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Understanding Engineering Undergraduates' Technical Oral Presentation: Challenges and Perspectives

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Abstract

This paper reports the findings of an evaluation study on technical oral presentation and its potential application in English language courses for engineering undergraduates setting. The main aim is to delineate difficulties and challenges faced by engineering undergraduates in learning Technical Oral Presentation (TOP) skills in an English proficiency course. The participants were 310 engineering undergraduates who enrolled in the English for Technical Communication (ETC) course and nine instructors. Various difficulties and challenges faced by the engineering undergraduates to learn the TOP skills were identified and input from instructors were also examined. Suggestions to address the challenges faced by the students were highlighted with the view to preparing them for their future engineering workplace communication.

Keywords: Engineering undergraduates; English for Specific Purposes; Presentation skills; Technical oral presentation

INTRODUCTION

Over the years, literature shows that employers have been placing greater emphasis on graduates to acquire good set of English oral communication skills in order to be successful in workplaces. Many employers admit that many new graduates who enter the workforces have the necessary technical skills but still lack English communication skills which hinder them from functioning well at workplaces (Basri, Zaharim, Omar & Yuzainee, 2012; Darmi & Albion, 2013; Nair, Rahim, Setia, Husin, Sabapathy, Jail & Seman, 2012; Shakir, 2009). While many graduates have been successful in their job applications, many more are struggling and one of the reasons associated with this is the lack of English communication skills. This is evident with the alarming unemployment rate among Malaysians undergraduates. On February 3, 2016, the News Straits Times reported that, based on data from PEMANDU (a department under the Prime Minister's Office), there were about 400 000 graduates who were still looking for jobs (Husaini Abdul Karim, 2016). It is therefore imperative for Malaysian undergraduates to equip themselves with appropriate English communication skills. Lacking these communication skills would mean that these students face great risks of not being able to secure jobs.

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Realizing that the future of engineering undergraduates' English communication relies on having effective English communication skills specifically geared for the workplace, Universiti Malaysia Pahang (UMP) has designed its English for Specific Purposes (ESP) curriculum towards meeting these needs (Kassim & Ali, 2010). AT UMP, it is compulsory for engineering undergraduates to register for three levels of English courses equivalent to six credit hours prior to graduation. These English courses are designed to suit engineering undergraduates' needs for academic purposes as well as possible future professional workplace communication. Within these courses, students are exposed to English oral and written skills, which include Technical Oral Presentation (TOP) delivery skills in English for Technical Communication (ETC) course as part of efforts to train students towards becoming efficient technical communicators at the workplace.

Crawley, Malmqvist, Östlund & Brodeur (2007) put forth the notion that for engineering education reform to occur, the voices from four key stakeholder groups which are students, industry, university faculty and society must be considered. Therefore, it is imperative for language educators dealing with curriculum development for engineering undergraduates to consider the views of these entities. Hence, this study was conducted with the view to gain deeper understanding of the difficulties and challenges faced in delivering technical oral presentation from the perspectives of engineering undergraduates, industry and university faculty. Due to limited resources, this paper reports only the findings from engineering undergraduates and instructors teaching English for Technical Communication course.

LITERATURE REVIEW

For professionals in the engineering and technology industry, English communication skills are skills highly valued and needed (Yuzainee, Zaharim & Omar, 2011). This is a concern because apart from having technical expertise, engineers' daily workplace activities require them to successfully participate in small group discussion, meetings and deliver oral presentations (Matthews & Marino, 1990; Yuzainee et al., 2011). Small group discussions and meetings involve engineers' interactions with their fellow engineers to complete certain technical tasks while oral presentations are required when an engineer presents his ideas to a group of audiences within the same company or to external audiences. To some extent, engineers' daily routines include delivering oral presentation centred on analysis and problem solving of technical issues related to their job. Basically, this is known as technical oral presentation (TOP). Technical oral presentation refers to "a prepared formal presentation on scientific, engineering, technological, business types, regulatory, legal, managerial, or social scientific information topics to non-expert audience" (DiSanza & Legge, 2003). According to DiSanza and Legge (2003), the types of presentations that fit under technical communication include laboratory presentations, feasibility reports, progress/status reports, survey presentations, training lectures and business reports.

Lacking appropriate English communication skills and poor command of language affect their ability to deliver oral presentations successfully (Norlida Md Shariff, 2014). A study conducted by Wahiza Wahi (2014) shows that employers continue to place high emphasis on employees to have skills to deliver effective presentations in workplaces. In fact, the literature on workplace communication needs shows that employees' involvement in formal presentation is one of the most important communication activities in the workplace and very often become a very influential criteria for job promotion (Crossling & Ward, 2001; Dannels & Darling, 2010; Kassim & Ali, 2010). Oral presentation is very important for engineers because sometimes the purpose is to present their company's bid for contracts from other entities or to promote products from their companies to potential buyers. This shows that having oral presentation skills is very crucial for future engineers. Relating to that point, in a study by Darling and Dannels (2003) who traced former university students who are now engineers to study the importance of communication skills in their jobs, half of their respondents stated that public speaking (presentations, public speaking, public seminars and technical presentations) is important for practicing engineers. The respondents explained that engineers need oral presentations skills when they have to make presentations about new products. The engineers also explained that presentation skill is one of the important criteria for career advancement in their organisations (Darling & Dannels, 2003).

Since one of the important sub-skills for oral communication needs of professional engineers is the

ability to give effective oral presentation (Yusoff, 2010; Radzuan & Kaur, 2011), developing effective oral presentation skill is crucial for engineering undergraduates (Berjano, Sales-Nebot, & Lozano-Nieto, 2012). Oral presentation forms an integral part of oral assessment and evaluation practices in engineering education; and in engineering workplaces, oral presentations form engineers' daily activities and will continue to be an essential part of their oral communications (Bhattacharyya, Nordin & Salleh, 2009; Idrus, Salleh & Abdullah, 2011; Kassim & Ali, 2010; Radzuan & Kaur, 2011; Yusoff, 2010). This is a challenging task as research shows that delivering oral presentations is considered the most stressful communicative event rated by Asian students (Woodrow, 2006) and second language learners (Kunioshi, Gonuchi, Hayashi & Tojo, 2014).

It is a common shared understanding among practitioners of English for Specific Purposes that, for engineering undergraduates, it is expected that upon their graduation, they must be able to communicate effectively which includes the ability to deliver effective technical oral presentation in workplaces. However, studies reported that certain number of professionals in accounting, business; medical and technical areas have often not achieved the required level of competency demanded upon completion of their education (Chan, 2011; Kerby & Romine, 2009). Van Ginkel et, al (2015) suggested that higher education should emphasize on training their students to achieve competent level in communication as this is regarded as an essential skill for graduate effective performance in various working environments (Smith & Soldano, 2011). Therefore, the teaching and learning of oral presentation skills to these learners for their workplace communication must be emphasized in English for Specific Purposes curriculum and the challenges they face must be appropriately assessed.

The presence of oral presentation as a part of formal assessment at tertiary level is to prepare students to become competent presenters and thus becoming successful engineers in their future workplaces (Berjano, Sales-Nebot & Lozano-Nieto, 2012). Globalisation has stimulated engineer mobility around the world and more and more attention is given to engineers' technical and non technical competencies. According to Joughin (1998), the main objective of oral assessment in professional field is "to measure candidates' knowledge and understanding of facts, concepts, principles and procedures that underlie professional practice" (p. 369). Martin, Maytham, Case and Fraser (2005) found that there is a positive relationship between being a successful engineer in the workplace and communication skills. This highlights the importance of instruction of technical oral communication in engineering education, particularly oral presentation competencies.

Delivering an effective oral presentation requires skills and knowledge among undergraduates at tertiary level, which however, is not always the case. Mahani Stapa, Asniza Murad and Norasnita Ahmad (2014) conducted a survey to determine problematic areas in delivering technical oral presentations involving 235 respondents from six engineering faculties in Universiti Teknologi Malaysia (UTM). They found out that generally students faced difficulties in language, content and delivery specifically due to limited knowledge in presentation skills, low self-confidence and low English language proficiency. According to Mahani Stapa, Asniza Murad and Norasnita Ahmad (2014), students' problem in the delivery of presentations occur in the forms of reading from notes or slides, intonation problems, problems in responding to questions from audience and lack of skills and knowledge in the delivery pace. They also reported that students feel stressed, worried and anxious when they are asked to deliver a technical oral presentation – and these are factors that contribute towards students' low self confidence in delivering technical presentations (Stapa et al. 2014). Furthermore, the researchers also reported that students' problems in language occur in the forms of incorrect pronunciation and limited vocabulary or word choices (Stapa et al. 2014). It can be concluded that instructors face an uphill task in developing students' skills in the three aspects. Instructors must equip students to have a mastery of knowledge and skills to present, possess high self confidence level as well as a mastery of English language proficiency to deliver an effective presentation.

According to Bhattacharryya and Sargunan (2009), there are three effective major presenter skills and attributes of technical oral presentations as viewed by the stakeholders in their study. The stakeholders are members of academic community (students and instructors) and professional community. The list of technical presentation skills and attributes viewed as important (Bhattacharryya & Sargunan, 2009, p. 1031):

- Presenter skills and attributes which emphasize technical competency, methodology, organisation, layout, visual presentation, audience analysis, interaction with audience, presentation skills, delivery, clarity, creativity, confidence, fielding questions and humour.
- Language skills which focus on usage of complex terms, grammar, pronunciation, technical jargon and diction.
- Non-verbal attributes which include eye contact, stance, vocal variety, vocal fillers and attention to certain cultural norms.

Similarly, Otoshi and Heffernan (2008) observed that students have their own conception of what constitutes a good presentation. Students rated clarity of speech, correct language and presentation that is appealing to audience as criteria that make up a good presentation. Hence instructional designers could take into account all these presenter skills and attributes in the teaching of oral presentation skills for engineering undergraduates.

However, teaching technical oral presentation skills is not an easy task, but rather challenging as students perceived delivering techncial oral presentations as the most anxiety-provoked sitaution (Woodrow, 2006; King, 2002). King (2002) emphasised that speech anxiety, group boredom and limited presentation skills are the major problems that lead to students' oral presentation failures. Kavaliauskienė (2006) offered very useful tips to improve students' public speaking skills. To him, instructors should pay attention to three key aspects of instructions of presentation skills; namely managing students' anxiety and fear, dealing with delivery of presentations and giving feedback. Having discussed the demanding requirements of workplace communication needs for the engineering professionals, it is imperative to investigate the challenges and difficulties in engineering undergraduates' English language classroom teaching and learning.

METHODOLOGY

3.1 Research Design

This study employed case study methodology as it investigated a particular real-life phenomenon in depth within its real life context (Yin, 2009) by using multiple data sources (Gerring, 2006). The present study was designed to be explanatory-interpretive (Grotjahn, 1987) which yielded qualitative data and therefore required interpretive analysis (Nunan, 1992; Mohd Ali, 2004). Research participants in this paper comprised engineering undergraduates and instructors while data collection methods used were focus group interviews and open-ended questionnaire; and data were analyzed using thematic analysis. Figure 1 depicts the research framework adopted in the study. Data collection process took place from December 2016 to May 2017.

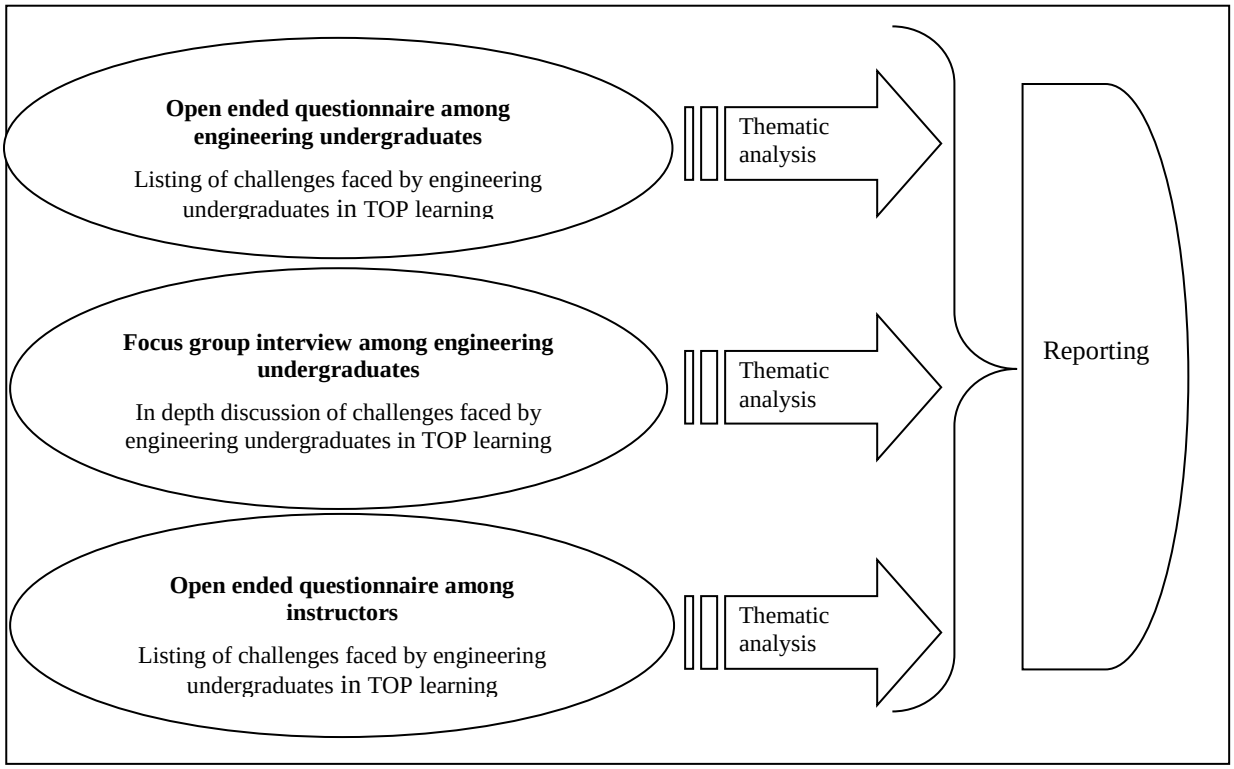

Figure 1. Research Framework Employed in the Study.

3.2 Participants

The participants in the study were 310 engineering undergraduates from various engineering faculties from both Universiti Malaysia Pahang Pekan and Gambang campuses and nine English language instructors involved in the teaching and learning of UHL 2422 English for Technical Communication course during December 2016 to May 2017 academic year.

The instructors involved in the study were also teaching the same group of students during that period. We informed the instructors teaching each section and we asked for volunteers to join in the focus group interviews. Of 14 instructors invited, nine instructors responded and arranged for their students to participate voluntarily.

3.3 Research Instruments and Procedures

Three research instruments were used: an interview protocol for student participants and two sets of questionnaires, one for student participants and one for the instructors.

Data from the instructors were collected from questionnaires distributed among instructors in English language Department. Data from instructors were collected from open-ended section in questionnaire Set A distributed among 14 instructors, with nine returned questionnaires. The returned questionnaires were labeled with code and analyzed. The returned questionnaires were marked with *Xa* where '*X*' depicts instructor and an '*a*' is the number written on each returned questionnaire. For instance, each returned questionnaire was marked with code *X1* depicting questionnaire received from instructor 1.

Data from engineering undergraduates were gathered from an open-ended section of a Questionnaire Set B distributed among students who registered in English Technical Communication sections in both campuses. Students' written responses from the open-ended section were collected and analyzed for themes on difficulties they faced while developing their TOP skills. Data were also collected from nine

focus group interview protocols with engineering undergraduates from these English Technical Communication (ETC) sections who volunteered to participate.

FINDINGS

4.1 Input from Engineering Undergraduates

In order to understand problems faced by students while developing their technical oral presentation skills, this section presents data that were collected from an open ended questionnaire as well as from the focus group interviews with engineering undergraduates.

4.1.1 Findings from the Questionnaire

From the analysis of the open ended questionnaire prompting students (n= 310) to describe the problems they faced while developing their TOP skills as shown in Figure 2, it can be seen that most of the students stated that *lack of confidence* is the main problem faced by them in the development of TOP skills at 37%, and *lack of preparation* is the second problem faced by them at 12%. On the other hand, 8% of the students stated *difficulty in vocabulary and content understanding* while 6% stated that they faced *problems in facilities and technology* and *delivery problems* which include eye contact as well as *lacking in class TOP practice*. Furthermore, 4% of the respondents reported that they have problems in *pronunciation and grammar* while 3% stated that they have problems in *lack of fluency, time management* and *audience interaction*. In order to better visualize the problems faced by students, data derived from students' open ended responses are illustrated in terms of percentages as shown in Figure 2.

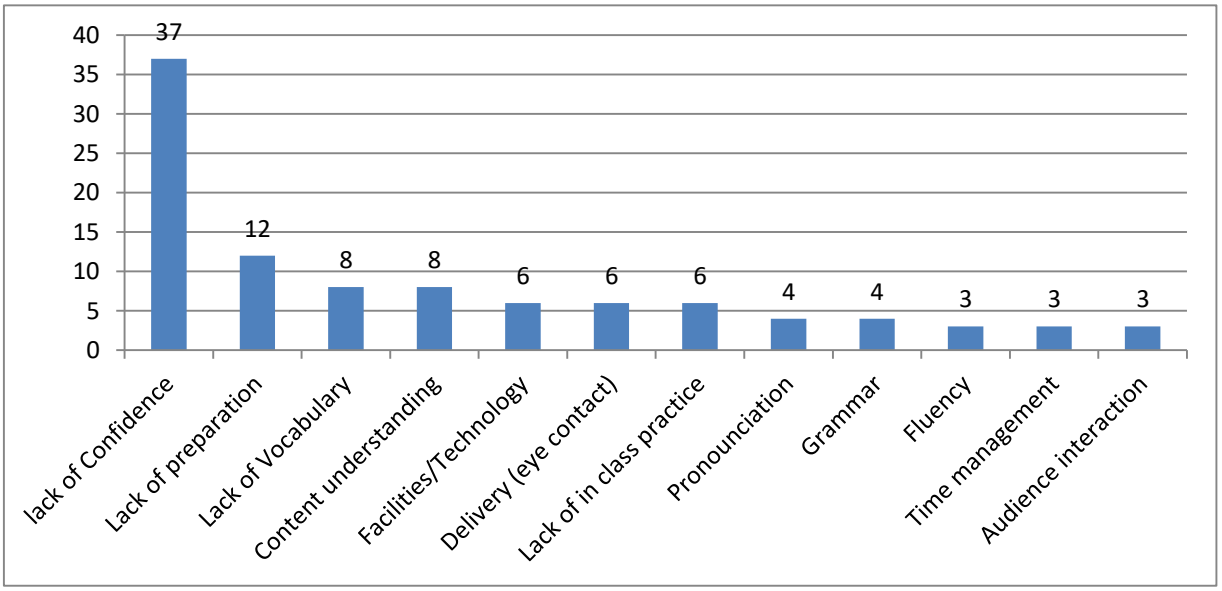

Figure 2. Percentages of challenges faced by students in TOP skills development.

We list here a few samples of students' written responses taken from a survey paper which we coded with the label Rx, where X depicts the number of respondent as the response sheet is labeled for data entry purposes. In the questionnaire, we asked students to list problems that they faced while developing technical oral presentation skills in classroom. It is important to note that, it is not always the case where one respondent stated only one problem; sometimes multiple problems hindering their TOP development were listed by the respondents.

The following excerpts are samples of written statements taken from students' responses depicting issues of low self-confidence, lack of vocabulary, lack of delivery skills, facilities/ technology problems,

time management and audience interaction.

Self-confidence

R7: Low self-confidence.
R47: My pronunciation is still low; my confident is a bit low.
R48: Confidence level of student is a bit low.
R104: Nervous when all audience look at me.
R197: Nervous and sometimes voice cannot be heard clearly, need to use microphone.
R213: Lack of confidence

Lack of vocabulary

R118: Do not understand the meaning of certain word.
R135: Pronunciation and lack of vocabulary.
R103: Hard to understand technical term.

Lack of delivery skills

R166: Eye contact and low voice
R183: Scare to make eye contact and nervous
R241: Problem on how to attract audience attention; problem in grammar; and feel nervous during presentation.

Others

R119: Internet connection is too slow.
R173: Time management

4.1.2 Findings from the Focus Group Interview

We investigate further about the difficulties faced by students by collecting data from nine focus group interviews. The participants in each focus group are between six to eight persons.

The participants in the focus group interviews were coded based on their focus group interview number, gender and participant number. For instance, a participant with the code G2/1/M refers to a participant who was interviewed in the focus group number 2, participant number one and a male engineering undergraduate. The focus group interviews were conducted in English and Bahasa Melayu; and engineering undergraduates could code-switch between the two languages whenever students were at ease in using both languages. All speeches in Bahasa Melayu were translated into English by the researcher who is a bilingual speaker (proficient in both English and Malay) and great care was taken to ensure the meaning of utterances remains the same. The following themes emerged from the focus group interviews describing problems that engineering undergraduates face in developing their TOP skills.

Low self-confidence and high anxiety level

Many participants highlighted that it was their feeling of nervousness affecting them very much while they are presenting. This affects their level of self confidence during technical oral presentation delivery.

G1/1/F: I am a person who have a very low self-confidence level, in fact very low. I cannot present in front of people… I am so nervous that I don't know what to say although I have prepared earlier …when I am in front of the audience I felt very nervous.

G6/2/M: For me, nervousness is the real problem. When I started to feel nervous, I will forget everything.

Participants also suggest that nervousness occur due to lack of exposure to delivering presentation at their faculty.

G2/5/F: Nervous. Because we were not exposed to presentation. It's very rare for us to present. Because in our faculty, we present only in English class.

One participant identified shyness as one of the major hurdles.

G1/2/F: Shy. Lack of confident. May be because we do something we don't normally do. New thing.

Challenges in in language learning

a) Pronunciation

Participants stated that they feel nervous because they think the audience would find it difficult to comprehend their presentation as they think their English word pronunciation are not good. For instance,

G2/2/M: I think I feel nervous every time I present. I now English is not my native language. I sometime afraid if I present and nobody could understand. Maybe my pronunciation is not so good. Maybe I understand what I said, but afraid that my friend don't understand.

G1/3/F: For me, my problem is pronunciation of words in English.

b) Grammar

Difficulty to form sentences and grammar issues are also highlighted by students as problems affecting their ability in presentation. G1/2,3,4/F spontaneously agreed that grammar is their biggest challenges while G1/2/F stated sentence structure and content arrangement as one of the main challenges to deliver effective TOP.

c) Vocabulary

Another student suggests that lack of vocabulary affects effective presentation delivery.

G1/5/M: Vocabulary. Lack of vocabulary. But if I have prepared earlier on, maybe I can. But if spontaneous, surely I cannot.

G7/3/F: I think the difficulty is language. When students want to speak in English, they will need to think about the ideas in Bahasa Melayu. So the conversion process from Bahasa Melayu to English would take time if students lack vocabulary…so students will end up looking for words err…..err….errr….

G7/1/F: If we were to present about specific measurement, we must know specific word and the right term, we cannot just simply say things.

Issues in explaining presentation content and facing audience

a) New/unfamiliar audience

One of the focus group interview respondent stated that nervousness can occur due to new unfamiliar classmates when they present.

G3/2/1: If our audiences are new friends whom we know only for a few weeks, it is very nervous to present in front of them. If we already knew the audience, probably there won't be any problem.

Another participant suggested that although she has practiced, presenting in front of new classmates made her feel nervous and affected her fluency.

G3/4/F: I was not fluent when I presented in the assessment although I had practiced. I was nervous because there were new classmates.

For another participant, the fact that there was an audience was reason enough to cause anxiety, despite earlier preparation, not necessarily new faces.

G7/5/F: The factor that made me feel nervous is the audience. Even though I have prepared for the

presentation, I still feel nervous.

b) Inability to explain technical presentation content

Other participants pointed out that nervousness can occur due to inability to explain technical presentation content to audience.

G4/1/M: I am the type who is very nervous. Before presentation, I started to feel nervous, when I see the audience, I become more nervous. The situation that made me become very nervous is when, for instance, when I need to present technical things, I don't know how to explain to make my audience understand.

c) Anxiety due to Assessment

One participant suggested that students feel nervous if they know there will be presentation assessment and their final mark depend on their performance in presentation.

G9/1/M: If I present just for fun, I am not that nervous. However when we present for the final assessment and we know that our marks depend on our performance, we feel that we are obliged to deliver our best, then we will feel pressure and become very nervous.

4.1.3 Suggestions from Students' Focus Group Interview

We also asked students on activities which they thought should be retained and what suggestions they would like to propose in order to improve the learning and teaching of TOP in the following semesters. We received numerous feedbacks such as students wanted more opportunities for students' self-learning which could lead to self-improvement efforts.

Instructors to give individual feedback to students' TOP

One of the suggestions is where instructors could assign students to prepare and deliver an individual technical oral presentation in front of the class. The students also suggested that instructor should provide feedback to presenters individually, once each presenter has completed his/her presentation. The students stated that, normally instructors provided overall general feedback to students' TOP, without addressing individual presenters.

G1/3/F: Assign students to stand and deliver a presentation, then lecturer give comments. So we will improve ourselves based on the comments given. However, so far, the comments are overall for all students. I mean not individual feedback.

G2/3/M: I'd like my lecturer to give comments about my presentation in front of other people in the class. Because my friend could also learn something from the feedback. So they will make better presentations. However, the feedback should use positive words because if feedback is too negative that would make me be not comfortable and I would feel that I am not worth to deliver any presentation elsewhere.

G7/1/F: In my case, I would prefer lecturer to give comments to each student individually. This is because when comments are made for specific individual, we would be able to know our faults. Besides, when lecturer comments others' presentations, we could also learn.

Instructors to show video clips of professional presenters

Students also propose that instructors could show video presentation of professional presenters in teaching TOP presentation skills in class.

G2/3/M: For me, when I watch other people deliver presentation in videos, I think my confidence level increase. Because I think both of us are human, so what's the difference between me and him. So I think I can present like him or better. So they can give me confidence.

G2/5/F: Because if we watch video, it gives us effort to deliver juts like the presenters. If they can

do it, so do us.

G6/6/M: Watching video of successful presenters. From there we could learn how they present, what do they do, what is needed when delivering presentations. Because students must watch others, must see the models. From there students can improvise the skills that they already have.

Students found out that such previewing of famous public speakers video clips have helped them to learn about presentation skills this have helped to improve their confident level in their technical oral presentation.

G6/4/F: For me, the most interesting part is when the lecturer shows us video clips of famous speakers.

G3/1/M: If we watch video about Steve Job's presentation, we could learn how to attract audience's attention. For instance, Steve Job uses less word, and just showing an image of I-phone only.

This is supported by another student

G3/2/M: Steve Job is very careful with his presentation. He just lists main points only. He is very straightforward.

Instructors to avoid impromptu TOP activities

We also found out that, although students want their instructors to provide more in class practices of delivering TOP, they dislike the idea of impromptu presentations on unfamiliar topics.

G2/2/M: I don't like being asked to present on the spot on topics that I am not familiar. So I will feel bad. So at that time, my confidence level drops and I feel very nervous.

G6/3/F: I don't like if lecturer pull students on the spot to present spontaneously.

4.2 Input from the Instructors

The followings are the challenges observed by the instructors.

Instructor X1 observed that students are nervous and show lack of confidence during their presentation. Instructor X1 also observed that students tend to read from slides, lacking delivery skills such as eye contact possibly due to nervousness. Instructor X1 reiterated that generally students display lack of confidence in their presentations.

X1: They use power point slides as crutches, some students are highly dependent on power point slides. Some students' voice is very soft.

Another problems observed by the instructors is lack of practice. Instructor X1 stated that "*Students don't practice enough. The more they practice, the more the confidence level will increase. There are right ways to practice*."

It is suggested that students should change their perceptions towards English and treat learning as a pleasant experience where making mistakes is common things to occur. Instructor X1 remarks that

X1: In their minds, English is difficult for them. This creates a barrier for them to move forward. So we have to remove the barrier. Show them that English is easy. English class has to be a non-threatening environment where making mistakes are 'cool' things.

Instructor X3 similarly suggested that

X3: Students' performance were not up to the level that I expected…I suspect that students ignore the fact that they to do a lot of practices on their own before the actual presentation day.

Instructor X3 further stated among problems students face which hinder them from delivering a good technical presentation are due to limited time to elaborate and emphasize on technical details, low proficiency level and lack of preparation due to the many assignments from all courses.

Similarly, instructor X 5 also observed that students are unable to present within the time limit due to undermining the importance of practice.

X5: The ability to comprehend the importance of rehearsals before the presentations as well as lack of ability to deliver their presentation within time limit.

Instructor X4 observed that among the problems students face in their TOP are "*lack usage of terminologies in their technical oral presentations, weak delivery skills and weak language skills*."

Instructor X6 listed the following shortcomings as factors affecting students' TOP performance;

X6: Lack of confidence level (shy), poor command of English, lack of motivation to present instead treating presentation just for the sake of passing the presentation, too many words on slides and inability to handle Q&A (questions and answer) session with the audiences.

DISCUSSION AND CONCLUSION

This study delineates the challenges faced by engineering undergraduates in developing their technical oral presentation skills which hinder them from achieving the desired competency level. Their evaluation which provides information that might be obscure to curriculum designers and instructors should be helpful in curriculum improvement effort. Various factors were considered problematic and require further attention. In essence, a large proportion of engineering undergraduates are grappling with low self-confidence issues and lack of preparation which affect their ability to deliver an effective technical oral presentation.

Besides this, they also reckon that language related difficulties such as unfamiliar vocabulary, grammar, pronunciations of words and their lack of fluency impede their TOP. The findings of this study concur with the findings in the study conducted among UTM students by Mahani Stapa et al. (2014). Similar patterns of problematic areas were reported where students had difficulty in language, possessing low self- confidence, facing difficulty to explain presentation content as well as limited knowledge on presentation skills. Similarly, as King (2002) and Woodrow (2006) pointed out, high anxiety level is very much affecting students' successful delivery of their oral presentations and these are major problems facing by the engineering undergraduates in this study.

Other factors such as lack of content understanding, lack of technology facilities, lack of in class practices and audience management, delivery issues such as eye contact and time management were also reported. Engineering undergraduates also raised their concerns that instructors' strategies in giving feedback for their TOP could be improved. For instance, the nature of feedback should be immediate and addressing individual students, rather than addressing all students in general as in summative feedback.

The findings from this study corroborate the many concerns highlighted in previous research with regards to lack of confidence among undergraduates in executing communication task. Lack of confidence may occur as a result of students' high anxiety level whenever they face the task of delivering a technical presentation in front of others (Mohd Radzuan & Kaur, 2011). Along similar notion, a study by Woodrow (2006) also indicates that delivering oral presentations is considered the most stressful communicative event for Asian students. This is a concern as it is evident from the literature that oral communication skills which include the ability to deliver technical oral presentation effectively are highly demanded by employers in the workplaces. Adding to this, employers reported that employees' lacking of confidence is the one of the major obstacles to be successful in workplace communication (Wahiza Wahi, 2014).

Having said that, to develop students' confidence in delivering technical oral presentation is probably the most difficult skills to teach because students must be able to manage technical content and technical language as well as fluency and accuracy simultaneously while at the same time training to get rid of

anxiety. With all these in consideration, curriculum developers and course instructors must find a way to make learning these micro skills more manageable and achievable through scrutinizing the existing activities and improving current teaching practices. Research points out that problem of students' high anxiety level which affects their communication ability can be improved through continuous exposure and practices in delivering oral presentations (Rubin, Rubin & Jordan, 1997). It is through this concerted effort from the multiple stakeholders can the TOP competencies of students be enhanced.

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REFERENCES

Basri, H., Zaharim, A., Omar, M. Z., & Yuzainee, M. Y. (2012). *Performance of engineering graduates as perceived by employers: Past and present.* Paper presented at the Global Engineering Education Conference (EDUCON), 2012 IEEE. Retrieved from http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6201116&tag=1

Bhattacharyya, E., Nordin, S. & Salleh, R. (2009). Internship students' workplace communication skills: Workplace practices and university preparation. *The International Journal of Learning, 16*(11), 439-452.

Bhattacharyya, E., & Sargunan, R. A. (2009). The technical oral presentation skills and attributes in engineering education: Stakeholder perceptions and university preparation in a Malaysian context. In *20th Annual Conference for the Australasian Association for Engineering Education*, 6-9 December 2009: Engineering the Curriculum (p. 1029). Engineers Australia.

Berjano, E., Sales-Nebot, L., & Lozano-Nieto, A. (2012). Improving professionalism in the engineering curriculum through a novel use of oral presentations. *European Journal of Engineering Education*, 1-10.

Chan, V. (2011). Teaching oral communication in undergraduate science: Are we doing enough and doing it right? *Journal of Learning Design, 4*(3), 71-79**.**

Crawley, E. F., Malmqvist, J., Östlund, S., & Brodeur, D. R. (2007). *Rethinking Engineering Education: The CDIO Approach*. US: Springer.

Crosling, G., & Ward, I. (2002). Oral communication: the workplace needs and uses of business graduate employees. *English for Specific Purposes, 21*(1), 41-57.

Darling, A. L., & Dannels, D. P. (2003). Practicing Engineers Talk about the Importance of Talk: A Report on the Role of Oral Communication in the Workplace. *Communication Education, 52*(1), 1-16.

Darmi, R., & Albion, P. (2013). *Malaysian graduates: what and why.* Paper presented in Proceedings of the 3rd Malaysian Postgraduate Conference (MPC 2013), Sydney, Australia, pp 12-18.

DiSanza, J.R. & Legge, N.J. (2003). *Business and Professional Communication: Plans, Processes and Performance.* Boston, MA: Allyn & Bacon.

Gerring, J. (2006). *Case Study Research: Principles and Practices.* Cambridge: Cambridge University Press.

Grotjahn, R. (1987). On the methodological basis of introspective methods. In C. Faerch & G. Kasper (Eds.), *Introspection in second language research*, pp. 59-60. Clevedon, Avon: Multilingual Matters.

Husaini Abdul Karim. (2016, February 3). Unemployed because they can't speak English. *New Straits Times.* Retrieved from (https://www.nst.com.my/news/2016/02/125529/unemployed-because-they-cant-speak-english).

Idrus, H., Salleh, R. & Abdullah, M.R.T.L (2011) Oral Communication Ability in English: An Essential Skill for Engineering. *Graduates. Asia Pacific Journal of Educators and Education, 26*(1), 107-124.

Joughin, G. (1998). Dimensions of oral assessment. *Assessment & Evaluation in Higher Education, 23*(4), 367-378.

Kassim, H. & Ali, F. (2010). English communicative events and skills needed at the workplace: Feedback

from the industry. *English for Specific Purposes, 29*(3), 168-182.

Kavaliauskienė, G. (2006). Good practice in teaching ESP presentation. *English for Specific Purposes World, 5*(2), 13).

Kerby, D., & Romine, J. (2009). Develop oral presentation skills through accounting curriculum design and course-embedded assessment. *Journal of Education for Business, 85*(3), 172–179.

King, J. (2002). Preparing EFL learners for oral presentations. *Dong Hwa Journal of Humanistic Studies, 4*, 401-418.

Kunioshi, N., Gonuchi, J., Hayashi, H., & Tojo, K. (2014). An online support site for oral presentations in science and engineering. *European Journal of Engineering Education, 37*(6), 600-608.

Mahani Stapa, Noor Asniza Murad & Norasnita Ahmad. (2014). Engineering Technical Oral Presentation: Voices of the Stakeholder. *Procedia-Social and Behavioral Sciences, 118*, 463-467.

Martin, R., Maytham, B., Case, J. & Fraser, D. (2005). Engineering graduates' perceptions of how well they were prepared for work in industry. *European Journal of Engineering Education, 30*(2), 167-180.

Matthews, C. & Marino, J. (1990). *Professional interactions oral communication skills in science, Technology and Medicine*. New Jersey: Prentice Hall Regents.

Mohd Ali, Z. (2004). *The use of e-mail in Business English: A case study.* MESL dissertation. University of Malaya, Kuala Lumpur.

Nair, G. K. S., Rahim, R. A., Setia, R., Husin, N., Sabapathy, E., Jalil, N. A. A., & Seman, N. A. (2012). Malaysian Graduates English Adequacy in the Job Sector. *Asian Social Science, 8*(4), 143.

Norlida Md Shariff. (2014). *Expert panel discussion at Teaching Excellence in Higher Education Seminar (TECHSE),* 25-26 August 2014, Sri Manja Boutique Hotel, Kuantan, Pahang.

Nunan, D. (1992). *Research methods in language learning.* Cambridge: Cambridge University Press.

Otoshi, J., & Heffernen, N. (2008). Factors predicting effective oral presentations in EFL classrooms. *Asian EFL Journal, 10*(1), 65-78.

Shakir, R. (2009). Soft skills at the Malaysian institutes of higher learning. *Asia Pacific Education Review, 10*(3), 309-315.

Smith, C.M.m & Sodano, T.M (2011). Integrating lecture capture as a teaching strategy to improve student presentation skills through self-assessment. *Active Learning in Higher Education, 12*(3), 151-162.

Radzuan, N. R. M., & Kaur, S. (2011). Technical Oral Presentations in English: Qualitative Analysis of Malaysian Engineering Undergraduates' Sources of Anxiety. *Procedia - Social and Behavioral Sciences, 29*, 1436-1445.

Rubin, R. B., Rubin, A. M., & Jordan, F. F. (1997). Effects of instruction on communication apprehension and communication competence. *Communication Education, 46*(2), 104-114.

Van Ginkel, S., Gulikers, J., Biemans, H., & Mulder, M. (2015). Towards a set of design principles for developing oral presentation competence: A synthesis of research in higher education. *Educational Research Review, 14*, 62-80.

Wahiza Wahi. (2014). English language literacy: Juxtaposing undergraduates students' competencies with workplace requirements. *International Journal of Language Education and Applied Linguistics, 1*(1), 19-31.

Woodrow, L. (2006). Anxiety and speaking English as a second language. *RELC Journal, 37*, 308-328.

Yin, R. K. (2009). *Case Study Research: Design and Methods.* California: SAGE Publication.

Yusoff, M. (2010) *Analysing communication competence in oral presentations: engineering students' experiences. Journal of Human Capital Development, 3*(1), 99-118.

Yuzainee, M., Zaharim, A., & Omar, M. (2011). *Employability skills for an entry-level engineer as seen by Malaysian employers.* In Global Engineering Education Conference (EDUCON), 2011 IEEE (pp. 80-85). IEEE.