



**RESEARCH PAPER**

**Exploring the Importance of Integrating Technology to Teach English in Public Sector Engineering University of Sindh, Pakistan**

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**ABSTRACT**

The study aimed to highlight the impact of technological integration on engineering students to teach English in one of the public sector engineering university in Jamshoro, Sindh, Pakistan. The study adopted the qualitative design and data was collected through an interview. Further, the collected data was analyzed through the content analysis. It was to find the effectiveness technology usage in learning and teaching of English language amongst the engineers at undergraduate level in Sindh. The study also intends to demonstrate that how the English language can be enhanced effectively through use of technology by the engineers in their future. The study stated through the results that English language is considered the global language, where students of engineering context need to have the competency. The learning of English enhances the efficiency of the engineers and technological integration makes them to learn English more efficiently through the use of technological gadgets. They improve capacity of visualization in students and teachers. Therefore, the digital tools proved to increase the learning more efficiently.

**KEYWORDS** Effectiveness, Engineering, English, Students, Technology, University

**Introduction**

English is considered the most spoken language in the world. According to U.N.O, the Mandarin is considered the second (Ghosh, 2020) but English is spoken all over the globe. This is because the Brits were one who introduced this language and they ruled almost all over the global. However, they left behind is English, it is considered to be the key mark for the global competency (Crystal, 2006). The top institutes in the world teach in English and many countries use English as their second language. When, one talks about technological integration, it means the use of laptops or any other digital device in the classrooms that helps students to learn. When it comes to the engineering departments, the technological reforms are led by the engineers and English is considered effective in enhancing the efficiency of the engineering student. Technology is considered as most effective tool for learning process. Teachers should choose the model of technology in order to support the curriculum of the engineering courses. This can help the students to grow their skills up to the demand of global level. This will also polish the skills of the English teachers. The co-operation of students can be increased through the technological integration (Sarkar.et.al.2021).

**Importance of English for the Engineering Students**

Engineering is vast field of the study. It is the tool that affects the academic performance of the engineering students. Most of the theoretical subjects of engineering courses are taught in English these days. Engineering students in their whole degree program have to encounter many English lectures, projects and when they are either

applying or appearing for the interviews, the English proficiency is on the first priority that is been evaluated. It basically exhibits how efficiently the candidate can speak English. In world today, most of the universities and top rank institutes conduct their lectures in English, their whole medium of study is English and to the countries some of them also refer that their whole educational system is in English. First language is not English. Since, English is considered as the language of global competence then it is need for the engineers to have very proficient grip on the language. This will help them in their academic carrier and their professional life. The competence of English language is very much important for the engineering students all over the globe.

### **Technological integration in learning English**

Technological integration is use of digital tools in the class for purpose of efficient learning. Digital tools are from mobile to the computer use, the internet and to the digital books. It can be anything that helps in learning as the tool for technological integration. According to Ammade, Mahmud, Jabu, and Tahmir (2018), the use of internet helps them to grow globally and get to know about the new trends that are going in the world and it helps them to have a look of the global perspective.

### **Literature Review**

The physical situation and use of Personal computers in classrooms turned out to be more predominant during the mid-1970s (Molnar, 1997). The innovation progress paced during that period. Between 1963, when only just 1% of schools utilized personal computers for the instructional purposes and 1975, there was an extreme increment in Personal Computers based on training with 55% of the schools that approached personal computers for instructional purposes for more than 10 years (Menuey, 2009).

There is incredible worth and advantage to classroom technological integration that offers instructors towards the chance of doing things. It thought to be outlandish only for 10 years and two prior with potential future prospects. At the point when instructors effectively coordinate innovation into their classroom guidance, they make chances to make learning increasingly important, significant, and intuitive, while upgrading levels of student's commitment all the while (Byrne, 2009 and Hicks, 2011). Instructors can streamline students' commitment, inspiration, and instructional time by the utilization of technology effectively. Using technology, the students are welcomed to become something other than latent students. They are given organized learning openings that urge them to connect and become dynamic members in the instruction and learning forms. Oblinger (2004) came out with the sentiments that instructors should teach through the technological integration and be capable to effectively use the technology by them as well in order to increase the learners' outcome of the instructors. The teachers of this era should be fully aware of all the tools that are available. The integration of technology does enhance the outcome of the learner. Goodwin (2011) stated that the technological integration is much as important as the knowledge of the technology for instruction. Further, he stated that if the instructor is not fully aware of the technology, he then must use it with high probability ratio. The teachers must produce that output from the students. The technological integration also depends on the instructors that are teaching English through technology. It is then; the teaching through this channel would be very much ineffective if the person who has to teach is not aware of the technology itself.

In the present World, the significance of English cannot be undermined and disregarded. Since, English is the language spoken all around the World. To learn English requires the constant practice and patience. The sort of feeling that prevails among students is that it is absurd to expect to accomplish either familiarity or authority over the English. This sort of propensity keeps students to learn English. The greater part of the students' study in in English from the assessment perspective. Therefore, they cannot deliver even a sentence without making a linguistic error. Moreover, the adequate practice is not given to

students to gain proficiency for a language. Information on English is important in the event that one needs to come up through the everyday life business. It is the significant window of the advanced world. This sort of inclination keeps students to learn English with anxiety. It is also important window, where the propelled nations have opened their entryways to actually test the qualification of people. The individuals who have an command over English are given the occupation. Therefore, in the modern times, English can be very much effectively taught with the help of technological integration (Rajathurai, 2018).

The utilization of present day technology speaks to huge development in contemporary English teaching techniques and methodology. Ahmadi et al. (2018) stated that it keeps up that electronic training programs have become the transcendent inclination of educators since they seemingly help positive students' commitment with the instructors and boost by and large English language learning. Most contemporary English language instructors currently do effectively join a scope of technological guides intended to encourage ideal educating conveyance. The flow of research in this way tends to highlight different components of the technology that is utilized in English education by the concocting inventive educational plans that tackles ongoing logical and specialized turns of events; outfit educators with the mechanical aptitudes to guarantee viable and quality subject conveyance with give specialized media. The various media and current specialized projects make student instructor stages that boost positive language learning results. For the following reasons, the present investigation on integration of technology to teach English is significant writing that has looked into the matter deeply. The technology is characterized phonetically and customarily with relationship to the present day training abilities that are completely assessed. Considering this, the analyst traces the basic exploration issues, clarifies the hugeness of the examination goals and the theories with presentation of new discoveries (Gajek, 2018).

### **Hypotheses**

On the basis of review on literature above, the following hypotheses statements are developed.

**H1:** The integration of technology makes learning of English for engineers more efficient.

**H2:** English enhance the effectiveness of engineering students

### **Material and Methods**

The methodology used for this research is qualitative in nature. Interview from 10 engineering students from one of the public sector universities of Sind, Pakistan was selected. The interviews of the students are analyzed and discussed.

### **Process of Sampling**

Ten engineering students were interviewed. All belonged to Mehran University of Engineering and Technology, Jamshoro, Sindh. The two from five respective departments were selected. The departments selected for purpose of data collection were, Civil, Mechanical, Electronics, Electrical and Petroleum and Gas Engineering departments. The researcher chose sample from five diversified fields of Mehran University so that a better result could be produced. If the act of diversification in sample could not have been practiced, then the results could have been same. It is because the same expected response from one department would have produced same opinion would have resulted be unreliable.

### **Results and Discussion**

The interview from ten engineers from five respective departments stated that their overall effectiveness will increase in learning English with technological integration.

According to majority of responses from the engineering students, learning of English through technological integration can make them more professional in their academic life. They even stated that after learning English they will perform even better in their professional and academic lives, however, learning English manually is hard for them. The concepts about English were grasped that the students had to work hard to learn English because it was not their first language. Five out of Ten did not answer about the question of English learning difficulty. Two students stated that overall it did not affect their effectiveness to learn English with integration of technology even by today. Therefore, it did not put a serious impact on their academic and professional lives. The efficiency to learn English remained same as it was before learning the language through technological integration. Similarly, learning language through technological integration has somehow better impact on them. Therefore, they perceive that the technological gadgets can help them more to learn language.

The majority of responses favored to integrate technology that they perceive could make them easier to learn the language. According to one of the students of electronic department stated that:

*“They did not learn the language as per the international standards; however, the inclusion of technology can be very helpful for them in order to grasp the basic fundamental concepts in language. It is learning through technological integration that could make us able to connect with the latest studies about English language and make us aware of the changes that were made in the language over the past period of time.”*

#### **Engineering Student (Electronics) Department**

It can be assumed that learning of English from the technological integration had a great impact on the life of engineers. They also said that learning of English also had the great effects on their confidence levels.

Two of the students, one from Mechanical and other from Petroleum and Gas Departments stated their experience to learn English with integration of technology is not presumed fruitful because they were not aware of the technological skills. First it was very hard for them to learn that how technology would help them in the learning process. According to the statement of student from Petroleum and Gas department, it is their need to learn technology first.

*“First we need to learn the proper use of technology. When we are made aware that how technology can be used for the purpose of learning then the learning experience will enhance. Before, the training on technological gadgets, it will be a hard learning experience to follow immediately on....”*

#### **Engineering Student (Petroleum and Gas) Department**

However, majority of the students agreed to perceive that technological integration in place is a fruitful tool to briskly have a command onto the language in a very shorter period of with minimal efforts and they also suggested that the institutes of education in Pakistan should consider the learning of language through technological integration.

It will help them to have more knowledge provided that the technological integration is immensely under use throughout the world. The technological integration has also made them very efficient in their life. 80 percent of the engineers agreed that the learning of English through technological integration have enhanced their learning abilities and also can give them confidence in life that helped them in both, their academic and professional lives. It is so one can say that learning English through technological integration can have positive impacts on the engineering students in Mehran University of Engineering and Technology.

Learning of English can made the students competent at the global level. The student of Electrical department stated likewise as:

*“To learn English proved beneficial for us. We have made theme quipped with the knowledge that is very much effective on the global level and it will be further eased through the technological integration. It can make the learning experience up to the global mark and it will be very much important for the students that are studying to get the benefit out of it because of the fact that it will help them in the long run in order to have skills that could make them compete at the global level.”*

### **Engineering Student (Electrical) Department**

According to 80 percent of statements given on integration of technology by the engineering students, it can be said that the learning of English will make them effective and their efficiency will be increased with its learning. This can make them excel in their academic life.

The students even stated that the institute should make policies that promote the culture of learning the language through technological integration. It can also give students the confidence that they need in order to excel in their respective fields. So according to all the data that is collected the author agreed to both the hypothesis that the language learning through technological integration can overall increase the efficiency of the engineers. Language learning through technological integration can give the engineers the confidence that will be required in order to cope with challenges of the professional and academic lives. so one can say that the technological integration has various positive impacts on the life of the engineers and it can make them capable enough in order to meet with the challenges of world and compete at the global level. However, without the technological integration, it will hard to bring changes in educational system.

After analyzing the data collected through the interviews of engineering students of Mehran University of Engineering and Technology (MUET), Jamshoro, Sindh, agreed to this point that the learning of language through technological integration has positive impacts on the engineering students. It is because the native language in Pakistan is not English. Therefore, in order to learn another language is hard and to learn language through integration of technology makes it very much effective in their respective engineering fields. According to the engineering student of (Civil) department stated that:

*“Learning the language through technological integration is observed to increase overall efficiency. It increased once we learned the language because of the fact that now a days everything in the country and globally is taught in English at the level of higher education.”*

### **Engineering Student (Civil) Department**

Similarly, the engineering student of electronic department further validated the above statement with agreeing to the positivity of technological integration in learning English. According to the statement:

*“We engineers compete at the global level as well. The experience we had learning the language through technological integration was very much effective in learning process. It is fast and untiring way to learn English. The global standards met with overall increased academic performance”*

### **Engineering Student (Electronics) Department**

The majority of students agreed to this fact that they were able to get more knowledge that proved helpful for them in order to compete at the global level. The students stated to increase in ability to work for betterment of state. One of the students of Mechanical

engineering department stated to request Government to revise polices of education and must integrate technology in learning. According to the student:

*“The government should made policies that could help the education sector to promote the technological integration at secondary level. It would enable the students to gather more knowledge at the higher level. When the students are taught the language at the initial level through the technological integration then the base of language would be polished at the higher level.”*

### **Engineering Student (Mechanical) Department**

Therefore, according to the students, the overall efficiency and their capabilities would enhance at the secondary level. So, with the learning of English through the technological integration, the engineering students will have the confidence to excel themselves on the global level. The study shows that in Pakistan, when the engineers are taught the language through the technological integration, then the efficacy and their overall effectiveness are enhanced. Therefore, it could be perceived that the overall impact of learning English through technological integration is positive on the students of engineering field in Pakistan. It is also a fact that the learning of English in Pakistan is considered important in Pakistan.

After analyzing the responses of the engineering students on English, it can be assumed that English considered important and second most spoken language after Mandarin.

Majority of the non-English speaking countries are influenced by the English language. The third world nations that include south Asian countries, like, Bangladesh, Pakistan and India have English as their second language. From the responses of students, it was further analyzed that the use of technology to learn English increases the students' engagement. It is, when the engagement of students is enhanced; the overall learning process is also increased. With the enhanced learning phase, the students of engineering field agreed to the fact that if integration of technology is made the part of English course, it can overall result into increased learning process.

Learning and command on English is much important in context of Pakistan. The students agreed to this fact that without English, one cannot seek proper job in market. The integration of technology can fill the educational gap between their teachers. They can easily approach to their teachers even outside the premises of classroom context.

The students from civil, mechanical, electronic departments have emphasized more to allow the integration of technology in learning of English with visualization and easy approach to internet access. According to the students, this can create motivation to learn English with adoption of different collaborative techniques. This can make classroom learning environment much relax and easier.

However, when it comes to contextual differences, the students gave their verdict clear that technological integration to practice different exercises of language have cleared the differences of culture, creed and caste. The only focus is to improve proficiency in language learning skills of students and teachers.

The engineering students need to have grip on fundamental English lingual skills that could improve overall effectiveness of the engineering students in international market.

According to the responses of students from five respective departments, the present research is revolutionized and carried in English only. Therefore, it is really significant for them to keep themselves up to date with the modern trends of research

around the World. This will ultimately result into development of their educational and occupational lives.

The effectiveness of language skills in engineers can be further enhanced by learning of English with practice of their communication skills to native speakers of English. The communication with native speakers is possible through global access to native English countries. The global effectiveness to speak in English is considered important. It is because English is the language of the modern business from all the tech giants to the all multinational companies. The language inside international organization is English. Therefore, learning of English will help engineers to overall enhance effectiveness in their respective engineering fields.

Therefore the hypothesis developed in this following study holds true that the technological integration in learning of English for engineers makes them more efficient.

The responses of the students tend to found that in almost all around the globe, the engineering courses are conducted in English except China. The technological integration has been found to help instructor and students both to learn the language efficiently.

Therefore, the integration of technology made learning English easier with internet and with different technological gadgets in the classroom. It has revolutionized the overall learning experience of to learn and teach English. It is much easier for the engineers as all that the literature and the theoretical concepts regarding English from parts of speech to the voices of sentences all are available at just one click through technological integration. It has made the access of the content related to the language easy for the engineering students. So far, the role of the instructor is important in the integration of technology to teach and learn language. The teacher guides how to use technological integration for the best of engineering students.

## **Discussion**

The technological integration is important as far as the students of engineering field are concerned worldwide. If one talks about China, the whole educational system is in Mandarin language. However, in Asia, the educational system over the World has started using the technological integration to teach English, still some important countries like, Africa are facing problems regarding the technological integration in language teaching because the instructors are not well aware of how to use the technology to teach. There is much incompetency and it results into learning deficiency among the engineering students with overall less effect on their academic and professional lives of these particular regions.

In developing countries of the World, technological integration is still missing in some parts of African and other third world states. The students of third world nation have less intellectual and academic growth compared to the states where technology is used to learn different language courses. Technology for the purpose of learning English has helped people from any race and culture or the country to explore more with its usage. The students can learn English without the help of physical instructor from any nook of the World. It has created a revolution to make English as the language of global affairs. Engineers from all around the globe except China can understand and speak English fluently. Engineers from the Asian context have tried to improve their proficiency in English. Though, it is not their national language, however, they have learnt it as their second language. The students of engineering field having English as not their first language can use technological gadgets of their advantage and bring excellence in their proficiency to use English through technology.

Technology now a days have enabled people to connect with the internet and to subjects from anywhere in the world. One can have an easy access to learn English without the instructors. The instructors even need to use the technology in order to keep themselves up to date with the recent development in language changes worldwide. It will help them to

teach effectively and prove for the best of its possible usage. It can result into development of better communication skills between teachers and students. The better grip on work and compete at the global level is only possible with the integration of technology to learn English language. Engineering students are well aware with the use of technology. This can readily prove beneficial for them to increase social competence.

### **Recommendations**

- After analyzing the responses from study, it is recommended that the learning of English holds a very significant place in the engineers' academic as well as the professional life. Therefore, there it is a great emphasize on part of the institutes design the course materials that effectively deliver the knowledge in English language with the integration of technology in future.
- The teachers in academic institutes should have to be given proper knowledge on how they can handle the technological gadgets for learning the language. If the teacher is not well aware of tools that are used for purpose of learning, then the teacher will not be able to convey the knowledge effectively to students. Therefore, first, the teachers themselves need to be taught the procedure to use the technological gadgets.
- The world is moving towards changing trends of teaching the language courses. The most common adopted method in western paradigm is the technological integration in academic institutes. Therefore, the students and teachers should need to pay research on the new domains of technological gadgets. This would help them to learn and teach English language more effective in Sindh region of Pakistan. It is only possible, when the new domains must prove beneficial for the students in learning and in their research processes.
- It has become necessary for the students and teachers of today to pay research on new domains of technology with proper operation. This can overall help to increase the learning experiences.
- Learning processes and the curriculum of the education system in secondary school should be in English. It can improve the skills of students in English at their higher level of academic career. This can even polish the lingual skills of the students and teachers.

### **Conclusion**

For the positive impacts on learning English through technological integration, the instructor should be well aware of the technological usage. If the instructor is not fully aware of the technology and its different sources, then the instructor will lose confidence in teaching. It is so, the instructor guides the engineering students to learn English and if the instructor is not aware of the technology, then how it would be possible to teach students English through the technological integration. So for the technology to be effective for future studies, the instructor should be efficient in use of technology. The technological integration in view to learn that can only be positively achieved if the instructor is first taught how to use the technology effectively. It is then the engineering students can be positively benefitted all over the globe.

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