire, how to administer the questionnaire, sampling, conducting interviews, etc. The learners at the end came up with immensely substantial and highly commendable work.

Redesigning an engineering classroom was very crucial and challenging at the initial stage. The students regarded English as a pass time subject ignorant of the fact that many surveys in India

conducted by Aspiring Mind and AICTE regards engineering graduates were not 'job-ready' or not 'employable' reason being they cannot communicate well in the real life scenario. Many students were reluctant at the initial stages of peer tutoring as they came from different cultures, communities, religions and languages background. The objective of this peer teaching model was to identify the challenges faced by undergraduates in learning how to communicate in English which is not their native tongue and to facilitate student learning: learner choice and flexibility offered by teachers of English; tacit knowledge and experience of peers conveyed in discussions; and a sense of informality brought into formal learning. It should be mentioned here that patience is the key to having an effective and meaningful peer teaching-learning experience. The paper argues that peer learning can eliminate many bottlenecks of the syllabus with its unique motivational and cognitive benefits for participating peers. Research has shown that peer learning can reinforce learner's self-esteem, stimulate and trigger their interest in challenging tasks. The teacher-researcher enhanced scholarly achievement, and fostered prosocial behiour by maximum utilisation of the minimum resources by engaging the learners where they were either participants or facilitators. In particular, it is an effective means of enabling learners of English in Indian context to grasp basic concepts that underlie university curricula.

Two different forms of peer learning, "peer tutoring" and "peer collaboration," are distinguished. Each has its potential use: peer tutoring for transmitting information and drilling special skills; peer collaboration for facilitating intellectual discovery and the acquisition of basic knowledge.

India is a vibrant and dynamic country, so some general guidelines for the integration of peer tutoring and peer collaboration in the classroom are offered. The teacher –researcher instructed the team leaders in the group to form a WhatsApp group instantly and communicate their thoughts and ideas on various issues simple or complex and asked them to discuss it in the group. It is recognized that specific curriculum plans to fulfil these guidelines must be framed in a certain way which yields the overall cultural context of the education system. Such plans must be made in context to suit the needs of each particular learner. Group discussion on social issues was conducted where the peers shared their opinions, the teacher researcher found that when the students found themselves in a group they liked to take if not leadership but at least took responsibility of their ideas. Tolerance increased to a higher level. Listening skills were improved, as a whole everyone appreciated each one's opinions though there were differences on viewpoints. It is concluded, however, that the general principles of peer education outlined in this paper would enhance all varieties of teaching-learning. As explained in this article, the key benefits of peer education is that adult teaching becomes more meaningful, as it does not crawl upon the teachers' time and it enables them to focus more directly and effectively on individual learners' learning needs.

The teacher-researcher conducted an enormous amount of brainstorming sessions in that stipulated two hours class. Sometimes the teacher-researcher made a group within groups and made peer assessment possible. This facilitated the students to take ownership of what and how they performed in the classroom.

The students knew when to initiate the brainstorming sessions with a little encouragement from the teachers. The participation level showed a unique high.

The teachers asked to choose roles to assign their peers, and rotate roles at appropriate times

They also filled in missing roles. The researcher in this context suggests that peer teaching helps the students to come out of their shell. In no way they feel intimidated or conscious of their environment. They can freely in a relaxed way interact with their peers and learn effectively. The learners also participated in building up teaching materials with the researcher's assistance.

The teachers also discussed with the other teachers what peer teaching is and how they could adapt it to their context. Each teacher was asked to think of a topic, especially a 'learning challenge' in their classroom, and to share this with the other teachers. The interview and survey findings from the teachers' indicate that students experience five particular problems during the crucial first year at university: understanding technical vocabulary, comprehending lectures, sometimes unsocial behaviour due to overuse of social networking sites as friendship is only limited to the virtual world than real,homesickeness and meeting institutional and disciplinary requirements. Undoubtedly, social media has changed the traditional patterns of friendship-driven social interactions among peers. However, the evidence suggests that students are able to overcome these and other problems through a combination of strong motivation, hard work, effective learning strategies and supportive peer networks. The groups were formed around those topics through negotiations between the teachers; each group had three or four members. After each group had completed a literature review on their proposed topics, they collaboratively planned the lessons. Next, one member of each group taught the first lesson to his/her class while the other teachers observed the selected case students. Immediately after the lesson, the case students were interviewed. Each group then held a review meeting during which the lesson plan was discussed and revised. Following this, another teacher in the group taught the revised lesson to her/his class and they followed the same procedures in the Lesson Study(LS) cycle. Finally, a third member of the group taught the research lesson and followed the same procedures. At the end of the LS cycle, each group held a final meeting to organise the data they had gathered and drew investigation of how this approach works in one particular context. Even though this research took place in India, the results are very clear description of the context in which the study was carried out. This makes the paper immediately relevant to teachers everywhere—who does not have a 'learning challenge' in their classroom?

Finally, the researcher shared the outcomes of their Lesson Study (LS) cycle with other colleagues and collected teachers' perspectives on lesson study. The majority of the teachers involved in the LS research project showed how peer teaching has a large positive effect.

The process of peer teaching or peer tutoring shifted their focus from teaching to learning. They pointed out that LS helped them observe and better understand student learning as it provide thorough solutions in order to support the slow learners. The exposure to the language learning skills was amazing as with peers inhibitions and public speaking anxiety was minimal.

Moreover, they said that this process showed them ways to improve learning in their classrooms. The teachers also emphasised that the process helped them to learn from each other thanks to the collaboration it required. In addition, they stated that the student interviews and the post-observation meetings to review the lesson plans were quite useful in helping them to adjust their lessons according to the needs of their students. Some of the teachers also mentioned that the process made them feel more confident and gave them opportunities to try out new ideas and see the immediate results. Teachers in engineering institutions in India mostly have tight teaching schedules so in this context they would like more space and flexibility to carry out these kinds of professional development activities. In short, the teachers did not experience any problems about the Lesson Study (LS) procedures; however, their busy schedules were constraints on their ability to work more rigorously.

5. Conclusion

This project was intended as a trial to use LS to investigate the effectiveness of peer teaching in the ELT context in an engineering college. Apart from time constraints, the teachers involved in this project reported positive outcomes: a shift in focus from teaching to learning, which helped teachers gain insight into the nature of learning; a significant contribution to the teachers' professional learning; the ability to learn from each other and to share ideas while working collaboratively; increased confidence, motivation and encouragement for trying out new things; and the ability to address students' needs more effectively. These findings suggest that LS has

potential as a vehicle for professional development of ELT teachers in this teaching context. However, its application requires that certain conditions and support provided for teachers, for example, time and management support.

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