# Attitudes, Practices and Opinions of Engineering Students' Learning ESL with the use of Multimedia Materials

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**Abstract:** The aim of this study was to examine the attitudes, practices and opinions of the students of engineering and technology regarding learning English as a second language (ESL). The success of using multimedia materials (MMM) in the language classroom for teaching and learning languages completely depends on students' attitudes, practices and opinions and their involvement with technology. A survey questionnaire was applied to collect data from the students and analysed by using SPSS software version- 17. The survey result suggested that the majority of the students seem to have positive attitude, practices and opinions regarding the use of multimedia materials and they agreed that multimedia plays a vital role in learning English language. In addition to obtained results also show that no significant differences exist between male and female engineering students in terms of attitude, practice and opinions with regard to using multimedia materials for learning English language at the level of (0.05) significance. This study concludes with recommendations to facilitate the integration of multimedia materials for teaching and learning English language.

**Key words**: Multimedia materials (MMM), ESL, Technology, Communication.

## I. Introduction:

Teaching and learning English language skills in India is not an easy task specially to teach at undergraduate level how to speak, listen, read and write (Patel & Jain, 2008). The reason behind this is the heterogeneity in the language classroom. Therefore, language instructors are unable to provide the correct model of language skills i.e. LSRW (Cajkler & Addelman, 2013). Rana, argued that "teachers need to stop following the same old methods of teaching, experiment and acknowledge that the world is changing and we need education that augments that change." To overcome the issues of teaching and learning English language during the last couple of decades, due to the growing development of science and technology, information communication technology (ICT) a large amount of multimedia materials have been developed and integrated with traditional teaching methods for learning and teaching English language and communication skills. In fact, Multimedia is a blend of numerous components such as: text, graphics, animation, sound and video. These elements help in a different way to learn the content materials and to develop communication skills (Vaughan, 2008). Moreover,

multimedia materials give various choices to make teaching and learning lively, interesting and also making learning more productive in terms of improvement in communication skills among the learner (Atkins, 1993).Similarly, it is found by different studies that using multimedia materials in the language classroom makes language teaching and learning easy and memorable for the learner and teacher can present real model of language skills (Block, 1999). Likewise, Adams and Missingham, 2006 stressed that there is a need to develop required communicative competence, problem solving and high level communication skills among the engineering students. Engineering profession is one of the largest fields of study in the world which requires teamwork and communication with different human resources around the world. English language is used as a functional language on a larger scale. For the sake of coordination with associates, engineers need to communicate fluently in English language. Therefore, communicative competence in English language plays a vital role in the academic as well as in the career of engineering students (Latha, 2014).

## II.    Statement of the problem

 After technological advancement in the entire sphere it is observed that traditional method of English language teaching and learning can no longer effectively fulfil the communicative needs of the students for language learning. The problem of accuracy and fluency as well as poor and ineffective learning of English language had been noticed among the students' of Zakir Hussain College of Engineering and Technology (ZHCET), AMU Aligarh. To teach with latest technology and develop communication skills in them, a well established language lab has been installed in the ZHCET.

## III.    Description of course and language lab at ZHCET

The English language skill course namely EZ- 291 communication skills lab which is prescribed for engineering students at Zakir Hussain College of Engineering and Technology *(*ZHCET), AMU Aligarh is common for all branches of engineering students i.e., Chemical, Civil, Computer, Electrical, Electronics, Mechanical, Petro-Chemical and Architecture. This EZ-291 communication skills course is taught to engineering students for two years. Objectives of the communication skills language lab course are developing four language skills which are listening, speaking, reading and writing through multimedia materials and classroom activities, building clarity and confidence in speaking thereby developing required employability skills of the students and experience of overall development of their personality and soft skills (Jalaluddin, 2016).

**Language laboratory**: English communication language lab of ZHCET provides the course to the engineering students in a completely different manner. The course is basically a blend of both audio and visual materials. The language instructor teaches engineering students in an interactive manner and creates interest among the learner which would help them in learning the teaching unit in the best way (Nishat, 2016).

**Facilities available:** The language lab of ZHCET is a well equipped language lab with 30 computers, language software and all the primary multimedia materials, internet connectivity, power back up and multimedia projectors for onsite demonstration and different multimedia materials and software's installed in the computers. Software used in the language lab is on study skill success, road to IELTS, clear pronunciation, connected speech and clarity recorder (Nishat, 2016).

**In-class activities:** The language lab instructor facilitates various in-class activities with the use of multimedia materials to develop students' communication skills in English language. Some of these in- class activities are building vocabulary, basic grammar exercise practices, intelligibility in pronunciation, developing LSRW skills, group discussion, role play, debating, extempore, interview, oral presentation, voice recording and PowerPoint presentation etc.

## IV.    Purpose of the study

The aim of this study was to examine engineering students' attitudes, practices and opinions for learning English as a second language with the use of multimedia materials.

## V.    Methodology

**Validity and reliability:** Following measures had been taken by the researcher to ensure validity, reliability and objectivity of the study.

The supervisor and expert in statistical work were involved at the time of formulation of questionnaire, data collection and analysis of the study, to avoid wrong interpretation, questions in simple language were constructed and two different sections of the questionnaire were made in the same manner. Moreover, participants were informed to give response according to their own experience, practices and opinions to ensure objectivity.

## VI.    Setting and data collection

The researcher selected the class and section where English language is taught with the use of multimedia materials. He approached to the engineering students in a class after taking permission from the concerned teacher. The purpose of the study was explained to the subjects with voluntary participation of researcher and ensured the confidentiality of information. Fifty-four students took part in this study. They were enrolled in the different branch of engineering and studying EZ-291communication skill lab course for improving English language skills. A quantitative survey was applied for this study. A questionnaire was designed to get participants' responses on their attitude, practices and opinions regarding the use of multimedia materials for learning English language. The students are familiar with the various aspects of technological tools as their

language teachers are using them in the smart classrooms and in the language lab to give them practice. The questionnaire consisted of 4- point likert type scale which was designed based on the related review of literature for this study. The questionnaire was split into three sections i.e., general information of the participants, attitudes, practices and opinions. The rating scale consisting of 4 choices each scale item on attitudes and practices as follow: Always= 1, Mostly= 2, Sometimes= 3, Never= 4 and for opinion questions scale item Strongly agree= 1, Agree= 2, Disagree = 3, Strongly disagree= 4.

## VII.    Data Analysis

The survey based data was obtained through questionnaire and analysed by using SPSS software version- 17. First of all, descriptive statistics had been run. Then, t- test was applied in order to determine the possible differences between male and female student's responses. The responses on each question item given by the participants were calculated in percentage and coloured graphically as represented in figure no. 1 and figure no. 2.

## VIII.    Results and Discussion

The results are obtained from the analysis of the questionnaire and analyzed by considering the two sections in the questionnaire. Table 1 is about general as well as specific attitude and practices of the students in MMM and table 2 shows student's opinion towards the use of multimedia materials for learning English language. Both the tables are analysed separately.

Table 1. **Descriptive statistics of student's attitudes and practices for using (MMM) in learning English language**.

| Gender | N | Mean | SD | t-test | Sig. |
|--------|-----|-------|------|--------|------|
| Male   | 40  | 32.35 | 7.39 | .584   | .268 |
| Female | 14  | 31.07 | 5.90 |        |      |
| Total  | 54  |       |      |        |      |

*Significant 0 .05

As the result of this test presented in the table 1 shows, there was no significant difference in the score of male (M= 32.35, SD=7.39) and female students (M= 31.07, SD= 5.90) because t-test value is (.584) and significance values is (.268) which was greater than level of freedom $p< 0.05$. So, there was no significant difference found between male and female students in terms of attitudes and practices in using multimedia materials for learning English language.

The below given bar graph displays the results of the survey conducted in ZHCET, AMU Aligarh, on Engineering students in English language  communication lab classroom.

### IX.    Attitudes and practices of the students with regard to using multimedia MMM.

Discussion of the findings of first variable on attitudes and practices of the students with regard to using multimedia materials (MMM) in fig.1 which have 15 statements and each statement has been discussed under the following separate headings.

1**. "I can operate the computer and multimedia mobile easily."** According to the findings of data, 55.65% engineering students always use computer and multimedia mobile, 33% mostly, 11.3% sometimes and nobody was found who never used such multimedia tools. ( Miangah & Nezarat, 2012) stated in his article that computer and mobile assisted learning technology is more useful for doing activities outside the classroom. Such operation of technology enables learning to be more directly connected with the real world.

2. **"I watch movies, songs and news on the computer/mobile."** Survey shows that 38.9 % students responded in favour, i.e.  they are always using MMM for entertainment and communication with the use of audio visual media, 29.6% mostly, 18.5% sometime and only 13% are not using these devices for entertainment. According to Huang and Sun mobile and computer mediated technology for English language listening exercise system can develop students English listening abilities to a high degree.

3. **"I can search anything on my mobile or the computer with internet connectivity."** Result displays that 53.7% student are always surfing anything on computer or mobile with internet connectivity, 33.3% mostly, 22.2% sometimes and there was nobody who never used MMM without internet connectivity. The use of multimedia technology with internet connectivity is widespread in various fields of study without any doubt, it also plays a great role in educational use particularly for second language and foreign language learning.

4. **"I use multimedia technology for social networking, such as facebook, twitter, whatsapp, and for writing blogs."** It is displayed in the graph that 38.9% students are always using social networking sites, 33.3% are mostly, 22.2% sometimes and only 5% said that they never use social networking plate form. The application of social networking sites (LLNSs) and online specifically, goal to enhancing collaboration between the language learners (Harrison & Thomas, 2009).
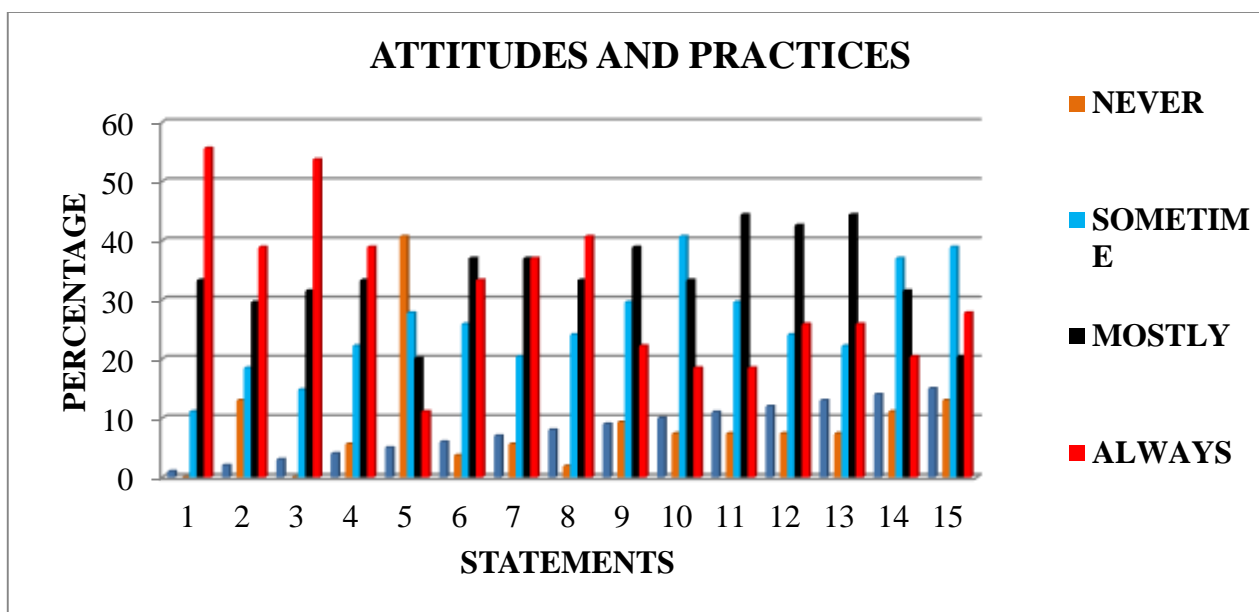
**Fig. 1**

5. **"I upload speeches, interview and movie etc. on YouTube."** Result exhibit that only 11.1% learners upload speeches interview and movies on YouTube, 20.1% mostly, 27.8% sometimes and 40.7% never upload and share all such stuff on YouTube. Above findings reveal that students are familiar to deal with YouTube since they have its application in their smart phones and laptop for watching videos on debate, discussion and interview.

6. **"I feel comfortable with the idea of using MMM as a learning tool for English"** Majority of students are in the favour of using multimedia as tool for learning English language. In terms of findings, 33.3% always feel comfortable 37 % mostly, 25.9% sometimes and a very small numbers of students feel uncomfortable with the idea of using MMM for learning English language, that is, 3.7%. Many researchers have found that learners are tired of traditional English language classes and are interested in new style of learning. Students have positive attitude towards multimedia materials used in the classroom and such technologies have a positive effect (Zhen, 2016).

7. **"I enjoy using the computer in my English language classroom."** 37% students always enjoy using computer in their English language classroom, 37% mostly, 20.4% sometime and only 5.7% learner are not enjoying computer mediated language classroom. Several studies have been conducted to ensure that whether the integration computer promotes English language learning and it was found computer technology encourage students autonomy by allowing them to select the time, place and circumstances which can be conducive to enhance their language learning (Mutlu & Eroz,- Tuga, 2013). Moreover, students who are learning with the help of computer technology can work individually at a comfortable pace. Therefore, they are more likely to take self responsibility for learning language both inside and outside the classroom.

8. **"I prefer a projector for presentation."** The findings reveal that 40.7% always 33.3% mostly and 24.1% like sometimes to prefer presentation with the use of projector. In a doctoral thesis, the data collected from the 2nd year of ESO students involved in the project confirms the beneficial aspects of the visual aids. Because of these results researcher assumes that using multimedia visuals as tools in the language classroom is highly beneficial for students and enhances the learning process (Ramirez, 2016).

9. **"I download books on my computer for detailed study."** Since the last decade a tremendous development in technology especially in ICT brought a pool of services for easy access to knowledge. Findings show that 22.22% always, 38.9% mostly, and 29.6% sometimes download books for extensive study.

10. **"I listen to native speakers' speeches, debates and discussions with use of MMM."** Listening is one of the key skills to develop any language. Findings demonstrate that 18.5% always, 33.3% mostly, 40.7 sometimes use multimedia technology for listening and developing communication skills similar to native speakers. Multimedia materials (interactive, video disc, CD- ROM, CD-1) have become simply accessible to the learners of English as a second language which provides opportunity to listen to native speakers. Its potential as a tool to enhance listening skills becomes a practical option (Meskill,1996).

11. **"I read course books, news papers, e- books, and stories on the computer."** According to the Case and Truscott (1999) learners have been able to develop their sight word vocabulary, fluency and comprehension. Computer based reading allows for "increased interaction with texts, attention to individual needs and increased independence through an ability to read text they would not otherwise be able to read." Findings show that 18.5% always, 44.4% mostly 29.6% sometimes read course books, news paper and stories etc.with the use of multimedia materials specially computer assisted technology.

12. **"I use the computer for writing assignments, mails, messages and chats."** A number of research studies have revealed that the use of computer technology in the classroom is capable of affecting positively the quality of writing with a word processor. The result shows that 25.9% always, 44.4% mostly use computer for writing different assignments. 29.9% sometimes use computer for writing, only 7.4% students never use this tool for writing purpose. Cohesion –Smith 1999 reported that student make more correction when writing on computer.

13. **"I make use of e-dictionary for learning new words."** According to the findings of the data 25.9% students always, 44.4% mostly use e-dictionary in their mobile and laptop 22.2% students were using sometime. Only 7.4% never use e-dictionary for learning language. A survey based research conducted by Omar& Dahan in 2011 and reported that e-dictionary could help the teaching and learning process of Mahra al-Qirah textbook with savvy, smooth and time saving application. It also has an educational value in inspiring students to learn and develop new vocabulary.

14, 15 **"I use a computer for correct use of punctuation."** and **"I check my grammar and spelling while writing on the computer."** Survey displays that 27.8% always, 20.4% mostly and 38.9% sometimes students

were using computer technology to enhance their writing skills, grammar, punctuation and spellings. Multimedia technology can be integrated to change writing and grammar instruction in multiple ways (Bruce, 1990). Correction of grammar, punctuation and spelling are one aspect in which computer technology if compared with teachers are much more flexible. They can correct learners error without delay and as many as they want (Pichastor, 1996)

Table 2. **Descriptive statistics of students' opinion for using (MMM) in learning English language comparing male and female**

| Gender | N | Mean | SD | t-test | Sig. |
|--------|-----|-------|------|--------|------|
| Male | 40 | 20.10 | 5.20 | .018 | .796 |
| Female | 14 | 20.07 | 5.90 | | |
| Total | 54 | | | | |

**\*Significant 0.05**

The result of second section which are presented in the table 2 indicates that there was no significant differences in the score between male and female students opinions regarding the use of (MMM) for learning English language. Because, the above tabulated t-test= .018 and significance= 0.796 which are greater than the p< 0.05 level of freedom. So, there was no significant difference found between male and female students on opinions variable.

## X. Students opinion towards the use of MMM.

The following discussion of the survey findings of opinions of the students regarding the use of multimedia materials (MMM) in fig.2 which have 11 statements and each statement has been discussed under a separate heading.

1. **"MMM provides visual aids in the form of interesting pictures, cartoons and graphics."** Finding shows the opinions of the students on the use of MMM that 53.7% strongly agree, and 37% agree that really MMM made their learning interesting through the use of different visual aids in the classroom. Mannan, 2005 stated that visual aids like picture, cartoon and graphics can be useful instrument in the language classroom, because it supports the teacher to clarify, create, correlate and coordinate accurate concepts, interpretation and enable students learning meaningful, interesting and inspirational.

2. **"I can listen to native speakers' speech, interview etc. for oral practice through MMM."** In response, 29.6% students strongly agree and 61.1% agree that they are using MMM for developing listening and speaking skills. An important characteristic of multimedia materials in teaching English is to train and develop student's ability to listen and speak, and to improve their communicative competence. It is important for learning English language to integrate English language and culture of English speaking countries (DU, 2011). With the help of multimedia students can access English culture and their native speakers directly or indirectly. (Brett, 1996)

found that 86.9% of students believed that multimedia applications were introduced to improve their listening skill.

3. **"I feel more comfortable learning at my own pace through MMM."** Researcher found that 31.5% students were strongly agree and 46.3% agree that MMM are comfortable tools to learn according to the students' own pace of learning. There are several advantages of multimedia technology in teaching and learning. It creates flexibility to get access to computers for all the learners. Now that computers have become common and learners can get access to internet, student can engage in study at any time, place and at their own pace (Young, 2008).

4. **"The atmosphere in the MMM class is more informal than in the traditional classroom."** The result show 25.9% students strongly agree, 57.4% agree that classroom with MMM is informal and student centred in comparison to traditional class room. Only 13% students disagree and 3.7% strongly disagree. MMM help the learner to gain non-sequential learning behaviour. They can select on their own which language skills need to be develop and which course to use (Hod & Ben-zevi 2015).
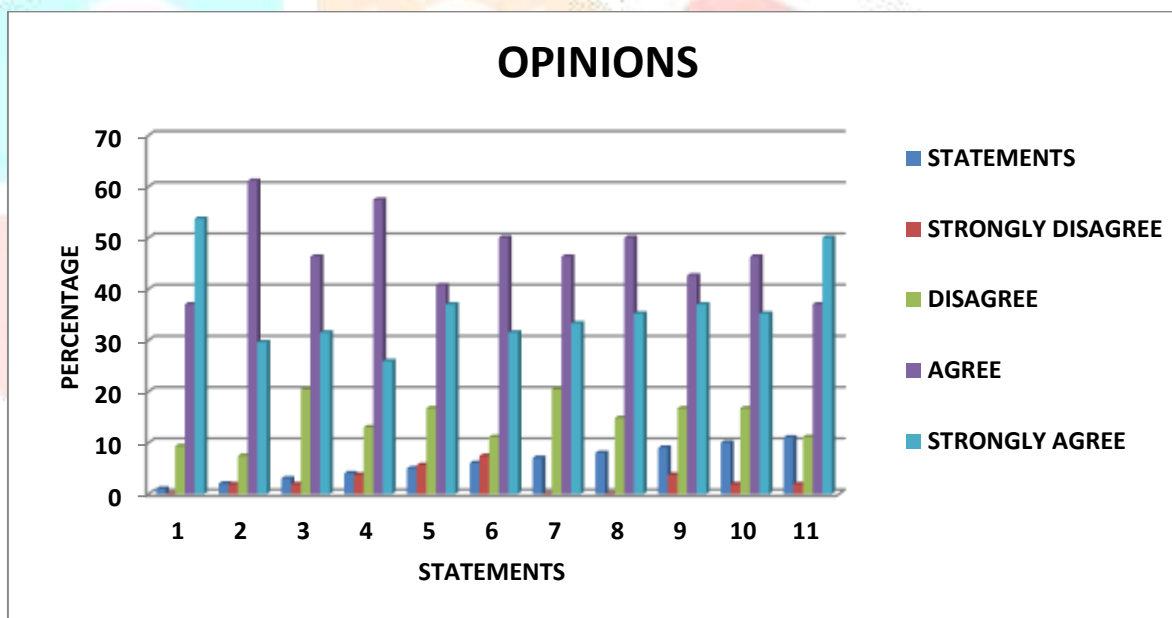


**Fig. 2**

5. "**MMM classes are more motivating than the usual lecture based classes."** Lecture based learning in the language classroom can be monotonous and boring. Students can lose their interest and motivation in learning. Findings show that 37% learners strongly agree and 40.07% agree that use of MMM in the class is motivating. Multimedia materials provide ways to learn English language through computer, audio, video and animated graphics which make the learning motivating and problem solving technique create interest (Zhao, 2003).

6. **"I retain information for longer in my mind by learning through audio- visual aids."** In response to this 31.5% students strongly agree and 50% agree that learning through audio- visual media help in learning the information and retaining it for longer period of time.

7**. "MMM helps to learn the four language skills of listening, speaking, reading, and writing in more effective ways."** Finding shows 33.3% students strongly agree and 50% agree that multimedia technology is one of the best learning tool for developing major skills of learning English language.

8. **"The use of MMM helps me understand concepts in more effective ways."** Survey of data findings displayed in the fig. 2 shows that 35.2% students strongly agree and 50% agree MMM support to understand complex concepts easily and effectively. Only 14.8% are disagreeing on this idea.

9, 10 **"MMM is an important tool for improving grammar."** and **"MMM is an important tool for improving vocabulary."** In response, 36% students opinion in strongly agree 44% are agree that MMM technology is important tool for leaning grammar and vocabulary. Meagre number of participants that is only 16% disagrees on the above statements. Koii & Ghasemi, stated in an article that application of multimedia and CALL can make the teaching and learning of grammar and vocabulary more absorbing and retrieval of grammatical knowledge.

11. **"MMM provides a variety of activities"** 50% students strongly agree that multimedia provides a variety of activities for learning English language, and 37% agree that wide range of activities can be conduct inside and outside the classroom through multimedia.

## XI. Conclusion and Recommendations

The present study specifically reported the engineering students' attitudes, practices and opinions towards the use of multimedia materials for learning English language. It is reflected in the results and discussions that students who are under survey, majority of them agree with the idea of that they are comfortable using multimedia materials for learning English language. Moreover, findings as presented in the table 1 and table 2 show that there was no difference in the scores of male and female students. The significant value on attitudes and practices were (0.268) and significant value on opinions was (0.796) which were greater than the $p \leq 0.05$ level of freedom. So, there was no significant difference found between male and female students' attitudes, practices and opinions.

The results from the collected data were interpreted to mean that majority of male and female engineering students' habitually use multimedia materials as a tool for learning English language. It is also indicated that students have positive attitudes, practices and opinions for using multimedia technology in general and use for English language learning purpose in particular. Students' positive behaviour regarding the use of MMM strengthens its use for language learning.

In the end in the light of the above findings, I would say that multimedia materials should be viewed as an integral part of the English language learning activity. Latest methods and technical tool should be implemented for effective learning teaching of the second language. Educational organizations should strengthen their technical instruction capabilities with the use of new tools, equipment and language laboratories for enhancing the teaching learning process.

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