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Exploring the Listening Skills among the Engineering and Non-Engineering Undergraduates

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Abstract

Listening is an important skill in our daily life, from home to school and at the workplace. Listening skill plays a key role to ensure the effective communication occur between the information deliver and receiver. Furthermore, communication skill is one of the 21st century skills must be mastered by the students to prepare themselves in facing the challenge at competitive job market. Therefore, a survey using a self-rating test was conducted to determine the listening skills among the undergraduate students in Universiti Tun Hussein Onn Malaysia. A total numbers of 165 students from engineering faculties and non-engineering faculties were strata randomly selected as respondents in this study. The gathered data were analysed using frequency, percentage and independent t-test. The findings showed that majority of the students possess to medium level of listening skills and they need to improve themselves to learn to listen more skilfully especially in difficult situations with others. The findings also showed that there was no significant difference in listening skill level among the students from the aspect of gender and field of study. In summary, higher education institutions are recommended to integrate and expose students effective listening skills in their program or courses and lead them to the success of learning and vital social skills.

Keywords: Listening Skills, Undergraduate Students, Engineering, Non-Engineering

Introduction

Listening is a skill always been neglected in learning even in working. Listening is the ability to accurately receive and interpret messages in the communication process. Indeed, listening play an important role to ensure the effective communication take place. Nowadays, a lot of employers request the listening skills training or courses for their employees as the employer knows that listening is one of the main factors behind the success of the organization. Moreover, good listening skills can lead to greater productivity of an organization by reducing the mistakes and improving the right information sharing that result in most innovative and creative work (SkillsYouNeed, 2018). A research finding by Adler, et.al (2001) in SkillsYouNeed showed that about 45% of an adult is spent listening during the communication process compared to speaking (30%), reading (16%) and writing (9%). In fact, as a student, he/she can get a lot of benefits by mastering listening skills, such as

improved communication skills, more time on task, increased academic understanding, enhanced interpersonal connections, and sharpened listening skills (LoBello, 2018). However, for those who are weak in listening, they can learn at any time and improve throughout their lives (Nurn & Payment, 2000).

According to Abdullah, Zain, Ambotang, Taat and Talip (2011), previous studies showed that students sit in front or near to lecturer tend to improve their listening skills. Besides, the level of concentration and understanding among the students sits in front or near to lecturer able to achieve 61% compared to those sitting far from the lecturer during the class. Subsequently, concentration, rate will reduce about 5% to 10% each row towards the back side of the classroom. Effective listening skills are needed at a higher learning institution because students require listening to a long period of time in the thinking process in order to generate an idea to express their opinions, ideas or what's in mind. Hence, the purpose of this study was conducted to indicate the listening skill level among the undergraduate students, and to identify the difference in listening skill level among the students from the aspects of gender (male and female) and field of study (engineering and non-engineering).

Many articles showed that engineering and non-engineering students tend to have different in many things. As stated by Heather (2007), engineering students tend to get answer for a solution that always has the constant method. This situation may due to the focus of engineering discipline is logical and fact (Lee & Adam, 2016). On the other hand, non-engineering students always have has a great variety of solution for a single problem with the suitable and acceptable argument (Heather, 2007). This may due to the non-engineering discipline focus on the process of finding answer (Lee & Adam, 2016). In line with American Society for Engineering Education (2011), the industry always complained that the engineering graduates are poor in communication skills. Furthermore, communication skills is one of the important 21-century skills being hot debate now. Good communication skills always need good listening skills because listening skills is important over other skills (Latha, 2018).

Methodology

This study adopted a survey method as research design to determine the listening skills level among the engineering and non-engineering undergraduate students. A total numbers of 165 students from eight faculties were involved in this study as sample. The involved faculties were electrical engineering, mechanical engineering, civil engineering, technology engineering, compter science, technology management, sains, and education faculties. They were selected through strata random sampling technique. A self-rating test (Burn & Payment, 2000) was used as instrument to collect the rating on listening skills from the sample. This test consists of 15 questions from the aspect of effective listening. Samples were required to rate their listening skills using 5 point Likert Scale, with the indicator "1 = None of the time; 2 = Rarely; 3 = About half of the time; 4 = Most off the time; 5 = All the time". The total score of the samples were obtained to identify their listening skills level and the interpretation of the scores are as follow:

60 – 75: Excellent listening skills during the difficult situation you encountered. Do well most of the time and friends believe that you are good listener.

45 – 59: Need to learn to listen more skilfully, in difficult situations with others. Must start to improving skills.

Less than 45: Other people did not believe you were listening. Must start to focus the weak areas.

Furthermore, Alpha Cronbach was used to ensure the reliability of the test. The finding of the pilot test showed that the α value = .788. Thus, this test is reliable and suitable to use as an instrument for this study. The gathered data were analyzed using frequency, percentage and independent t-test. Frequency and percentage were used to determine the listening skill level among the undergraduate students, meanwhile the independent t-test was used to identify the difference in listening skill level among the students from the aspects of gender (male and female) and field of study (engineering and non-engineering).

Results and Discussion

Listening Skills Level among the Undergraduate Students

Table 1 illustrates the level of effective listening skills among the undergraduate students in general. The majority of the students tend to have middle level of listening skills, about 66% of them need to learn to listen more skilfully. This situation is matched with the claims of the employers saying that the graduates are lacking in communication skills. In line with the statement mention by SkillsYouNeed (2018), listening is the ability to accurately receive and interpret messages in the communication process because listening is not equal to hearing as listening require focus and concentrated effort. Finding showed a worried situation as about 8% of the undergraduate students weak in listening skills, they fail to convince people to believe there were listening. Table 2 shows the effective listening skills for 15 aspects. The majority of the students tend to have high scores in “maintained appropriate voice control” with mean = 4.02, SD = .788. On the other hand, most of them are weak in “did not talk while the other person was speaking” with mean = 3.32, SD = .974. This finding showed that undergraduates tend to interrupt other people when the other person was speaking.

Table 1. Level of Effective Listening Skills among the Undergraduate Students

Effective Listening Skills	Frequency	Percentage
Excellent listening skills	43	26.1
Need to learn to listen more skilfully	109	66.0
Other people did not believe you were listening	13	7.9
Total	165	100.0

Table 2. Mean Score and Standard Deviation of Effective Listening Skills

Item	Effective Listening Skills	<i>m</i>	<i>SD</i>
1	I faced the person through the conversation.	3.77	.992
2	I did not interrupt.	3.47	.954
3	I did not talk while the other person was speaking.	3.32	.974
4	I listened for main ideas and concepts.	3.44	.983
5	I listened for vocal tones.	3.47	.979
6	I observed body language.	3.87	.905
7	I kept an open mind.	3.97	.879
8	I did not use the person's pauses as my signal to begin speaking.	3.42	.905
9	I used appropriate listening responses such as "I see".	3.43	1.138
10	I asked questions to clarify the speaker's meaning.	3.87	.849
11	I did not plan what I was going to say while the person was speaking.	3.44	.879
12	I maintained appropriate body language.	3.65	.916
13	I maintained appropriate facial expressions.	3.80	.857
14	I maintained appropriate voice control.	4.02	.788
15	I did not use fake smiles.	3.88	.968

m mean, *SD* standard deviation

Table 3 shows the level of effective listening skills between the male and female undergraduate. People always believe that female tend to be a good listener compare to male due to the nature of gender. About 30% female undergraduate fell into category of excellent listening skills during the difficult situation they encountered compare to male undergraduate that only 22.2%. Both male and female undergraduates were good in "maintained appropriate voice control", for male mean = 4.07 and SD = .76 while for female mean = 3.98 and SD = .82 as stated in Table 4. However, as illustrated in Figure 1, both male and female undergraduates tend to have a similar achievement for 15 aspects in effective listening skills.

Table 3. Level of Effective Listening Skills between Male and Female Students

Score		Gender		Total
		Male	Female	
< 45%	Frequency	6	7	13
	% within gender	7.4%	8.3%	7.9%
45 – 59%	Frequency	57	52	109
	% within gender	70.4%	61.9%	66.1%
60 – 75%	Frequency	18	25	43
	% within gender	22.2%	29.8%	26.1%
Total	Frequency	81	84	165
	% within gender	100.0%	100.0%	100.0%

Table 4. Mean Score and Standard Deviation of Effective Listening Skills between Male and Female Undergraduate Students

Item	Effective Listening Skills	Male		Female	
		<i>m</i>	<i>SD</i>	<i>m</i>	<i>SD</i>
1	I faced the person through the conversation.	3.75	.90	3.79	1.08
2	I did not interrupt.	3.52	.95	3.43	.96
3	I did not talk while the other person was speaking.	3.27	.91	3.36	1.04
4	I listened for main ideas and concepts.	3.44	.95	3.43	1.02
5	I listened for vocal tones.	3.41	1.01	3.52	.95
6	I observed body language.	3.90	.90	3.85	.91
7	I kept an open mind.	3.96	.90	3.97	.86
8	I did not use the person's pauses as my signal to begin speaking.	3.37	.94	3.48	.87
9	I used appropriate listening responses such as "I see".	3.26	1.15	3.60	1.11
10	I asked questions to clarify the speaker's meaning.	3.88	.91	3.87	.79
11	I did not plan what I was going to say while the person was speaking.	3.40	.90	3.49	.86
12	I maintained appropriate body language.	3.59	.97	3.70	.86
13	I maintained appropriate facial expressions.	3.69	.92	3.90	.79
14	I maintained appropriate voice control.	4.07	.76	3.98	.82
15	I did not use fake smiles.	3.80	.90	3.95	1.03

m mean, *SD* standard deviation

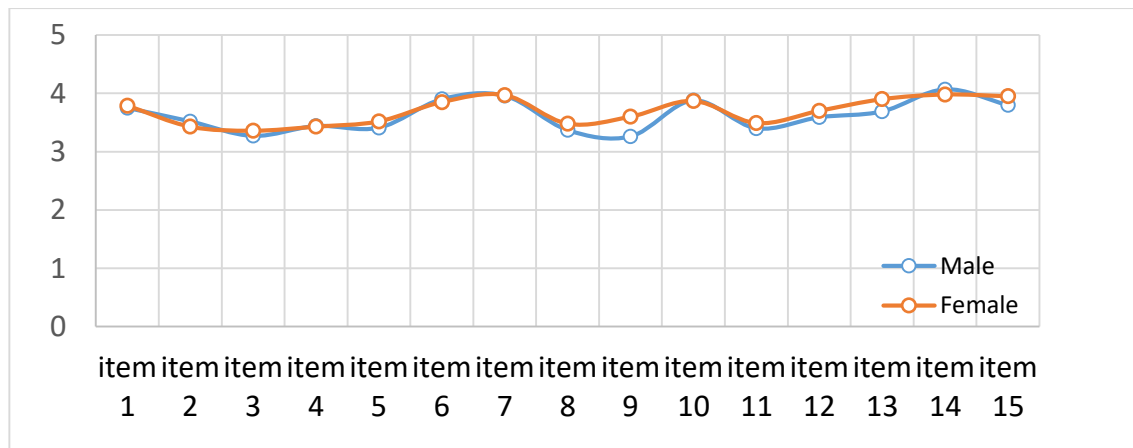
**Figure 1.** Graph for Effective Listening Skills Score between Male & Female Undergraduate Students

Table 5 shows the level of effective listening skills between the Engineering and Non-Engineering undergraduate. Most of the people will think that non-engineering students are learning social science and they tend to be a talkative person than engineering students that only knowing things in straight forward. Surprisingly, the finding showed that about 28.7% engineering undergraduate fell into category of excellent listening skills during the difficult situation they encountered compare to non-engineering undergraduate that only 23.1%. Engineering undergraduates tend to have high

scores in “I observed body language” with mean = 4.01 and SD = .93. On the other hand, non-engineering undergraduates tend to have high scores in “I maintained appropriate voice control” with mean = 4.06 and SD = .71 as stated in Table 6. However, as illustrated in Figure 2, both engineering and non-engineering undergraduates tend to have a similar achievement for 15 aspects in effective listening skills.

Table 5. Level of Effective Listening Skills between Engineering and Non-Engineering Students

Score		Field of Study		Total
		Engineering	Non-Engineering	
< 45%	Frequency	9	4	13
	% within gender	10.3%	5.1%	7.9%
45 – 59%	Frequency	53	56	109
	% within gender	60.9%	71.8%	66.1%
60 – 75%	Frequency	25	18	43
	% within gender	28.7%	23.1%	26.1%
Total	Frequency	87	78	165
	% within gender	100.0%	100.0%	100.0%

Table 6. Mean Score and Standard Deviation of Effective Listening Skills between Engineering and Non-Engineering Undergraduate Students

Item	Effective Listening Skills	Engineering		Non-Engineering	
		<i>m</i>	<i>SD</i>	<i>m</i>	<i>SD</i>
1	I faced the person through the conversation.	3.75	1.12	3.79	.83
2	I did not interrupt.	3.46	1.05	3.49	.83
3	I did not talk while the other person was speaking.	3.41	1.04	3.21	.89
4	I listened for main ideas and concepts.	3.44	1.06	3.44	.89
5	I listened for vocal tones.	3.55	1.10	3.37	.82
6	I observed body language.	4.01	.93	3.72	.85
7	I kept an open mind.	4.00	.99	3.94	.83
8	I did not use the person’s pauses as my signal to begin speaking.	3.39	.99	3.46	.80
9	I used appropriate listening responses such as “ I see”.	3.41	1.19	3.45	1.09
10	I asked questions to clarify the speaker’s meaning.	3.90	.95	3.85	.72
11	I did not plan what I was going to say while the person was speaking.	3.30	.90	3.60	.83
12	I maintained appropriate body language.	3.77	.99	3.51	.83
13	I maintained appropriate facial expressions.	3.86	.90	3.73	.80
14	I maintained appropriate voice control.	3.99	.86	4.06	.71
15	I did not use fake smiles.	3.83	.96	3.94	.97

m mean, *SD* standard deviation

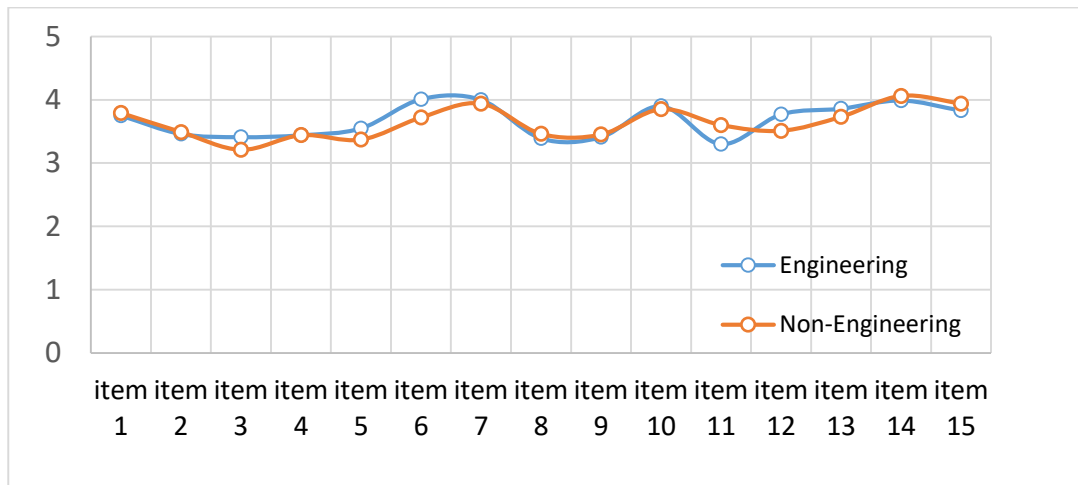


Figure 2. Mean Score Graph for Effective Listening Skills between Engineering and Non-Engineering Undergraduate Students

Difference in Listening Skills Level between Male and Female Students

Table 7 shows that female students tend to have higher score in listening skills than male students with mean difference = .988. However, independent t-test in Table 8 shows that there is no significant difference in listening skills between male and female students, $t(163) = -.902, p = .368$. Therefore, lecturers may teach students, regardless the gender issue. Students should develop adequate listening skills in the classroom no matter how intelligent he/she is to lead them reap the benefits of his/her education because students need to listen keenly to the directions and lectures rather than simply hearing them (LoBello, 2018). In addition, about 60% of the time spent by students is used for the listening purpose (Abdullah, Zain, Ambotang, Taat & Talip, 2011).

Table 7. Group Statistics of Effective Listening Skills between Male and Female Undergraduate Students

Gender	N	Mean	Std. Deviation
Male	81	54.32	6.33
Female	84	55.31	7.66

Table 8. Independent Samples Test of Effective Listening Skills between Male and Female Undergraduate Students

t	df	Sig. (2-tailed)	Mean Difference
-.902	163	.368	.98854

Difference in Listening Skills Level between Engineering and Non-Engineering Students

Table 9 shows that non-engineering students tend to have higher score in listening skills than engineering students with mean difference = .518. However, independent t-test in Table 10 shows that there is no significant difference in listening skills between engineering and non-engineering students, $t(163) = .471$, $p = .638$. According to Abdullah, Zain, Ambotang, that & Talip (2011), university students tend to spend 50% to 100% of their time in listening during the lecturing. Since there is no significant difference in listening skills between engineering and non-engineering students, lecturers should deliver their regardless to the field of study of the students. Research finding showed that students tend to spend much of their time listening than speaking, reading and writing, however, only 25% of a brief discussion will be retained after a few days (ACS, 2011). Thus, the lecturer is suggested to train the students to be an active listener than a hearing during the learning process occur.

Table 9. Group Statistics of Effective Listening Skills between Engineering and Non-Engineering Undergraduate Students

Field of Study	N	Mean	Std. Deviation
Engineering	81	54.55	5.98
Non-Engineering	84	55.07	7.89

Table 10. Independent Samples Test of Effective Listening Skills between Engineering and Non-Engineering Undergraduate Students

t	df	Sig. (2-tailed)	Mean Difference
.471	163	.638	.518

Conclusion

The finding in this study showed that undergraduate students tend to have the middle score in listening skills. Finding also indicated that there is no significant difference in listening skill level among the undergraduate students from the aspect of gender and field of study. Either students or lecturers must master the listening skills to ensure the meaning learning process occur because listening is the key to all effective communication (SkillsYouNeed, 2018). Without an effective communication during the learning process, both lecturer and student can be easily become frustrated and irritated. As mentioned earlier in this article, listening skills can be learned and be improved. Consequently, lecturer or student is encouraged to learn listening skills effectively, for example, a HURIER model of listing that developed by Judi Brownell from Cornell University (SkillsYouNeeds, 2018) that emphasize on key components of active listening. Further study is recommended to focus on method enhancing students listening skills and the impact of active listening skills towards the undergraduate employability rate.

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