

Culinary Arts Vocational Students' Cognitive Readiness Towards Basic Usage of Internet of Things (IoT)

M.A. Rohiat^{1,*}, R. Rohanai¹, A. Salim², N.F. Mukhtar¹

¹Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia, 86400 Parit Raja, Batu Pahat, Johor, Malaysia

²Faculty of Hotel and Tourism Management, Universiti Teknologi MARA Pulau Pinang, 13500 Permatang Pauh, Pulau Pinang, Malaysia

*Corresponding author's email: akmalr@uthm.edu.my

ABSTRACT: This study aims to see how well the college vocational students are prepared for the basic use of the Internet of Things (IoT) in the face of the industry 4.0 and to apply it in their learning and teaching. The main objective of the study was to identify student's readiness in cognitive perspective as a measure of the use of Internet of Things (IoT). The study design used by researcher was quantitative. Hence, the instrument used a questionnaire which involving 44 students of ERT Azizah college vocational in culinary arts for year 3 and year 4. Each data will be analyzed using SPSS version 23 software. Overall, the results obtain on the students showed a positive impact on the use of the basic Internet of Things (IoT).

Keywords: *Readiness; Vocational Students; Internet of Things (IoT)*

1. INTRODUCTION

Education is the main factor that builds the formation of personality and human identity. Teaching and learning process is the main method that measures the value of effectiveness in delivering information to students. Nowadays, in the face of an increasingly modern world of information technology, the world of education is also changing in the process of learning and teaching such as Technical and Vocational Education and Training (TVET). This situation is in line with the will of Malaysia Education Blueprint 2013-2025 that want holistic graduates to have a balanced and productive entrepreneurship. As the TVET field improves, the soft skills also play an important role because the relationship between TVET and soft skill are closely related. This is because; the relevance of these two aspects depends on each other in producing a product using the latest technology. For example, the use of high technology in learning and teaching such as web site, email, blog, Google Photo, Pinterest and so on. The changes in the industrial revolution have also made a movement due to sophisticated and modern technology. This situation has cause Malaysia to take steps to cope with the industrial revolution 4.0 by improving the quality of internet networks for the sake of national development. Klaus Schwab, founder of world economy forum has defined that revolution 4.0 is a new technology that combine the physical, digital and the biological world in order to give the new impact towards economy world, disciplines and

industry, [1].

2. METHODOLOGY

Thus, the populations for this research were 50 students from culinary art students at ERT Azizah Vocational College. Therefore, based on the sample size determination of Krejcie and Morgan (1970). The researcher selected a sample of 44 students of the culinary arts from ERT Azizah Vocational College. All the data obtained from the questionnaires were analyzed using the Statistical Package for the Social Sciences version 23.0 (SPSS). The results of the analysis are shown in tables obtained from SPSS such as min and standard deviation to measure the level of readiness [2].

3. RESULTS AND DISCUSSION

Based on the mean value obtained for each the questions that have been in the questionnaire, as given which is the cognitive readiness of culinary art vocational student in the basic usage of Internet of Things (IoT).

Table 1 Descriptive Analysis of Cognitive Readiness of Culinary Art Vocational Student in the Basic Usage of Internet of Things (IoT)

Item	Mean	SD
I have a basic knowledge of Internet of Things (IoT).	3.48	0.876
I know about Industrial Revolution 4.0 that happened in Malaysia.	3.20	0.954
I knew how to use email before I went to vocational.	4.14	0.795
I have knowledge of using Google Drive application.	3.70	0.851
I always receive additional information from lecturers through Whatsapp applications.	4.23	0.803
I am constantly developing theoretical knowledge in the field that I follow with the help of YouTube.	4.41	0.787
I have additional knowledge on machine operating safety	4.18	0.691

through a YouTube source.		
I was able to identify the names of tools needed in the workshop via internet source.	4.41	0.693
I keep up-to-date with online news such as <i>Berita Harian</i> .	3.64	0.917
Total Mean	3.93	0.819

Generally, the results of the overall findings shows 3rd year students and 4th year students have a high cognitive aspect with score mean 3.93 (SD = 0.819). Therefore, referring to Table 1, the item with the highest score is the item 6 and item 8 (I am constantly developing theoretical knowledge in the field that I follow with the help of YouTube) and (I was able to identify the names of tools needed in the workshop via internet source) with a mean score of 4.41. Whereas the lowest performing is the item 2 (I know about Industrial Revolution 4.0 that happened in Malaysia) with a mean score 2.30.

Based on the findings obtained by the researcher, the cognitive readiness of the culinary art students shows a high level towards the basic usage of Internet of Things (IoT). This situation clearly shows that area of expertise is very important in education because it is not only emphasized on skill; it also developed knowledge in the field of student study. [3], state that our communities still lack of knowledge on IoT technology especially youth generation. This statement is also supported by [4] that knowledge is the biggest part for some individual to improve and it was the key element that needed in order to distinguish a person's level.

4. CONCLUSION

Overall, the results show that all research questions that have been developed based on the objective of the research being conducted. Based on the results, all the mean score have been very satisfactory. Based on the research question can be conclude that culinary art vocational students' cognitive aspects has reached the highest level. These can be seen as the readiness students show a satisfactory level of the basic usage IoT in the learning and teaching process.

ACKNOWLEDGEMENT

Authors are grateful to Universiti Tun Hussein Onn Malaysia for the financial support .

REFERENCES

- [1] Patel, K. K., & Patel, S. M. (2016). Internet of things-IOT: definition, characteristics, architecture, enabling technologies, application & future challenges. *International journal of engineering science and computing*, 6(5).
- [2] Landell, K. (1997). *Management by Menu*. London: Wiley and Sons Inc.
- [3] Zubaidi, A., Wijaya, I. G. P. S., Irmawati, B., & Arimbawa, I. W. A. (2019). *Pengenalan*

Teknologi Internet Of Things (Iot) Untuk Menyelesaikan Permasalahan Di Sekitar Bagi Siswa-Siswi Sekolah Menengah Atas Negeri 7 Mataram. *Abdi Insani Universitas Mataram*, 6(1), 80-87.

- [4] Ee, A.M. 2005. *Kursus perguruan lepasan ijazah (KPLI): Ilmu pengetahuan dan ketrampilan ikhtisas*. Shah Alam: Fajar Bakti.