



IDENTIFYING THE BARRIERS IN ORAL COMMUNICATION ENCOUNTERED BY ENGINEERING STUDENTS: A CASE STUDY OF ENGINEERING UNIVERSITIES OF SINDH, PAKISTAN

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Abstract- Oral communication skills are important in the engineering career in 21st century. It is observed that engineering students face challenges in learning them. The teachers are, therefore, supposed to detect the oral communication barriers for addressing them in their teaching. Teachers of English language in Pakistan face some challenges to address the oral communication barriers of engineering students. This research study intends to explore the oral communication barriers encountered by Pakistani engineering students from the teachers' point of view. To achieve the research objectives of this study, data was collected through two instruments; literature review and semi structured interview. Semi-structured interviews were conducted from the English language teachers who are teaching oral communication skills to the engineering students. The collected data was analyzed through thematic analysis method. The findings of this study identify that engineering undergraduates face psychological, linguistic, social, and some others barriers in learning oral communication skills. Moreover, the teachers asserted that they were using modern teaching methodologies to address the oral communication barriers. Teachers also agreed that the different teaching methodologies such as CLT, ALM, and mix methods can effectively address the barriers of oral communication. It is highly recommended that oral communication skills of the engineering students need more attention and teachers should adopt modern teaching methods to address the barriers.

Keywords: Oral Communication Barriers, Psychological Barriers, Social Barriers, Linguistic Barriers, CLT, ALM, Engineering Students.

I. INTRODUCTION

Communication skills are imperative for a student's academic achievement and future profession. In contemporary world, students should not only acquire technical knowledge, but also grip over the soft skills to increase their academic knowledge and job opportunities. According to the existing researches, there are number of barriers in oral communication which create hindrances for the student to communicate in English language. The barriers in oral communication include linguistic, psychological and teaching methodologies. Linguistic barriers are the major hurdles which students face during their study time. The lack of sufficient vocabulary, semantics, phonology and syntax are the core problems of oral communication. Moreover, the lack of self-confidence, anxiety, shyness, stage fear, peer pressure and fear of making mistakes are barriers in oral communication. Similarly, oral communication barriers are also encountered by engineering students of Sindh Pakistan.

According to the Kakepoto et al, (2013) Pakistani undergraduate engineers possess poor oral communication and presentation skills because of ineffective teaching environment provided to them during study period. In addition to it, academic courses presented by engineering universities mostly focus on technical knowledge of engineering undergraduates in a result, engineering students have weak oral communication skills when they join the place of work. As result of weak oral communication skills, they are failing to acquire better job opportunities in local market and multinational organizations. Hundreds of studies are done over students' lack of communication skills like oral presentation and communication skills (Bemama, 2010; Tay, 2008). The present academic courses presented by Pakistani engineering institute do not pay attention on the training of students of engineering for job market (National Employment Policy of Pakistan, 2007). Therefore, it is the task of engineering institutions to appropriately educate engineering graduates for job market. Subsequently, students shall be capable to join international organizations and would give their services in the economic growth of a country.

Pakistani engineering institutes mainly pay attention on the grammatical knowledge of the students. Resultantly, it is a major reason that they believe that grammatical knowledge is very important skill for

students of engineering and it will help students to carry out productive duties at work place. Whereas, owing to globalization engineering students of Pakistan have to acquire strategic competence that can help them to do jobs efficiently at modern industries. Moreover, researcher Sattar Ansa et al. (2011) carried out a research on linguistic needs of Pakistani textile undergraduate engineers. The findings of that research discovered that undergraduate engineering students were motivated to grip over English language for commerce intention and they chose to learn English and focused on strategies of communication contrast to grammar translation method (GTM). In addition to it, the outcomes of the study further signified that English teachers were in support of teaching grammar rules to the students.

Researchers Kakepoto, et al. (2012) conducted a study on oral communication skills of undergraduate engineers at workplace and pointed out that oral presentation and oral communication skills performed significant role for engineers at job market and hurdles like poor self-confidence level, limited stock of vocabulary, non-availability of appropriate environment and insufficient knowledge of English language creates difficulties in productive verbal presentation attainment of engineering graduates. Similarly, one of the greatest problems for students of engineering is that they cannot speak English language fluently. Hence, this study will focus on those problems which are creating hindrances in the learning of the verbal communication

Purpose of the Study

This study is concerned with discussing, explaining and categorizing the most common barriers of verbal communication faced by Pakistani undergraduate engineers with the aim of providing English language teachers of engineering universities of Pakistan with productive insights they can use in their teaching communication skills. This study will definitely remove the students' barriers and will improve their oral communication skills.

II. LITERATURE REVIEW

For twenty years, oral communication skills are commonly recognized as the delicate skills of a language and have gained considerable importance in the field of engineering. Hence, effective verbal communication skills are demanded from newly graduate engineers have risen to serve the needs of modern industry. Consequently, the requirement of satisfactory skills of verbal communication from engineers cannot be overlooked in swift progress of world economies. The employees of MNCs having strong skills of verbal communication, augment the enterprise of industries. Therefore, undergraduate engineers should grip over verbal communication skills in their university time period to avail sound opportunities in their fields. Moreover, technical expertise may help the students in their university time where as strong verbal communication skills will benefit graduate engineers to successful job career. Regrettably, contemporary Pakistani undergraduate engineers have poor verbal communication skills. However, there is a yawning gap and difference between achieved communication skills of the students and demanded expertise and skills in job market (Radcliffe, 2005; Patil, 2005). Engineering institutes of Pakistan focus on the technical knowledge of the students and ignore communication skills.

Moreover, Marcus Kho Gee Whai & Leong Lai Mei (2015) conducted a research on the polytechnic students of Malaysia and the findings of their research study were lack of confidence, lack of English expertise, dearth of opportunities to practice and learners' perception; it is problematic to deliver oral presentation are the major difficulties faced by engineering and commerce students to deliver academic oral presentation. In addition to it, Manthajyothi Kumari (2016) conducted her research study in India on the communicative competence of Indian students of engineering. She found that undergraduate engineers faced communicative challenges due to the vernacular medium background, afraid of committing errors, shyness, lack of self-confidence and low motivation from faculties.

Similarly, another study was conducted by Kakepoto et al (2013) to find out the communication apprehension of Pakistani undergraduate engineers. The findings, assert that because of communication apprehensions students of engineering possess poor communication skills, poor credibility or confidence and face nervousness.

Furthermore, William Jordan et al., (2007) explained that students with extreme communication apprehension did not take part in class group discussions in contrast to the low hesitant engineering

students which creates hindrance in their oral communication activities. Therefore, engineering students with high apprehension are mostly failed to get a good job after getting graduation degree owing to communication apprehensions.

Research Questions

1. What are the perceptions of L2 teachers towards the oral communication barriers faced by undergraduate engineers?
2. What teaching strategies are adopted by English Language teachers to address the oral communication barriers encountered by students of engineering?

III. RESEARCH METHODOLOGY

This study used qualitative research approach because qualitative research is inductive in an essence and a researcher usually investigates connotations and better understanding of the circumstances (Levitt et al,2017). In addition to it, this study used qualitative thematic analysis method to analyze gathered data from the two sources; literature review and semi-structured interviews. Literature review is described by Webster & Watson, (2002) that a productive and well-organized review as a research method develops firm bedrock for promoting knowledge and helps to develop a theoretical framework. And semi-structured interview defined by Hitchcock and Hughes (1989: 83) that the semi-structured interview provides a greater opportunity for the interviewer to dig out a deeper analysis by the feedback of the interviewee. First data was collected from the existing literature on oral communication barriers. Second data was gathered from the English language teachers of two engineering universities of Sindh Pakistan through semi-structured interviews. This study collected data from the 10 participants 7 male and 3 female teachers as to give equal consideration to both genders. Participants were selected through purpose sampling as Paul J. Lavrakas (2008) explains that main objective of purposive sampling is to select a sample which can be rationally supposed to be the representative of target community. In last this thesis employed interpretive paradigm to know the personal experiences of the teachers as Reeves & Hedberg (2003) explained that interpretive paradigm emphasizes the necessity of investigating in context.

3.1 Data Analysis

This study used qualitative thematic analysis method to analyze gathered data. Boyatzis (1998) explained thematic analysis as it is a method for discovering, evaluating, arranging, explaining, and describing themes found from a gathered data. The data was collected from the two sources. First data was collected from the existing literature on oral communication barriers. Second data was gathered from the English language teachers of two engineering universities of Sindh Pakistan; Mehran University of Engineering Technology Jamshoro(MUET) and Quaid-e-Awam University of Engineering, Science and Technology Nawabshah (QUEST), through semi-structured interviews. Once the data was gathered it was divided into 4 main themes and 17 sub themes.

The study used a systematic literature review method to search out the most related papers and articles to the topic oral communication barriers faced by engineering students. Furthermore, it also helped to generate main themes and sub themes which covered the all aspect of the topic. Once this phase was completed researcher approached the teachers for interview.

All participants of the research were provided a consent form, for conducting the interviews keeping ethical consideration. Semi structured interviews were recorded with two devices such as cellphone phone and a laptop to avoid loss of any data. When the process of interview was completed, then recorded audio data was transcribed into verbatim through express scribe software.

IV. FINDINGS AND DISCUSSIONS

It was observed that teachers were reluctant to participate in the research study due to their busy schedule. The researcher repeatedly requested and they agreed to be part of the research. The researcher

started his interview with formal introduction of the research topic and asked second question of his research study from the participants. They responded that there are many barriers which engineering students face in oral communication. The researcher organized those barriers into four categories on the basis of frequency of responses from participants. Furthermore, researcher filtered out the responses and organized them into 4 main themes and 8 subthemes.

1 Psychological Barriers. 2 Linguistic Barriers 3.Social Barriers 4.Other Perceived Barriers

4.1. Psychological Barriers

4.1.1. Low Motivation

When participants were asked that what are the psychological barriers which students of engineering face in oral communication, few of them thought for a while and answered that low motivation of the students is the one of the psychological barriers which engineering students encounter in oral communication as one of the participants share his teaching experience:

“The main barrier in students’ communication competency is low degree of motivation to participate in communication activities such as oral presentation, group discussion and class debates”

Similarly, another teacher T-5 perceived the same that engineering students mostly came from the rural areas where mostly English teachers taught them English language as subject not as a language. So, when they came in the university, they were found less interested to the oral communication activities. Same thought was perceived by the T-7, T-9 and T4.

To conclude the responses of participants it can be said that low motivation was one of the barriers in oral communication. Low motivation among engineering students was due to the inappropriate teaching methodologies and they were not given proper exposure of the target language.

4.1.2 Inferiority Complex

It was observed by the researcher that teachers were feeling tiredness to speak more on psychological barrier but researcher continued the discussion by posing question that what other psychological barriers engineering students encounter in oral communication. A good number of the participants of this research work perceived the same that inferiority complex among engineering students was one of the barriers in their oral communication. As T-4 shared his teaching experience and asserted that:

“I have observed that less eloquent students possess inferiority complex and due to this complex, they are always reluctant to participant in oral communication activities of the class”

Researcher continued the discussion during interview and asked from the teachers, *“why this complex develops among students”*? Participant T-2 responded that this complex developed due to students’ poor educational upbringing, teachers’ attitude and the poor proficiency in English language made them hesitant to communicate with high proficient peers and teachers.

Verbatim of the teachers explained that inferiority complex of the engineering students restricts them to express their thoughts even though they had enough knowledge about the subject matter but due to low proficiency of the target language they usually avoid to share their ideas. Moreover, teachers’ attitude and high proficiency of the peers and teacher make them reluctant to take active part in the communication activities.

4.2. Linguistic Barriers

4.2.1 Poor Grammar knowledge

When researcher put question before the participants that what are linguistics barriers encountered by students of engineering in oral communication. They responded that poor grammar knowledge was one of the linguistic barriers. This response was commonly found as the first when from the interviews of the teachers, they all had put *poor grammar knowledge on the priority*. Poor knowledge of grammar creates hindrance for a speaker to make proper sentences which contain meaning and purpose of the utterances.

While enquiring from the participants about the grammar strength of the engineering students, many of them opined that they possessed inadequate knowledge of the grammar which highly affected their oral communication skills. As one teacher T-10 opined,

“Grammar competence of the engineering students is poor due to this they cannot make meaningful sentences while communicating in English language. They usually make grammatical mistakes while delivering any presentation or speech”.

Furthermore, researcher, asked question; what kind of grammatical errors are committed by engineering students? Teachers after thinking for some time then described some grammatical errors which are committed by the engineering students in oral communication. Some of the grammatical errors are mentioned below by T-8 and assert,

“Many of the undergraduate engineers are unaware about proper usage of subject verb agreement. In most of their utterances plural subject agrees with singular verb and vice versa. E.g., They plays cricket”

From above responses of teachers, it can be said that most of the engineering students had some basic grammar issues which depicted that they had poor knowledge of the grammar due to these their oral communication skills were highly affected. Hence, students should focus on the grammar as to avoid the error and overcome this barrier of their oral communication.

4.2.2 Semantic Problem

It is perceived from the existing literature that semantic problem is a barrier in oral communication because the meaning of words and sentences is not conveyed properly to the listener. Same barrier was identified from the responses of the participants. Many of the participants shared their teaching experience and voiced that engineering students had semantic problem due to this; their oral communication skills were highly affected. As one of the teachers T-9 uttered,

“Engineering students usually speak inappropriate words in their oral presentation and class discussions which do not convey the essence of their thoughts. They also speak unstructured sentences which lack proper meaning and not related to the subject matter”

In the same pattern, T-6 assumed the same as T-9 perceived about inappropriate choice of words. T-6 pronounced,

“Students mostly remember the words without their contextual meanings. When they speak, they only focus the denotation meaning of the words and do not pay heed to the connotation meaning. This practice creates gap in communication between speaker and listener eventually this affects their oral communication”

To sum up it, the perceptions of participants assert that engineering students use inappropriate words, unstructured sentences, in their oral communication which cause hindrance in delivering and receiving proper meaning, hence, they face semantic problem.

4.3 Social Barrier

4.3.1 Poor Educational Background.

When the question was changed it was observed that participants interest was develop to share their ideas. When, teachers were asked about the social barriers in oral communication faced by engineering students, they opined that one of the main barriers in oral communication of the students of engineering was their poor educational background. As one of the teachers T-10 gave his views,

“Engineering students mostly come from the ruler areas and their schooling was done in Sindhi medium. They were not given adequate exposure of the English language. When they come to the university they encounter with entirely different environment. They feel too much difficulty in communicating with teachers in English language”

Furthermore, one participant T-4 explained that due to poor educational background of the engineering they encountered many barriers in their oral communication. He identified different aspects such as

fluency, pronunciation, hesitation, and lack of confidence. He further illustrated that engineering students are not fluent in speaking which asserted that they were not given such environment in their early education. Hence, they feel difficulty while speaking.

To sum up it, participants assert that there is no denying fact that poor education of engineering students highly affect their future learning. The students were not given proper exposure of the English language, they were mostly taught in the mother tongue and exposure of target language was not given to them hence they feel difficult in speaking.

4.3.2 Cultural Norms as a Barrier

It is perceived from the existing literature that culture norms and values of the society greatly affect the oral communication of the student. Most of the participants perceived that cultural norms of the engineering students created hindrance in their verbal communication. As one of the participants T-3 mentioned,

“Some of the students do not use English language frequently due to their cultural barriers. They think that using a foreign language will affect their mother tongue. They think that English will replace their mother-tongue, thus, they do not like to communicate in English language”

Moreover, some teachers opined that cultural values made rigid mentality of some students. Hence avoid communicating in English language. As one of the participants T-1 gave her opinion that engineering students were mostly from rural areas, where the interaction between boys and girls is very restricted. Therefore, both genders feel hesitation to speak in front of each other. Furthermore, some teachers asserted that cultural norms sometimes demotivated students to speak English in their social gatherings. Responses of T-3, T-6 and T-4 matches with opinion of T-1.

From above responses of the teachers, it can be assumed that cultural norms, values, attitudes, traditions, cultural language and stereotype thinking are the greatest barrier in the oral communication skills of engineering undergraduates. These norms discourage students to exercise English language in their routine life conversations. Moreover, criticism from friends and society decreases the motivation level of the students. In a result, this criticism becomes a barrier in their oral communication.

4.4 Other Perceived Barriers

4.4.1 Communicative Incompetence

The researcher developed the interest of the participants by asking new question. One of participant T-3 shared her views that communicative competence is the topic of linguistics which asserts that learner should have the knowledge of the grammar along with the art of using the language in particular situation and context. Most of the participants opined that majority of the engineering students were communicative incompetent thus, they cannot speak smoothly. It is a barrier in their oral communication. As revealed by the T-7 that:

“Undergraduate engineers have much knowledge about the topic but due to their communicative incompetency they avoid to communicate with their fellow beings and the teachers”

Moreover, teacher T-2 asserted that engineering students only focused on the grammar but they ignore to use the language according to social context & requirements of the situation. Additionally, she explained that engineering students could not speak well in different context due to their communicative incompetence. Adding more to it, T-1 explained that he had observed that students could not speak for more than two minutes on the topic during their oral presentation and class group discussion which assert that they are incompetent in communication.

To summarize the opinions of the teachers it can be understood that engineering students did not have communication competency therefore, they felt difficulty to speak English. Moreover, teachers and learners mostly focus on the linguistic competency and ignore the communicative competence. In a result, communicative incompetence affects the oral communication of the engineering students. Teachers should pay equal attention to the both competencies of the learners, in this way they will develop effective communication skills of the students.

4.4.2 Lack of Communication Strategies

When researcher asked that do engineering students apply communication strategies in oral communication? Most of the participants stated that communication strategies were not used by engineering students even these help individual to achieve the objectives of his communication as one of the teachers, T-1 shared her opinions,

"Undergraduate engineers do not plan some strategies before delivering any speech or oral presentation in the class. They make ineffective presentations which do not catch the attention of the listeners"

Furthermore, teachers explained that the communication strategies are significant for the effective communication, unfortunately students lack communication strategies due to this their communication skills are not efficient. Participant T-2 shared her views that engineering students do not apply some strategies in their communication. Their choice of words is not according to the context because they do not have knowledge of using proper vocabulary. T-3, T-10, T-7 and T-5 also gave similar thoughts.

To conclude, the explored and collected data from the perceptions of the teachers denote that engineering students deal with multifaceted challenges in their communication including undefined objectives and planning, inappropriate choice of words, ignorance of timeline, irrelevant questions, disorganization of material, unaware about audience and their interests, monotonous nature of speech.

4.5 Teaching Strategies Adopted by L2 Teachers to Address the Oral Communication Barriers

When above question was asked from the participants of this study, they were seemed as agreeable to share their teaching methodologies for addressing the oral communication barriers of the engineering students. Their faces were glowing as they were satisfied with their teaching methods which gave a good impression to the researcher. From the responses of participant researcher concluded that ELT teachers were using various teaching methods for addressing the oral communication barriers of the engineering students. T-2 expressed her teaching technique with blushing face and mentioned,

"I used to apply communicative language teaching method (CLT) and I usually divide the class into groups and give them general topics for discussion and inquire every student's opinion about the topic and appreciate his ideas. This teaching method can remove hesitation and inferiority complex. It can also boost the confidence and motivation of the students"

Moreover, T-5 shared his teaching method and described that he used to prefer audio lingual method of teaching for oral communication and he thought that it really works and helps students as well as teacher to remove the psychological such as lack of confidence, hesitation, inferiority complex and low motivation and this method also helps students to develop contextual vocabulary and apply communication strategies during any dialogue delivery.

To conclude, the English language teachers who are teaching oral communication to the engineering students asserted that they apply modern as well as traditional teaching methodologies to address the psychological and linguistics barriers of the undergraduate engineers. Some teachers said that they adopt CLT and ALM teaching methods while some teachers said that that they apply GTM.

4.6 Discussion

This research study reveals that engineering students face psychological barriers such as low motivation, lack of confidence, hesitation, anxiety and inferiority complex in oral communication. The some of the results concur with pervious study conducted by kakepoto et, al (2013) which assert that engineering students of Pakistan encounter psychological barriers in their oral communication. Adding more to it, this study assert that engineering students of Sindh, Pakistan encounter linguistic, social and psychological barriers, the finding matches to some extent with previous study of M.Arif et, al. (2019), they conducted a research study on the communication apprehensions of undergraduate engineers. The results prove that there are three perceived barriers in oral communication apprehensions which include psychological, social and linguistic barriers.

Moreover, some findings of this study are novel such as linguistic incompetency and lack of communication strategies are also the core barriers in oral communication which are faced by the engineering students of Sindh, Pakistan.

The results of this present study mention that English language teachers of engineering universities of Sindh Pakistan use modern teaching methodologies to address the oral communication barriers of the undergraduate engineers. These results match with previous study of M. Arif et al, (2016) they conducted their study on the 20 ESL teachers of Pakistan and found that 70% of teachers claimed that they practiced updated teaching methodologies to teaching English language. In addition to it, the findings study reveals that L2 teachers apply CLT teaching methodologies to address the psychological barriers of the engineering undergraduates. Moreover, this study also found that English language teachers apply grammar translation method (GTM) and audio-lingual method (ALM) teaching strategies to address the linguistics barriers of the undergraduate engineers.

V. CONCLUSION AND SUGGESTIONS

The results of this research study explain teachers' perceived barriers in oral communication faced by engineering students slightly concur with previous studies. However, present study has sort out some other barriers which were not found in the previous research studies. The researcher has tried his level best to find out core barriers in oral communication and explored the 8 barriers; which are divided into four categories that include psychological, social, linguistic and other perceived barriers. Furthermore, the findings of this research work can be summarized as; low motivation, inferiority complex, poor grammar knowledge semantic problem, poor educational background, cultural norms, communicative incompetency and lack of communication strategies are core barriers which engineering students of Pakistan face while speaking and learning oral communication skills. These barriers seriously affect oral communication of the engineering students of Pakistan. Therefore, it is suggested by English teachers that these barriers of oral communication faced by engineering student can be overcome by effective teaching methodologies. Hence, teachers are advised to give a proper attention to the students as to remove these oral communication barriers. Moreover, the findings of this research study found that most of the English teachers apply old methods of teaching such as GTM and teacher centric approach was practiced for teaching oral communication to the engineering students in early years of their education. Therefore, this study suggests that new teaching methodologies such as ALM and CLT should be adopted to address the oral communication barriers of Pakistani engineering students.

Similarly, Engineering universities have some responsibility in building effective oral communication skills of the students. They must increase the number of the English classes per week as well as the number of semesters should be raised from four to eight, as students get conducive environment and enough time for practicing and learning English language. Adding more to it, engineering university should design English courses with more oral communication activities.

REFERENCES

1. Bashar, Khair. And Alam Zeb (2019). Oral Communication Barriers of BSSE Students of Abasyn University, Peshawar Campus. *DilveDilbilimiÇalışmalarıDergisi*. 10.17263/jlls.576577.
2. Bemama (2010). Five reasons why graduates are unemployed. Retrieved October 15, 2012, from *the star.com.my/news/story*.
3. Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage.
4. Dar, M. F., & Khan, I. (2014). Oral communication apprehension among undergraduate engineering students in Pakistan. *Journal of Education & Social Sciences*, 2(2), 144-153.
5. Hitchcock, D. H., Hitchcock, G., & Hughes, D. (1995). *Research and the teacher: A qualitative introduction to school-based research*. Psychology Press.
6. Jordan, W. J., & Powers, W. G. (2007). Development of a measure of student apprehension toward communicating with instructors. *Human Communication*, 10(1), 20-32.

7. Kakepoto, I. (2013). *Oral Presentation and Communication Skills in Workplace Environment among Engineers and Engineering Students in Pakistan* (Doctoral dissertation, UniversitiTeknologi Malaysia).
8. Kakepoto, I., Habil, H., Omar, N. A. M., Boon, Y., & Hamdani, M. (2012). Oral communication skills of engineering students of Pakistan in perspective of industrial internships. *International Journal of Applied Linguistics & English*.
9. Kakepoto, I., Said, H., Habil, H., Umrani, A. I., & Memon, I. A. (2013). Analyzing oral communication apprehension prevailing among engineers in engineering workplace of Pakistan. *Journal of Economics and Sustainable Development*, 4(3), 255-261.
10. Kho, M. G. W., Abdullah, N. S. A. B., & Leong, L. M. (2015). Oral presentation difficulties–Experience of students at a polytechnic in Sarawak. *Issues in Language Studies*, 4(2).
11. Lavrakas, P. J. (2008). Purposive sample. *Encyclopedia of Survey Research Methods*, 2455.
12. Levitt, H. M., Motulsky, S. L., Wertz, F. J., Morrow, S. L., & Ponterotto, J. G. (2017). Recommendations for designing and reviewing qualitative research in psychology: Promoting methodological integrity. *Qualitative psychology*, 4(1), 2.
13. McCorskey, J. C., & McVetta, R. W. (1978). Classroom seating arrangements: Instructional communication theory versus student preferences. *Communication education*, 27(2), 99-111.
14. National Employment Policy (NEP). (2007). *Pakistan Policy planning cell*. Ministry of labor and manpower (1-110). Islamabad.
15. Patil, A. S. (2005). The global engineering criteria for the development of a global engineering profession. *World Transaction on Engineering Education*, 4(1), 49-52.
16. Radcliffe, D. F. (2005). Innovation as a meta-attribute for graduate engineers. *International Journal of Engineering Education*, 21(2), 194-199.
17. Reeves, T. C., & Hedberg, J. G. (2003). *Interactive learning systems evaluation*. Educational Technology.
18. Sattar, A., Zahid, S., Mahmood, M. A., & Ali, N. (2011). The linguistic needs of textile engineering students: A case study of national textile university. *English for Specific Purposes World*, 11(33), 1-24.
19. Simons, H. (2009). Whose data, are they? Ethics in case study research. *Case study research in practice*, 96-113.
20. Soomro, M. A., Memon, N., & Memon, S. A. (2016). Concept of Best Practices in English Language Teaching to Pakistani ELT Fraternity. *Advances in Language and Literary Studies*, 7(4), 119-123.
21. Soomro, M. A., Siming, I. A., Channa, M. A., Shah, S. H. R., Naeem, N., & Abbasi, A. M. (2019). An analysis of English oral communication apprehension and anxiety of engineering undergraduates in Pakistan. *International Journal of English Linguistics*, 9(2), 162-173.
22. Tay, G. (2008). Grads not good enough. *The STAR Online*.
23. Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *MIS quarterly*, xiii-xxiii.