Mechanical Engineering Students Perceived Speaking and Listening Competence: A Self-Assessment

Noor Baiduri Abd Halim, Mohd Fauzi Kamarudin, Fudhail Abdul Munir

Abstract: *Speaking and listening are the four essential macro skills in English as Second Language (ESL) learning. In recent years, education evaluation has become a vital indicator in assessing the outcomes of the education delivery system. In this study, speaking and listening skills of students were assessed by using the Can-do scales. The scope of the study is confined to undergraduate and postgraduate mechanical engineering students with the aim to evaluate their capability in practicing their English language skills, particularly speaking and listening. The respondents are undergraduate and postgraduate students from Faculty of Mechanical Engineering, Universiti Teknikal Malaysia Melaka (UTeM). A total of 39 respondents were involved in the survey conducted for this study. It is found that respondents have no difficulties if the conversation is regarding basic topics. Nevertheless, respondents have problems to speak when dealing with unfamiliar topics. The outcomes of this study can be utilised to improve students' English communication skills. In addition, the teaching method can also be enhanced in order to enable students to communicate their subject matter that is engineering in both academic life and future career.*
Keywords : ESL, Assessment, Can-do Scales.

I. INTRODUCTION

In second language learning contexts, effective communication is achieved by a combination of four macro skills that includes speaking and listening [1]. These skills that lead to effective communication in English are seen as vital to help in securing employment in many sectors [2]. These skills remain to be relevant to the needs of the industry such as the engineering and tourism fields, especially when communicating with foreigners [3]. A previous study has shown the importance of effective communication skills where 300 employers were interviewed to understand the desired criteria for employment purpose [4]. Communication skills were ranked to be the most required one compared to

other technical skills. Azami et al.[4] also reported that soft skills are valued slightly higher than technical skills in the engineering field. These findings have alerted education providers to continuously assess graduates' competency in this area. In modern India, English communication skill is considered as one of the most important criteria for employment. Despite of this requirement. many engineering graduates in India are still having problem to use fluent and accurate English in speech and writing[5].

Generally, second language (L2) assessments are developed with different approaches to enhance different skills. In the Japanese context, the short sentence memorization method has observed an improvement at 75% of the cases investigated [6-7]. In their studies, it is found that the topic and background knowledge either help or hinder learners' performance in speaking by deploying the task-based assessment. It was also reported that respondents had problems to speak when dealing with unfamiliar topics and without the needed prior knowledge. This paper presents the results of preliminary assessment of speaking and listening skills among students from Faculty of Mechanical Engineering, Universiti Teknikal Malaysia Melaka (UTeM). It is essentially important to assess the outcomes of the two macro communication skills before any improvement on the teaching approach is performed.

II. THEORETICAL FRAMEWORK

This paper draws from situated learning theory which argues that learning is shaped not only by the content but also the context, community, and participation [8]. According to this theory, language learning of communication skills involves communicating with other speakers and contextual variables. This theory is commonly used to understand the impact of the content and context on students' 'Willingness to Communicate' (WTC). This theory states that if knowledge presented is authentic and meaningful, WTC level is high. Subsequently, learners will be motivated to communicate.

According to Hansman and Wilson [8], learning must not occur in isolation. Understanding of the context is therefore crucial. Learners' socio-cultural backgrounds, norms, culture of a community, values, and social environment are pertinent because these elements define the context of the communication process. The central purpose of this study is to comprehend how content and context affect students' WTC.

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Fig. 1: Heuristic model of variables influencing Willingness to communicate (WTC) [8]

Figure 1 shows the Heuristic model of variables influencing WTC introduced by McCroskey and Baer [8] as the construct of WTC. MacIntyre et al. [10] later adapted this construct to the L2 situation and developed a heuristic model incorporating the contextual variables of the learners. Each layer is a pre-cursor to other layers incorporating the variables that influence L2 learners' WTC. The situational variables in Layers I-III are dependent on contextual aspects. Layer II is a pre-cursor to Layer I but does not reflect learners WTC. Additionally, situational variables are context dependent. Layers IV-VI are more stable and predictable in many contexts. The top layer represents the intention of a learner to communicate. The next layers are operational aspects of initiation in communication dealing with types of inter-group and interpersonal motivation.

III. RESEARCH METHODOLOGY

In this research, quantitative and descriptive designs were employed in the form of questionnaire. The questionnaire, adopted from the well-known Can-do Scale [11] comprises of demographic variables and two components of English skills, namely speaking and listening skills. The main objective of this research is to establish preliminary data to evaluate students' speaking and listening skills. The data obtained in this study will be utilised to enhance students' communication skills. 39 undergraduate and postgraduate engineering students from Faculty of Mechanical Engineering, UTeM were selected to answer the questionnaire. The students were briefed on the objective of this research and how to complete the survey form. The questionnaire comprises of three parts. The first part is the demography of the respondents which are age, gender, type of programme, year of study and Malaysian University English Test (MUET) test results. The second part of the questionnaire consists of the Can-do statements of self-assessment of English speaking and listening skills. Mean score is given based on skill 1 to 4. Skill 1 refers to Not at all and skill 4 refers to Quite Easily. The Statistical Package of the Social Science (SPSS) [12] was used to analyse and interpret the data. The data was organised, simplified and presented in easier form. The results of this study are presented in the form of the respondents' demography and the descriptive analysis.

IV. RESULTS AND DISCUSSION

Demographic data gathered from the respondents are age, gender, type of programme, year of study and Malaysian University English Test (MUET) test results. Table 1 presents the age distribution of the correspondents. From the total of 39 respondents, 71.8 % are male students and the rest are female students. On the other hand, 35.9% of them are at the age of 21 which indicates that most of the students are in undergraduate programmes.
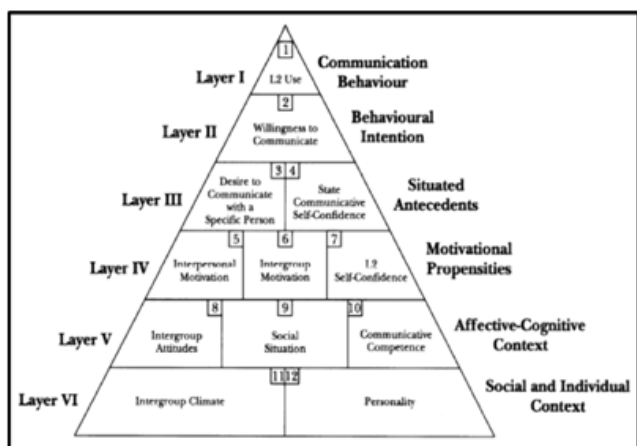
Table 1: Age distribution of the respondents

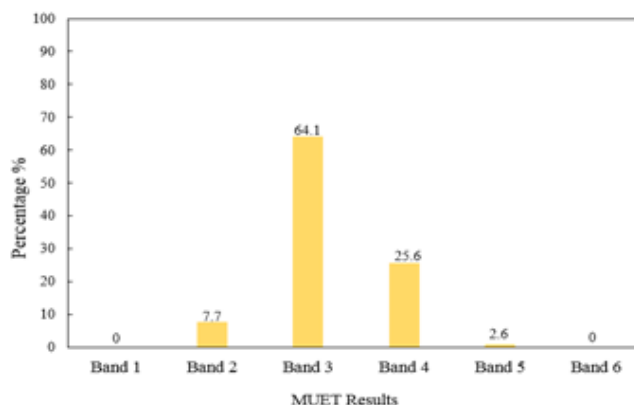| Age	Frequency, N	Percentage, %
21	14	35.9
22	1	2.6
23	7	17.9
24	6	15.4
25	3	7.7
26	4	10.3
27	1	2.6
28	2	5.1
30	1	2.6
Total	39	100.0

Fig. 2: Malaysian University English Test Results

Meanwhile, MUET results were also obtained and shown in Fig.2. As presented in the figure, 64.1% of students have obtained Band 3 in their MUET test. On the other hand, only 7.7% of the students are in Band 2 while 25.6 % belong to Band 4. Band 1 refers to extremely limited user, Band 2 for limited user, Band 3 for modest user, Band 4 for competent user, Band 5 for good user and Band 6 indicates very good user.

A. Can-do Scale of English-Speaking Skills

Table 2 shows the respondents' distribution of the self-assessment of English-speaking skills. The mean score for this section is 3.57, which is slightly higher than the average value. This shows that the respondents are able to speak in English without much predicament in conveying their messages. Majority of the respondents are capable to use English language for basic purposes.

However, some respondents face difficulties when they are required to describe themselves, give opinion on special topics that require appropriate vocabulary and use specific tenses for specific situation. This might be due to the missing of context and participation in specific task in the learning process experienced by the students.

B. Can-do Scale of English-Listening Skills

On the other hand, Table 3 presents the respondents distribution based on the Can-do scale for listening skill assessment. The calculated mean score for this section is 3.42, which is slightly less than the mean score in section 3.2. Nevertheless, the mean score is higher than the average value. This shows that most of the students are able to utilise their listening skills without major problems. However, going into more details of the results revealed that the respondents might have difficulties in understanding native speaker's command of language. This might be due to students' limited experience or exposure to the kind of language that is used by native speakers that leads to the lack of context for them to digest utterances in the language.

V. CONCLUSION

This research was undertaken to provide preliminary data of two macro skills that evaluate students' capability of communicating in effective English, particularly in speaking and listening. The self-evaluation assessment proved that students perceived themselves as having problems to communicate when factual topics are involved. This leads to a concern of students not being able to function well at workplace when using English since English is widely used in the technical fields to talk about facts and technical matters. This signals that UTeM graduates have not achieved the desired level of English proficiency required of them.

Moreover, the results suggest that effective communication between respondents and English native speakers at future workplace setting might be difficult to be achieved. However, this investigation had not involved respondents from other faculties in UTeM. Therefore, further research involving respondents from the other faculties would lead to a more generalised finding that can represent the students' language proficiency as a whole. In general, the outcomes of this study are extremely timely and important as they tell the University that review and improvement need to be done to the syllabus and subjects taught. The findings can be used to improve the teaching and learning of all subjects taught in the university. By this, students will be exposed to topics relevant to technical areas that imitate their future job scope in the industry.

REFERENCES

1. G. O. Young, "Synthetic structure of industrial plastics (Book style with paper title and editor)," in Plastics, 2nd ed. vol. 3, J. Peters, Ed. New York: McGraw-Hill, 1964, pp. 15–64.
2. B. Kamonpan, "Enhancing the development of speaking skills for non-native speakers in English". Procedia Social and Behavioral Sciences, Vol. 2, pp.1305-09, 2010.
3. M.Pandey and P.Pandey, "Better English for better Employment Opportunities". International Journal of Multidisciplinary Approach and Studies, Vol. 1, pp.96-103, 2014.
4. K. Bavornluck, "The Readiness of English Communication Skills of Tourism Employees in Bangkok for Entering the ASEAN Community". International Journal of Environmental and Science Education,Vol. 11,pp. 12903-12907, 2016.
5. Z. Azami, A. Ibrahim, M.Y. Yuzainee, Z.O. Mohd, B.Hassan, " Evaluating the Soft Skills Performed by Applicants of Malaysian Engineers". Procedia Social and Behavioral Sciences, Vol. 60, pp. 522-528, 2012.
6. A. Clement and T. Murugavel, " English for Employability: A Case Study of the English Language Training Need Analysis for Engineering Student in India". English Language Teaching, Vol.12, pp.116-125,2015.
7. K. Ikuo, "Effect of English Short Sentences Memorization on the Speaking Skill and the E-learning of English". Procedia Social and Behavioral Sciences, Vol. 103, pp. 348-51, 2013.
8. N. Khabbazbashi, "Topic and background knowledge effects on performance in speaking assessment". Language Testing, Vol. 34 (1), pp. 23-48,2015.
9. C. Hansman and A. L. Wilson, "Situated cognition: Knowledge and power in context", in Annu. Meeting of the Adult Education Research Conference, Raleigh, NC, 2002.
10. J. C. McCroskey and J. E. Baer, "Willingness to Communicate: The construct and its measurement", in Annu. Conv. of the Speech Communication Association, Denver, CO, 1985.
11. P. D. MacIntyre, Z. Dörnyei, R. Clément and K. A Noels, "Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation". The Modern Language Journal, Vol. 82(4), pp. 545-62, 1998.
12. J. L. D. Clark et al. (25-35). "College Students' Knowledge and Beliefs: A Survey of Global Understanding". Change Magazine Press New Rochelle, NY, 1981.
13. SPSS Inc. Released 2007. SPSS for Windows, Version 16.0. Chicago, SPSS Inc.

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216