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# Factors that Influence Oral Presentations of Engineering Students of Pakistan for Workplace Environment

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**Abstract**

Oral presentations have acquired significant importance in the world of work especially in the field of engineering. Industry demands a new type of engineer equipped with new competencies and skills to promote business of organizations. Twenty five (25) engineering students from 2 engineering universities of Pakistan participated in this study. Purposive sampling method was used for data collection since participants were selected on specific criteria of only final year engineering students. All presentations were video recorded to capture actual barriers than perceived barriers of engineering students. Data were analyzed qualitatively through oral presentation assessment rubric. This assessment rubric contained four traits such as presentation skill, confidence, nervousness and vocal variety. Three assessors assessed these oral presentations in order to overcome researcher bias. The results of the study indicated that poor presentation skill, poor confidence and nervousness influenced effective oral presentation performance of engineering students. The findings of the study can be used as a guideline to prepare better human capital for workforce which is demand of modern industry to increase its workplace productivity.

**Keywords:** Oral presentations, engineering students, workplace environment

## 1. Introduction

Corporate economies are consistently pushing organizations to focus competencies of its new hires because engineering graduates equipped with effective oral presentation skills contribute to increase workplace productivity of organizations at a large measure. In view of this, corporate recruiters demand well rounded engineers equipped with technical and non technical skills to boost business of organizations at global level. Oral presentation is an important aspect of modern workplace and engineering students have to perform oral presentations to promote business of organizations at domestic as well as global level. The purpose of this research was to explore factors that influenced effective oral presentation performance of engineering students since poor presentation skills of engineering students are never in their own better interest nor engineering organizations.

## 2. Literature Review

Oral communication skills in the workplace include oral presentation, participation in meetings, discussion, conversation, and negotiation skills. Among these skills oral presentation occupies a central position in the workplace. This is because it assists engineers to perform workplace jobs effectively and promote business of organizations at international level. Employers consider communication skills more important than technical skills (McPherson, 1998) because the work environment of organizations has become global resultantly engineering organization demand effective communication such as oral presentation skills of engineering graduates. In addition, organizational influences such as increased competition and technology constantly pressurize engineers to play diverse roles (Farr1996) at workplace. Moreover, the way of doing old fashioned things can be effective but no more efficient in this modern age (Redmann et al., 2004) of industrialization. Effective oral communication skills such as oral presentation skills are required skills to be successful in any profession (Luthy, 2006) and research over the years

 

indicates that oral presentation is an important attribute of an engineer in order to be successful in engineering profession. Engineers have to perform oral presentations to keep management of the organization well abreast about progress of industry projects and barriers that hamper timely completion of company projects. Truly speaking, employers can never bear losses due to delayed completion of industrial projects. In this perspective, they need daily briefings about work progress of company projects. In other words, employers conduct meetings with engineers on regular basis to get briefings on progress of initiated company projects. Research has found that engineers usually perform oral presentations (Hafizoah Kassim et al., 2010) thus; they need to be proficient in oral presentations (Bhattacharyya et al., 2009).

Oral presentations have acquired significant position in academics (Campbell et al., 2001) ranging from medical and engineering fields. Oral presentation is one of the seven important oral communication skills that entry level job candidates should possess (Campbell et al., 2001). Truly speaking, the professional competence modern engineer is based on his or her technical skills such as communication, oral communication and presentation skills. Effective communication, oral communication and presentation skills make engineering graduate valuable for modern industry. On the contrary, engineering graduates who lack in these skills are never productive for organizations and tend to be burden on financial health of organizations. The engineer of twenty first century should be different from past decade engineers (Radzuan et al., 2008) in terms of communication skills that are usually called soft skills. Soft skill is a very broad term and under this umbrella many skills work which are considered valuable skills for engineers in this competitive work environment of organizations. In fact, oral presentation is an attribute of an engineer that assists him to perform workplace jobs effectively that ultimately leads towards workplace productivity.

Engineering students need to be required to perform oral presentations within a certain length of time in academic settings. Thus, they need appropriate preparation for this presentation. No doubt, oral presentations require confidence of speakers to speak in front of familiar and unfamiliar audience. In this perspective, this tends to be the responsibility of effective speakers to develop audience interest during presentation. It has been best seen that of speakers or teachers usually fail to develop audience or students interest and let them allow fall asleep during presentation, briefings, seminars, conferences or classrooms. This tends to be surprising although oral presentations occupy central position at workplace but engineering students of Pakistan are provided few oral presentation opportunities during study time. Resultantly, these engineering students face barriers during job interviews and at workplace. Moreover, employers tend to be reluctant to assign them important job positions at workplace because they are never considered productive for organizations. According to Campbell et al. (2001) in a university setting students are provided few oral presentations. In fact, skills are learned (Maes et al., 1997) and through effective communication skill trainings engineering students of Pakistan can be prepared better human capital for the workplace.

Anderson and Bolt (2008) noted that students lack in presentation skills entering the workplace. Although engineering students desire to perform effective oral presentations in academic and non academic setting but it tends that still their desire remains unfulfilled. Research has also identified that engineers face communication barriers giving presentations in seminars, conferences and the workplace (Kedrowicz, 2006; Orr et al., 2005; Freeman, 2003; King, 2002; Polack-Wahl, 2000). Katz (1993) interviewed professionals from industry. Professionals responded that communication skills of modern graduates are not good; they are less than not good, they are really bad. King (2002) illustrated that poor presentation skill obstructs students' effective presentations. Due to poor oral communication skill students often experience failure on the job (Cangelosi et al., 1998). Thus, poor oral communication skill deficiency develops poor image for engineers at workplace. According to Riemer (2002) poor communication skill leads to undermine whole profile of an engineer. Baytiyeh et al. (2010) illustrated that students' desire a job that improves their professional growth, but when they start work at workplace they face realities of sustained work (Hettich 2000).

Confidence is an essential aspect of any good presentation. It provides impetus to speakers to communicate his or her ideas effectively. Due to confidence speakers maintain direct communication with audience. It has been best seen that although engineering students face barriers but due to confidence they succeed to complete oral presentations. On the contrary, engineering students equipped with low self confidence tend to fail to complete whole presentations. In certain instances due to low self confidence they shorten their presentations and leave the rostrum. According to Schunk (1991) students quit oral presentations due to low self confidence. On the other front, audience likes

 

confidence of speakers (Wardrope et al., 1994) and for many speakers oral presentation is just like fear of death (Glossophobia, 2001). Organizations require employees with confidence (Dam et al., 2004). Low self confidence can hamper graduates to be hired for workplace jobs (Zeigler, 2007). A study was conducted by Oliver Rhonda et al. (2005) on "communicative competence in oral language assessment" indicated that students faced lack of confidence in certain situations.

Nervousness is the most common factor that hinders effective oral presentation performance of many speakers including engineers and engineering students in academic and non academic settings. According to Miller (2005) speakers are never judged only from communication but they are judged by the image they transfer during communication performance. Truly speaking, for many engineering students oral presentation is never without nervousness, and it leaves negative impact on oral presentation performance (Tisdale, 2005) of engineering students. Richmond et al. (1995) reported that between 70 to 75% individuals fear from oral communication performance. Ayres (1998) noted that nervous engineering students spend more time on oral presentation preparation compared to low nervous peers. In view of this, engineering students should practice oral presentations to overcome barriers that obstruct their effective oral presentation performance and it is in the better interest of many stakeholders including industry, engineering universities and employers.

## 3. Methodology

The research approach used for this study was based on qualitative methods in terms of observation of recording of oral presentations. Video recordings provided insights to assess factors that influenced effective oral presentation performance of engineering students.

### *3.1 Sample*

Twenty five (25) engineering students from 2 engineering universities of Pakistan participated in this study. Purposive sampling method was used since respondents were chosen on specific criteria of only final year engineering students. Creswell et al. (2007) illustrated that purposive sampling assists researchers to select suitable respondents for the study. The notion behind selection of final year engineering students was based on the understanding that within six months these engineering students shall become part of workplace. In this perspective, it was necessary to assess factors that influence their effective oral presentation performance.

### *3.2 Instruments*

Video recordings were used as an instrument for this study. Participants were given choice for topic selection. In other words, it was a prerequisite demand of many engineering students. The main actors for this oral activity were engineering students.

### *3.3 Participant Characteristics*

All participants were undergraduate final year engineering students and they come from the discipline of civil engineering and electrical engineering.

## 4. Data Analysis

Data were analyzed qualitatively but results were presented quantitatively in terms of percentages for each trait included in the assessment rubric. The assessment rubric used for this study was partially adopted from "Impact of Digital Video on Communication Skills in Business Education" (Leeds Elke M., 2007). Oral presentation traits used in Leeds Elke M. (2007) study were 'credibility or confidence', 'eye contact or absence of reading', 'appearance nervous mannerisms', 'gestures or the purposeful use of the body 'and 'vocal variety'. However, the assessment rubric used for this study was 'presentation skill' (speaker communicates ideas clearly and effectively), 'confidence' (speaker appears confident and knowledgeable), 'nervousness' (presenter displays non purposeful body movements and nervous gestures) and 'vocal variety' (speaker speaks clearly, avoids verbal pauses and pronunciation problems during presentation). A 5 point likert scale based on 'strongly disagree', 'disagree', 'undecided', 'agree' and 'strongly agree' were used to assess factors that influenced oral presentation performance of engineering students.

 

## 5. Study Results

The research results provided valuable insights on factors that influenced effective oral presentation performance of engineering students. The findings are presented in percentages on the basis of assessors' agreement and disagreement for the factors that influenced oral presentation performance of engineering students.

### *5.1 Presentation Skill*

The results for presentation skill of engineering students indicated that 1% responses were recorded as strongly disagreed, 64% disagreed, 0% undecided, 31% agreed and 4% strongly agreed that engineering students possess effective oral presentation skill (Fig.5.1). Thus, results indicate that 64% engineering students possess poor presentation skill to perform effective oral presentations.

### *5.2 Confidence*

The results for confidence of engineering students indicated that 3% responses were recorded as strongly disagreed, 53% disagreed, 0% undecided, 40% agreed and 4% strongly agreed (F.5.2). Thus, results indicate that 53% engineering students possess poor confidence to perform effective oral presentations.

### *5.3 Nervousness*

The results for nervousness of engineering students indicated that 0% responses were recorded as strongly disagreed, 10% disagreed, 0% undecided, 87% agreed and 3% strongly agreed (F.5.3). Thus, results indicate that 87% engineering students face nervousness to perform effective oral presentations.

## 6. Discussion

The first finding of the study was that poor presentation skill influenced effective oral presentation performance of engineering students. The findings support the idea of Anderson & Bolt (2008) that students lack in presentation skills entering the workplace. Moreover, literature review also suggests that modern engineering graduates possess poor communication skills such as poor oral presentation skills. Katz (1993) interviewed professionals from industry in order to obtain information about communication skills modern graduates. The results of this study indicated that communication skills of modern graduates are not good; they are less than not good, they are really bad. The second finding of the study was that poor confidence influenced effective oral presentation performance of engineering students. Literature review also suggests that engineering students possess poor confidence for oral presentations. Oliver Rhonda et al. (2005) conducted a study on "communicative competence in oral language assessment". The results of the study revealed that students faced lack of confidence in certain situations. The third finding of the study was that nervousness influenced effective oral presentation performance of engineering students. Literature review also suggests that engineering students face nervousness during oral presentations. Majority of students face nervousness during oral presentation (Lucas, 2001) and nervous engineering students spend more time on oral presentation preparation compared to low nervous peers (Ayres, 1998). It is envisaged that if oral presentation barriers of engineering students of Pakistan are not redressed at university level as a result, these barriers shall affect their job performance at workplace. Thus, this tends to be the responsibility of engineering universities of Pakistan to prepare better human capital for workplace equipped with technical and non technical skills such as oral presentation skills. Additionally, it is suggested that engineering students should take interest in non engineering subjects such as communication, oral communication and oral presentation skills if they want to be successful in this competitive business environment of organizations.

## 7. Conclusion

The results of the study indicated that poor presentation skill, poor confidence and nervousness influenced effective oral presentation performance of engineering students. Resultantly, these obstacles shall affect their job performance at workplace which is never in the better interest of organizations. In view of this, it is suggested that communication teachers should assist engineering students to overcome oral presentation barriers during study time. Moreover, it is

 

the responsibility of engineering universities of Pakistan to add more communication courses that focus oral presentation skills of engineering students. Thus, they can prepare productive engineers for organizations. There is no exception and doubt that engineers equipped with poor presentations are never productive for organizations. In this perspective, industry and engineering universities of Pakistan should arrange oral presentation skill trainings for engineering students during study time and following graduation at workplace if they want to increase workplace productivity of organization. A productive engineer is in the better interest of all the stakeholders who are directly or indirectly related with engineering profession. Moreover, skilled engineers would assist to overcome increasing unemployment in engineering profession of Pakistan.

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**Biographical Notes**

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**Appendix:**

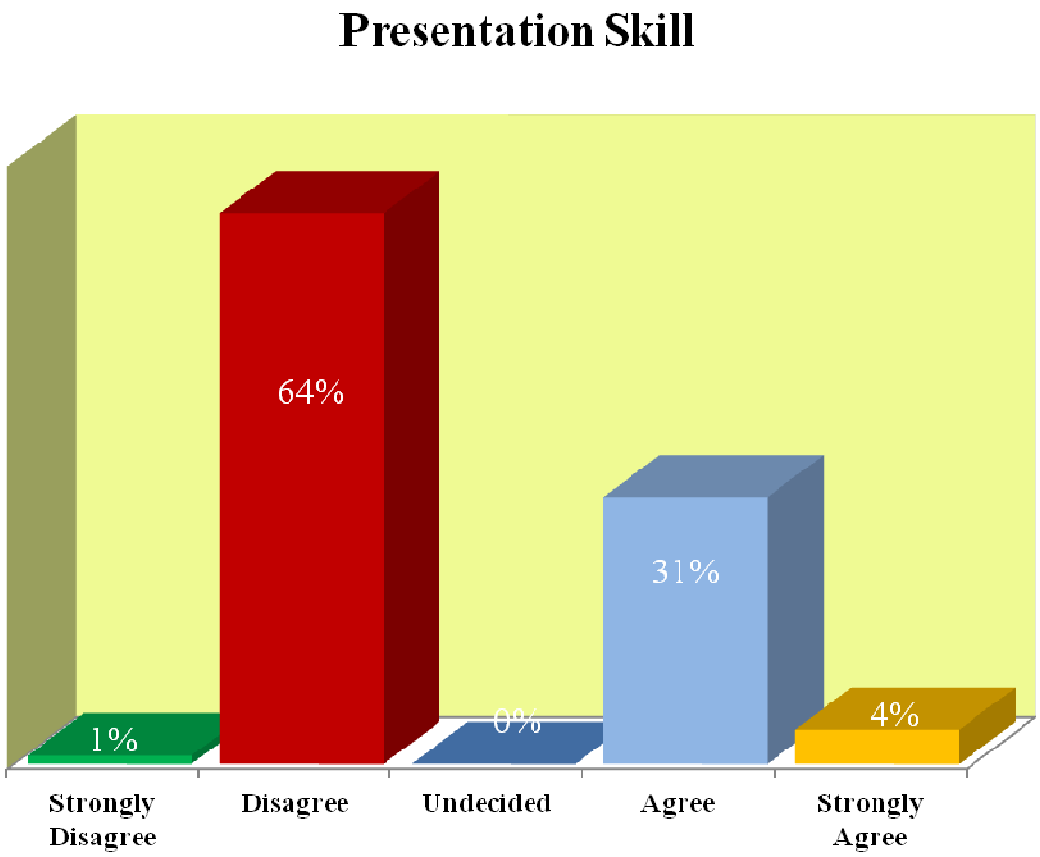


Figure 1: Assessors Agreement and Disagreement with Presentation Skills of Engineering Students

 

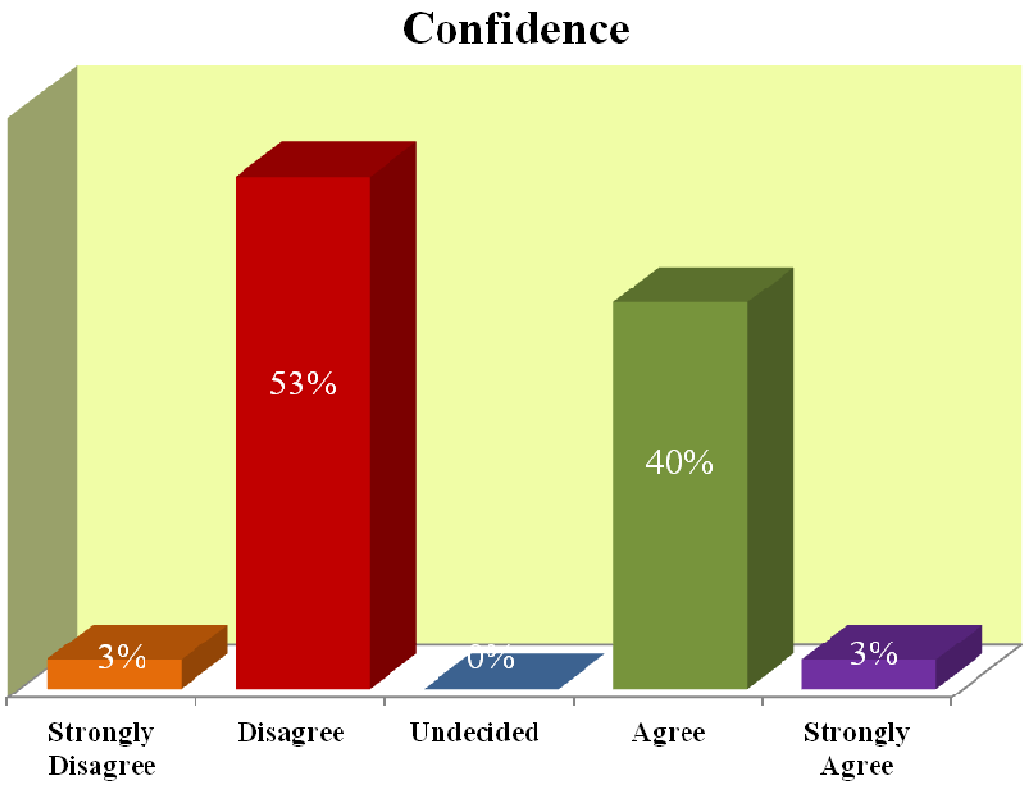


Figure 2: Assessors Agreement and Disagreement with Confidence of Engineering Students

 

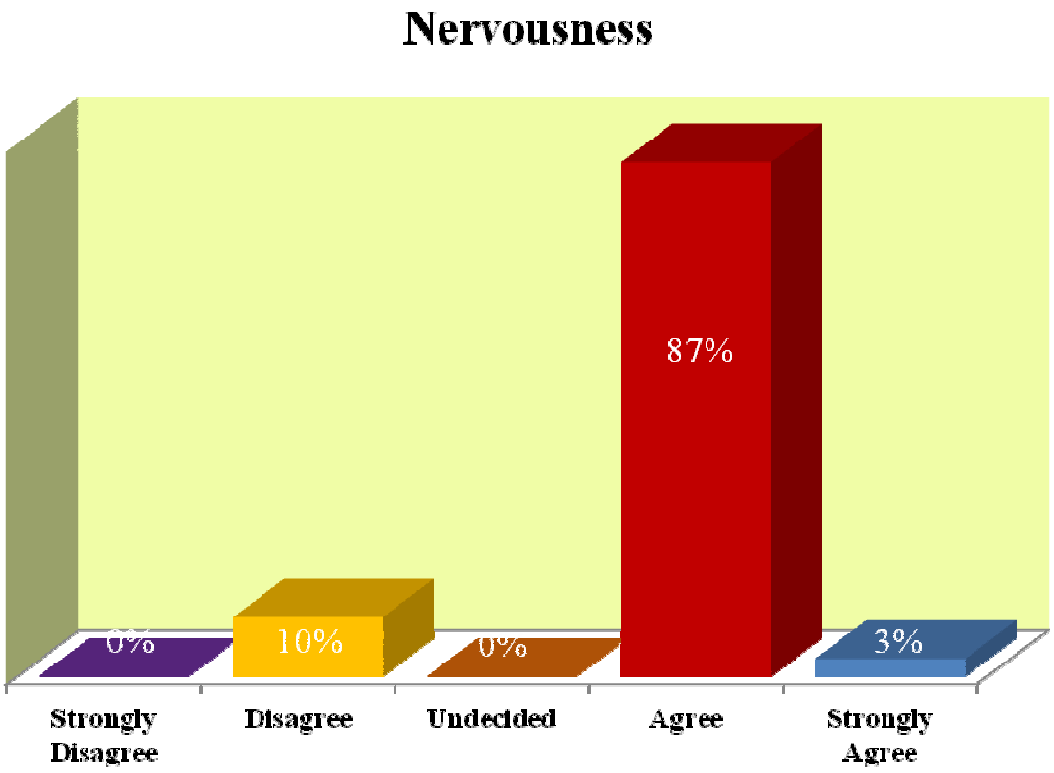


Figure 3: Assessors Agreement and Disagreement with Nervousness of Engineering Students