Enhancing Writing Skills In Engineering Students: An ICT Based Multimodal Approach Through Google Classroom

R. Nilavu

Abstract: English from time immemorial is a language that connects people universally as Lingua Franca and Link language, and hence demands the necessity to learn it. Especially with the tertiary level engineering students, communicating appropriately in English becomes imperative in the global ecosystem of developing and applying technology. Also, living in a multilingual global scenario, English learning and writing is highly indispensable. Teachers have been adopting many methodologies and practices to improve students’ skills and it seems to continue still. Among the four skills of language, writing has been an important yet difficult skill for the students of English as a Second Language (ESL); and the means and methods to improve this particular skill keep changing over the period. There has been a complete transformation in imparting writing skill from chalk and talk to ICT. Some of the approaches in ELT through ICT are Computer Assisted Language Learning (CALL); Mobile Assisted Language Learning (MALL); Technology Enhanced Language Learning (TELL); Open source platforms such as Modular object-oriented dynamic learning environment (Moodle) and Massive Open Outline Course (MOOC) etc. The primary focus of this research is to teach writing for the tertiary level engineering students; create interest in language learning, at the same time improve their writing skill. The idea is also to bridge the gap of basics of language skill. With ICT raging the world, tools that are being used to teach should also kindle interest in the students; and hence this research study is devoted to google classrooms which makes learning writing an interesting affair. A number of writing tasks has been planned to improvise their levels and to give practice to those who need support from the teacher. The attempt here is that improvement in writing can be brought out using more of google classroom sessions along with traditional teaching method.

Index Terms: CALL, Google classrooms, ICT, MALL, methodologies, Mooc, Moodle, multi-modal, tertiary level engineering students, traditional teaching, and TELL.

1 INTRODUCTION

Writing is the most important form of communication. Chambers Dictionary defined writing in 1993 as forming letters, symbols, numbers, words, sentences...on a surface; to compose and to record, state or communicate in a letter. The research study considers what Stern views writing as a form to “communicate with someone (listener/reader) about the events and topics in the world which he lives.” (Stern 1983, 135); and what Ferdinand de Saussure states: “Language and writing are two distinct systems of signs; the second exists for the sole purpose of representing the first.” The long history of writing and its importance along with its commanding relevance for life, nevertheless, would have provided a clear definition of what writing is. “At least six meanings of ‘writing’ can be distinguished: (1) a system of recording language by means of a visible or tactile marks; (2) the activity of putting such a system to use; (3) the result of such activity, a text; (4) the particular form of such a result, a script style such as block letter writing; (5) artistic composition; (6) a professional occupation.” (Coulmas, 1)

2 TEACHING WRITING

Writing is a complex process that requires a wide range of methodologies of teaching at every stage of learning. For the purpose of research, the present analysis combines all the qualities of writing mentioned above into one, so that it applies to what is expected of writing in a student. Accordingly, it may be a combination of letters, symbols into words that is composed and recorded to communicate what the writer wants to. The composition may be what the writer wants to express, or it may be the representation of language into a text. The script style may be anything but what ultimately got is a readable and communicable text which may take its own form as a letter, story, report, or any other form of communication.

2.2 Teaching Writing: Problems and Solutions

The complexity of teaching writing to learners of English (be they natives or non-natives) remains a challenging task down the ages and consequently there is a plethora of literature on it. It is even more challenging to accommodate all the major trends in teaching writing within this paper. The author of this study is very clear about the methods to be employed in teaching students, more specifically, writing. Having observed students in their first semester, the author had been introspecting over the steps to be taken to improve their writing. Students were found to go wrong in spelling, which is considered as the first step in learning writing. They go wrong with words such as accommodation, auxiliary, preceded, twelfth, fulfillment and so on. The author has always spelt these words whenever there was an opportunity to dictate to students as part of their traditional classroom teaching. A mention is made of ‘traditional classroom teaching’ in order to justify the statement that another method is employed in this study to teach writing. The author also recalls the phrases which the students go wrong many a time, which is in fact glaring. The students write: ‘I can’t be able to’; return back, cope up with, more clearer and so on. Similarly, grammatical errors such as ‘I did not went’; ‘have I took’, has I seen’ are usual of the students. Not only this, but also in punctuation such as Your’s faithfully in the complementary close of a letter.

R. Nilavu, Department of English, Loyola-ICAM College of Engineering & Technology, Chennai, India. Email: nilavusaro@gmail.com (This information is optional; change it according to your need.)
and a comma after a main clause. The author wishes to assure that not all the problems were taken into account that the students have while writing; but the glaring mistakes which almost all the teachers of English know, and which can be easily noticed. Despite learning English as a second language in schools which have English medium of instruction, the students still have problem in writing.

While pondering on solutions for the above problems, the following are certain recommendations and avenues of changes for improving writing skills at the tertiary level:

1. To satisfy the current needs of the society, the direction of teaching and learning in technical institutions must be rediscovered.
2. The pedagogical resources can be pooled and formed according to their syllabi and can be used by the teachers/investigators.
3. Teachers must focus to provide ample practice to learn English effectively and provide proper orientation. To accomplish this, it is the teachers’ responsibility to reframe the syllabus to be taught by incorporating the tailor-made resources.
4. Teachers also have a challenge to combine communicative skills in English which is the key factor in their career development.
5. It is imperative to develop a suitable pedagogical system of programmes and methodology that are student centered. Novel approaches and methods can be incorporated to enhance learning in the students. Instead of following the same pedagogical frame of chalk and talk, the teacher can bring in innovation in teaching.

3 USE OF GOOGLE CLASSROOMS

With English being Lingua Franca amidst the tertiary level engineering students importantly, communicating appropriately in English becomes imperative in the global scenario. A paradigm shift in imparting writing skill from chalk and talk to ICT is being noticed rampantly. A few approaches in ELT through ICT are Computer Assisted Language Learning (CALL); Mobile Assisted Language Learning (MALL); Technology Enhanced Language Learning (TELL); Open source platforms such as Moodle and MOOC etc. With ICT now gaining importance in most of the educational institutions across the world, tools that are being used to teach should also kindle interest in the students; and hence, the author has found a resource through google classroom as it involves multimodal learning. Multimodality here implies the use of pictures, graphs, bar diagrams, videos, patterns and other pictorial forms. Another reason for choosing google classroom is the accountability that the teacher decided to have. The author of this study is of the view that by bringing in technology into teaching learning, a lot of time can be saved in bringing in so many templates, learner materials, and resources that may be useful for the learners. Since students have liking towards internet and mobiles, teaching through google classrooms may be an added advantage. The author also asserts that instructional technology is used to teach writing and that google classroom is an instructional technology.

4 GOOGLE CLASSROOM

Google classroom is a free web service, a blended learning platform developed by Google for institutions that aim to simplify creating, distributing and grading assignments in a paperless way. The primary goal is to streamline the process of sharing files between teachers and students. Introduced as a feature of G Suite for Education which was Google Apps for Education, it was released to the public on 12th August 2014. It was only in April 2017 that it became possible for any personal google user to create and teach a class. Google classroom can combine google drive, google docs, gmail, google calendar, forms, sheets, google slides etc. for assignment creation and distribution; writing, communication; and scheduling the lessons. Students can be invited to classrooms through the institution’s database through a code that can be automatically imported from the domain. Each class has a separate folder in the respective user’s drive, where every interaction between the teacher and the student happens. The teacher adopting this technology can add students directly from the Google apps directory or can provide a code that can be entered for access to the class by the students. The teacher can upload her lessons, incorporate her work sheets, raise questions, create assignments and in turn the students can answer in their google form created by the teacher also submit any work to be graded by the teacher. Google classroom allows streamlined online collaboration, boosts social learning aspect of online education, allows the teacher to design digital based learning activities and enables learners to benefit from the experience and skills of peers. It is delivered through chrome browser which makes it accessible in all computers, tablets and mobile phones. It also helps to create groups based on readiness, interest, reading level, or other factors for teaching and learning. Sharing resources, creating lessons, making announcements, creating paperless classrooms, collaborating classrooms, creating discussions, emailing students, viewing submissions, creating tests and evaluating the answers are easily done through google classrooms. The possibilities and the benefits that google classroom evidently provided made the author to think of it as a perfect tool and use it appropriately. You tube videos, google documents were uploaded and resources were downloaded in the classroom drive of the students in their google classroom. It gave the impression to the students that classroom means google classroom. Andrew Wright suggests that, according to linguists, if the teacher/investigator is interested, he/she can create a new fruitful approach to English language teaching by involving students’ observation and participation in the language learning activities (p.64). It is also desirable to follow the following checklist as proposed by him (p.66):

1. The topic of interest chosen must be at the conceptual level of the students.
2. The teacher/investigator must organize interesting types of participation for all students.
3. The language the students has to produce must be known to them already or if new, they must be able to learn it easily.
4. The language must be useable to the students.
5. There must be plenty of opportunities to use the language at least in the classroom.

Any meaningful activity would be an attempt in making language learning useful, participatory, interesting and easy. A committed teacher and a properly designed content can go a long way in making the students realise their language potential and ultimately would develop their language skills to a great extent. The tasks must be presented in such a way
that it interests majority of students. Out of curiosity and with the ideas mentioned above, steps were taken seriously to improve the writing skills of the students. In order to reduce boredom with the usual prescribed textbook among the students, the google classroom became an apt choice for the author to draw them towards learning writing with interest and vigour. The researcher also asserts that she does not use all the facilities that Google classroom provides. For the purpose of assessing writing, all the assignments were collected as hard copies. Also, the primary aim or the objective of teaching writing in L2 is to get learners acquainted with the abilities and skills and at the same time focus on the 'micro' aspects of teaching (spelling, punctuation) and 'macro' aspects of teaching (grammar, content and organization). (Ur, 162). Ur states that 'Writing can be used as a means, or as an end or as both means and end.'(Ibid.162) Writing as a means implies answering a test question paper, attempting a reading comprehension and answering the questions, noting down new words and learning the meaning, learning grammar rules. Writing as an end represents the writers’ skill to express themselves using their own words and state the purpose of writing such as writing letters and reports. The third type that includes both, demands purposeful and original writing as in writing reviews and stating anecdotes to illustrate a meaning.

5 APPROACH, METHOD AND TECHNIQUE
Various approaches, methods and techniques play a vital role in the process of teaching writing, especially in this research, and it will be useful if taken into consideration what is meant by approach, method and technique as it would put an end to confusion. “An approach”, Antony says, “is axiomatic consisting of a set of correlative assumptions dealing with the nature of language and the nature of language teaching and learning” and describing “the nature of the subject matter to be taught.” (Antony, 5) A method, on the contrary, “is an overall plan for the orderly presentation of language material, no part of which contradicts, and all of which is based upon, the selected approach.” (Antony, 6) A technique, “is implementational that which actually takes place in a classroom. It is a particular trick, stratagem, or contrivance used to accomplish an immediate objective.” (Antony, 7) Antony asserts that the relationship between approach, method and technique is hierarchical. The organizational key is that techniques carry out a method which is consistent with an approach.” Though the various definitions on methods, approaches, techniques by Antony, Rodgers and Richards have been mentioned in the study, it is clear that not a single method which is unique in its way will suffice to teach writing at the tertiary level of students particularly in engineering education considered for the study. The list of methods and methodologies and approaches would have supported the author in designing the classroom atmosphere. But students' interests and motivation have been prioritizing factors such that they are drawn towards the subject and start developing a liking towards it as other subjects.

6 METHODOLOGY OF RESEARCH
The experiment was conducted with first year engineering students for 27 periods spanning over a time of 45 days. The intermittency occurred owing to the breaks in the classes such as Unit tests and Continuous Assessment Tests; and Special occasions in the college such as College Day, Sports Day, Farewell Day, Technical Symposium, and Inspections. Apart from this the students also had holidays which made it difficult to conduct the experiment. Since the subject taken was Technical English, a paper in Second Semester as per Anna University syllabus, Chennai, a set of writing activities was decided and shortlisted. The experiment was on various topics in writing such as Writing instructions, Short processes, Checklists, Reports, Interpretation of graphics – tables, graphs, pie charts, bar charts and flow charts. To study the evaluation, a pre-test and a post-test were conducted. A list of examination papers on writing such as, TOEFL writing, BEC writing and CAE writing were read and finally BEC Vantage was decided for the tests. It was decided as it was a globally agreed standard for English language ability. Students completed the tests with great enthusiasm. It was a hidden agenda and the students were unaware of their writing ability being checked. The result of the post test showed a great improvement. During the regular class schedule, students were given inputs on the lessons uploaded in google classroom. Students went through the contents, learnt their lessons and completed the given task at their own pace. The teacher acted as a facilitator here. Realising the need of the students, the teacher gave enough practice on framing questions, exercises on descriptions, narrations, and cohesive devices in google forms. This paved the way to practice writing tasks with ease. Here, the teacher researcher wishes to stress that she did not explore the complete google classroom platform, but only certain few particularly intended for the tasks.

A study was implemented in order to fulfil the following objectives:
• To determine the usefulness of using google classrooms to encourage learner independence and out-of-class learning.
• To provide insight into the pedagogical applications of using google classrooms for writing sessions.
• To prove that google classroom supported by traditional teaching methodology improves writing.
• To provide students with a forum to read and understand at their own pace with supporting documents and materials/supplements provided by the teacher.
• To increase the productivity of the learning of the students as the resources through which the teacher teaches are already uploaded in the classroom drive.
• To provide more writing exercises and samples.

The author-teacher accounted the language learning and teaching experiences and documented them regularly in a diary. It is a study on a classroom research. The diary studies enabled to know the problems which students encountered. It supported exceedingly well to know the sequence of the class and the know-how of which teaching part could be enhanced. The detailed entry also gave exposure to find out how to proceed for the next session knowing the likes and dislikes of students and thereby altering the methods of teaching. The feedback collected from the students for every topic also supported greatly in enhancing the methodology of teaching.

7 RESULTS
The experimental group, the number of students who have taken the Pre-test and Post-test was 37. Hence, the analysis of the results was done with 37 students.
The following is the result of the Paired T-Test analysis:

**T-TEST (PAIRED T-TEST)**

<table>
<thead>
<tr>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>ENTRY TOTAL</td>
<td>15.32</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>EXIT TOTAL</td>
<td>21.27</td>
<td>37</td>
</tr>
</tbody>
</table>

**Table 1: Entry Test Paired Samples Statistics**

<table>
<thead>
<tr>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>ENTRY TEST TOTAL &amp; EXIT TEST TOTAL</td>
<td>37</td>
</tr>
</tbody>
</table>

**Table 2: Entry & Exit Test Paired Sample Correlation**

The enhancement in writing is believed to have obtained by the students because of the following reasons:

- The youtube videos chosen with subtitles.
- The industrial visit video played with the sample industrial report for the same.
- The images complimented with the text that enable the students imbibe the content for writing checklists.
- Models for transcoding bar charts, pie charts, graphs with diagrams and texts.
- Understanding reading of graphs and transcoding it through Wolfram Alpha Widgets.

The objective of the research is to prove that ICT based multimodal approach through google classroom enhances writing skills in English. The author sternly believes that the multimodal- aural, visual and textual content given for the lessons depending on the topics complimented each other and the students imbibed the contents, or the vocabulary needed to draft the lessons. It is also firmly believed that the uploaded contents created massive interest as it relates to day to day life and it is what is expected of them to write. The students were also made aware that their syllabus is part of their day to day reports and Technical English is not a subject to score marks.

**9 CONCLUSION**

The focus here is only on writing skills and the other skills listening, speaking, reading is applied to enhance the writing activity and process. The whole teaching learning process deals only with the methods, methodology, and enhancement of methodology to improve writing in the students and the core of the study always revolves around classroom teaching. ICT based multimodal approach through google classroom to enhance writing skills claimed positive results through showing better graph of improvement.

**REFERENCES**

[6] www.cambridge.org/Writing Systems: An Introduction to their Linguistic Analysis Florian Coulmas Excerpt (1-10)