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Beyond the Technical Barriers: Oral Communication Barriers of Engineering Students of Pakistan for Workplace Environment: Preliminary Results

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Abstract
Engineering organizations demand soft skills of engineers to augment its business worldwide. Technical skills alone are never sufficient for engineers to perform workplace jobs efficiently in this age of industrial and commercial advancement. This study aims to investigate oral communication barriers of engineering students that can potentially influence their job performance at workplace. One hundred (100) engineering students were surveyed from an engineering university of Pakistan. Since respondents were drawn as only final year engineering students thus, purposive sampling method was employed. Data were analyzed statistically using computer based software Statistical Package for Social Sciences (SPSS). The gathered information was coded and percentages were determined for oral communication barrier variables included in the questionnaire. The results of the study indicated that poor English language, fear and anxiety, lack of motivation and overcrowded classroom were oral communication barriers of engineering students. The results are in line with other communication studies on oral communication barriers of engineering students available in literature review. These findings would assist engineering universities of Pakistan to prepare better engineers for the workplace.
Keywords: Oral Communication Barriers, Engineering Students, Workplace Environment

1. Background of the Study

Communication skills often called soft skills or people skills have gained much importance in engineering profession during the past two decades. Thus, expectations from modern engineering graduates have increased that they need to possess strong communication skills to manage industry jobs and increase productivity of organizations. Employers also put special emphasis on soft skills of engineering graduates to boost business of organizations at national and international level. Thus, the pressing need for effective oral communication skills of engineering students cannot be ignored in this fast growing age of economies. Engineers with effective oral communication skills keep advantage over engineers who fall short in this skill. Thus, they avail better job promotions with other pricks and privileges and occupy a central position at workplace. In return they attract industrialists to buy their company products and increase financial output of organizations. Thus, in business arena oral communication skills of engineers are highly valued and given weightage. Conversely, engineers who are deficient in this skill are considered burden on the budget of organizations because they fail to promote business of organizations. In view of this, looking at the merits of oral communication skills modern engineering graduates need to acquire strong oral communication skills if they want to be successful at workplace. Thesis (1996) noted that technical competency may be paramount for engineering graduates at entry level but communication skills dominate mid career of an engineer. Unfortunately, modern engineering graduates possess poor oral communication skills, and a disparity exists between the acquired skills of engineering students and the required skills at workplace (Radciffe, 2005; Patil, 2005). The major reason of this disparity relies on the phenomenon that engineering universities of Pakistan mainly tend to focus on technical skills of engineering students. Thus, it raises a need to develop oral communication skills of engineering students, since they have to work in multinational and multicultural organizations (Patil & Codner, 2007). Engineering universities of Pakistan should never forget that due to opening up of new business trade markets around the globe has necessitated a need that engineering students need to possess effective oral communication skills. This is because the way of doing old fashioned things can effective but no more efficient (Redmann & Kotrlick, 2004) in this modern age of global industrialization. Moreover, the organizational influences such as increased technology and competition have forced engineers to play diverse roles (Farr, 1996) at workplace. Thus, in order to meet the challenges of modern industry engineering students should acquire latest skills and knowledge to perform jobs efficiently at workplace.

The Partnership for 21st Century Skills (2007) states that 81% jobs by 2014 will involve communication with customers, suppliers and employees. Thus, engineering students need to possess a complete set of

communication skills such as communication, oral communication and oral presentation skills to meet the demand of modern industry. Truly speaking, engineers and engineering students both face oral communication barriers in academies and the workplace. A study was conducted by Kakepoto Inayatullah et al. (2012) on "New Trends in Modern Industry and Oral Presentation Barriers of Engineers of Pakistan". The results of the study revealed that engineers faced oral presentation barriers at workplace. If the situation is analyzed there are certain reasons for oral communication barriers of engineering students.

First, the major focus of engineering universities of Pakistan tends to remain on technical knowledge of engineering students despite the fact that oral communication skills play paramount role for engineers at workplace. Thus, there is a need to develop oral communication skills of engineering students at university level. Kakepoto Inayatullah et al (2012) conducted a study on "The Picture of Modern Workplace Environment and Oral Communication Skills of Engineering Students of Pakistan". The results of the study revealed that English language was a barrier for engineering students. The second oral communication barrier of engineering students is fear and anxiety. The major reason for fear and anxiety of engineering students is that they receive inadequate oral communication opportunities in classrooms in terms of oral presentations, peer discussions and conversations. Thus, engineering students tend to keep avoidance behavior from oral communication and prefer to take back seats in the class. Kakepoto Inayatullah et al. (2012) conducted a study on "Oral Presentation preparation of Engineering Students of Pakistan for World of Work: Are they really prepared? The results of the study revealed nervousness was a barrier for engineering students.

The third oral communication barrier of engineering students is low motivation. Due to low motivation engineering students do not take part in oral communication activities in the class. A study was conducted by Kakepoto Inayatullah et al. (2012) on "Global Influences on Modern Industry and Oral Presentation Barriers of Engineering Students of Pakistan". The results of the study revealed that low motivation was a barrier for engineering students to perform better oral presentations. The fourth oral communication barrier of engineering students is overcrowded classroom. Although certain drastic changes have been made in the field of higher education but still there is a big room for improvement to meet the international standards. It is worth mentioning here that Higher Education Commission (HEC) Islamabad Pakistan is taking better measures to improve the standard of higher education in Pakistan since 2002. In this perspective, various teachers training programs have been initiated across the country with other avenues such as foreign funded scholarships. Higher Education Commission (HEC) of Pakistan is assisting engineering universities to provide better quality of education to engineering students to provide better workforce to modern industry. Engineering universities in collaboration with Higher Education Commission (HEC) need to take solid efforts to keep standard size of classrooms. This is because overcrowded classroom is a big barrier for engineering students to develop oral communication skills. In overcrowded classrooms communication teachers often fail to promote oral communication activities. They fail to provide individual oral presentations to all engineering students due to time and syllabus constraints. Thus, classroom can be a positive place to develop skills or to develop barriers of students (Freiberg, 1998).

2. Study Approach

The research approach used for this study was based on quantitative methods in terms of questionnaire survey. On hundred (100) engineering students were drawn as informants of the study to obtain information about oral communication barriers. The site for data collection was an engineering university of Pakistan. Data were collected from two engineering departments' namely electrical engineering and mechanical engineering as pilot study project. Purposive sampling method was chosen because respondents were final year final term engineering students. The rationale for selection of final year engineering students rests on the understanding that after passing final term examination they shall join the workplace. Thus, they were considered potential respondents for this pilot study project to investigate their oral communication barriers. Purposively sampling is selected when the researcher believes that chosen respondents shall provide appropriate information (Patten, 2004) on the topic of the study. Survey questionnaire contained two parts first part contained demographic information pertaining to gender, qualification, field of discipline and marks obtained in the subject of English or communication skills. The second part contained 25 statements relating to oral communication barriers such as poor English language, fear and anxiety, lack of motivation and overcrowded classroom. Data were analysed statistically using Statistical Package for Social Sciences (SPSS, 15.0). A 1-5 unit likert scale was used for computing mean, median, standard deviation and other descriptive statistics.

3. Study Findings

The findings of the study are presented into four major headings such as poor English language, fear and anxiety, lack of motivation and overcrowded classroom in terms of oral communication barriers for engineering students.

3.1 Poor English Language

For poor English language 13% engineering students strongly disagreed, 25% disagreed, 12% responded neutral,

42% agreed and 8% strongly agreed that poor English language is a barrier for them to take part in oral communication activities in the class.

3.2 Fear and Anxiety

For fear and anxiety 10% engineering students strongly disagreed, 20% disagreed, 12% responded neutral, 43% agreed and 15% strongly agreed that fear and anxiety is a barrier for them to take part in oral communication activities in the class.

3.3 Lack of Motivation

For lack of motivation 12% engineering students strongly disagreed, 23% disagreed, 8% responded neutral, 39% agreed and 18% strongly agreed that lack of motivation is a barrier for them to take part in oral communication activities in the class.

3.4 Overcrowded Classroom

For overcrowded classroom 10% engineering students strongly disagreed, 23% disagreed, 10% responded neutral, 38% agreed and 19% strongly agreed that overcrowded classroom is a barrier for them to develop their oral communication skills.

4. Discussion

Results indicated that poor English language, fear and anxiety, lack of motivation and overcrowded classroom were oral communication barriers for engineering students. Engineering students asserted that they cannot communicate ideas effectively due to poor English language thus; they prefer to remain silent in the class. They further said that due to this barrier they do not take part in oral communication activities in the class such as group discussions and oral presentations. Moreover, they stated that due to poor English language they switch to L1 language. They further opined that if they fail to communicate ideas in English language then they use body language expressions to communicate ideas. In addition, they stated that due to poor English language they hesitate to communicate ideas. They explained this that it is mainly due to poor oral communication skill trainings provided to them. Kakepoto Inayatullah et al. (2012) conducted a study on "The Picture of Modern Workplace Environment and Oral Communication Skills of Engineering Students of Pakistan". The results of the study revealed that English language was a barrier for engineering students. For fear and anxiety engineering students indicated that they feel fear to communicate ideas in front of peers and teachers. Thus, they become nervous and tense when they engage in group discussion especially in English language. Moreover, they held the opinion that their ideas disappear when they deliver a speech due to fear and anxiety. Thus, they usually avoid communication with teachers due to this barrier and occupy back seats in the class. Kakepoto Inayatullah et al. (2012) conducted a study on "Oral Presentation preparation of Engineering Students of Pakistan for World of Work: Are they really prepared? The results of the study revealed nervousness was a barrier for engineering students. For lack of motivation engineering students complained that teachers do not encourage group discussions in the class thus, they face oral communication barriers. They demanded that communication or language teachers should motivate them to speak in the class. Moreover, they showed apprehension about poor environment of the class and stated that in case they speak wrong English their peers laugh at them. Kakepoto Inayatullah et al. (2012) conducted a study on "Global Influences on Modern Industry and Oral Presentation Barriers of Engineering Students of Pakistan". The results of the study revealed that low motivation was a barrier for engineering students to perform better oral presentations. On the other hand, engineering students stated that their classroom is overcrowded and noisy thus, they cannot follow proper lecture of teachers. They kept the opinion that due to overcrowded classroom teachers do not properly guide and train them to overcome barriers that hinder our oral communication. Moreover, they pointed out that in engineering universities there is lack of English Language Laboratories that assist them to overcome oral communication barriers before they join workplace. Freiberg (1998) noted that classroom can be a positive place to develop skills or to develop barriers of students.

5. Conclusion

The results of the clearly indicate that engineering students face various oral communication barriers although they are near to graduation and ready to join the workplace. Thus, this tends to be the responsibility of engineering universities to train them properly in oral communication skills. The major purpose of engineering universities is to provide trained and skilled workforce to engineering organizations. Moreover, it is suggested that language or communication teachers should focus on oral communication barriers of engineering students and provide them ample opportunities of oral presentations to overcome this barrier before they join workplace.

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Biographical Notes

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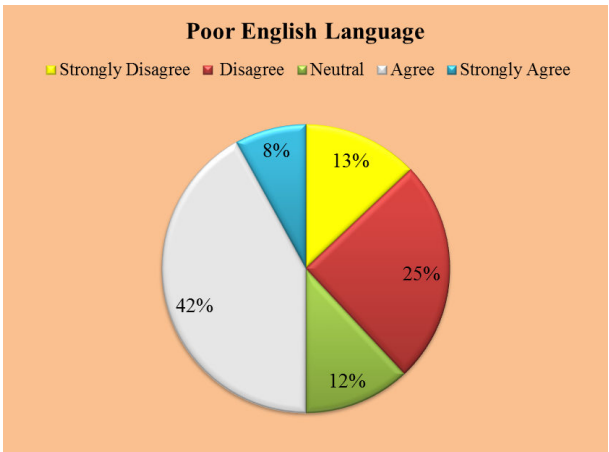
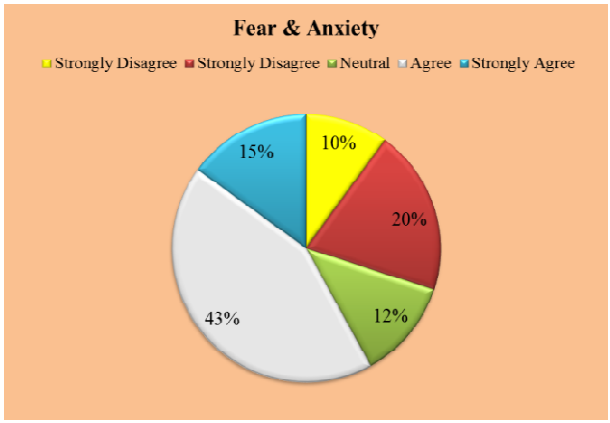
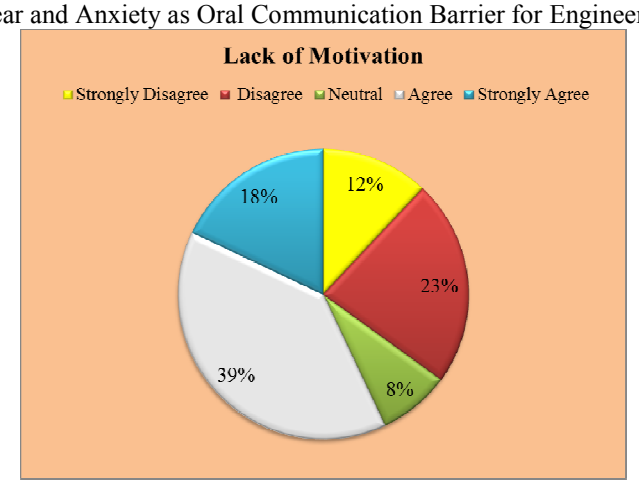
Appendix



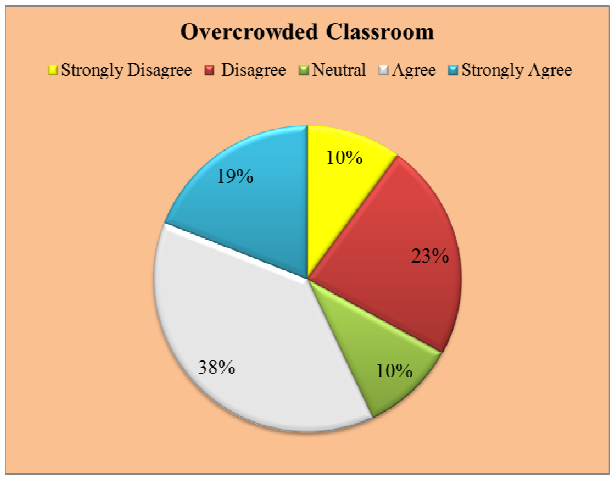
Figure, 1: Poor English Language as Oral Communication Barrier for Engineering Students



Figure, 2: Fear and Anxiety as Oral Communication Barrier for Engineering Students



Figure, 3: Lack of Motivation as Oral Communication Barrier of Engineering Students



Figure, 4: Overcrowded Classroom as Oral Communication Barrier for Engineering Students