JTVE, Special Edition NARTC 2023, Vol 8, No 1 (2023)
eISSN: 0128-0821
http://upikpolimas.edu.my/ojs/

The Perception on The Effectiveness of Industrial Training During Pandemic

Hasni Hashim[1], Aida Yusnizan Bt Mohd Yusof[2], Marsunita bt Md Saad[3]
[1]Politeknik Sultan Salahuddin Abdul Aziz Shah
[2 3]Politeknik Sultan Abdul Halim Mu'adzam Shah,
[1]hasnihashim@psa.edu.my
[2]aidayusnizan@polimas.edu.my
[3]marsunita@polimas.edu.my

Abstract: This study was conducted on students from Politeknik Sultan Salahuddin Abdul Aziz Shah in Selangor and Politeknik Sultan Abdul Halim Mu'adzam Shah in Kedah who had recently finished their industrial training during the COVID-19 pandemic. In order to graduate with a diploma, students must complete and pass a 20-week practical training program. The study was conducted through self-administered questionnaires, which were completed by the respondents and were distributed using Google Link. Section A, Section B, Section C, and Section D were the four sections of the questionnaire. Section A includes responders' demographic profiles, general information, and information concerning their practical training, such as the industry they work in, the allowance they receive, and the impact of industrial training on them. Much more in-depth questions were included in Sections B, C, and D, where Section B is about knowledge the students gained, Section C is about skills they got, and Section D is about their attitude during practical training. Data for the research was obtained from 127 respondents from both polytechnics, resulting in a 100% response rate. Based on the data collected, knowledge had the highest score of 86 % (mean = 4.38), followed by skills with 84.8 % (mean = 4.28), and the lowest was attitude with 83.8 % (mean = 4.19 percent). Thus, the finding showed that even during the COVID-19 pandemic, students were able to complete their practical training, obtain extra knowledge, enhance their skills, and get the right attitudes that they will be able to apply when they join the real workforce in the future.

Key words*: industrial training, perception, effectiveness, knowledge, skills, attitude*

1.0 Introduction

Industrial training was a requirement for students in higher learning institutions. Students may be permitted a certain period of time to participate in a full-time or part-time practical training program in order to get experience in the real world of work. Students benefit from hands-on experience by gaining a better understanding of how what they've learned in the classroom actually works in the real world. During the course of their employment with the company, students will gain practical job experience that they can apply to their academic careers. To earn a diploma from a polytechnic, students must complete 20 weeks of industrial training. Similarly, another study concurred that the student needed five months of industrial

training (Mat, K., Omar, M. Z., Osman, S. A., Kofli, N. T., Rahman, M. A., Jamil, M., & Jamaluddin, N.,2010).

Industrial training is a win-win situation for students, colleges, and businesses alike. In this way, students are able to put theory into practise in a real-world setting. By the end of their practical training, students should be able to demonstrate a wide range of skills, enhance their knowledge in related fields, and adjust the correct attitude needed to perform well. As of 2019, 1,574 students had undergone industrial training, while in 2020, 1,435 students in Politeknik Sultan Salahuddin Abdul Aziz Shah had undergone industrial training (Unit Perhubungan dan Latihan Industri, 2023)

The COVID-19 pandemic has significantly impacted various sectors, including education and professional training. Practical training, which often involves hands-on learning experiences and real-world application of skills, has been particularly affected due to the restrictions imposed to curb the spread of the virus. These will cause practical students to have limited practical hands-on experience, lack or minimum of direct communication and mentoring, inadequate access to equipment and resources, problem to adapt to training content and many more. Thus, this study aim to problem statement aims to identify the level of perception of the effectiveness of industrial training during the COVID-19 pandemic and explore potential solutions to optimize learning outcomes in such challenging circumstances.

RESEARCH OBJECTIVES

i. To identify the level of perception of the effectiveness of industrial training on knowledge during a pandemic.
ii. To identify the level of perception of the effectiveness of industrial training on skills during **a p**andemic.
iii. To identify the level of perception of the effectiveness of industrial training on attitude during a pandemic.

SCOPE OF STUDY

Participants in this research include students of Sultan Salahuddin Abdul Aziz Shah and Sultan Abdul Halim Mu’adzam Shah polytechnics. This study aims to learn about the students' perceptions of the effectiveness of pandemic industrial training. The results of the survey, which was delivered online via Google Form, were analysed and used to draw conclusions. This study's findings will be useful to help academics better understand how effective industrial training is during pandemics.

SIGNIFICANCE OF THE STUDY

i. The researchers will discover information and identify the level of perception on effectiveness on industrial training.
ii. The researcher also will know the level of knowledge, skills and attitude of the students during pandemic.
iii. It is also beneficial for the students, which help them to learn the practical impact of their study and know about a specific industry, and how to adapt with the real and current issues.

2.0 LITERATURE REVIEW

EFFECTIVENESS

In the event of a pandemic, such as a industrial training for undergraduates, online learning can take the place of traditional classroom instruction. As a result, it should be put to good use in the quest for knowledge (Abdul Aziz, Mohd, Selamat, & Omar, 2021). The university administration and academic supervision functions must also work closely with industry to ensure that internships are successful (Karunaratne & Perera, 2019). From the point of view of students, the pandemic has no significant impact on the effectiveness of industrial education. For the formulation of guidelines for industrial training during the epidemic, this information will be taken into consideration (Nik Roselina, Kalosang, S., Amedorme, S. K., Saad, N., Venkatason, K., & Makhsin, S. 2021).

KNOWLEDGE

Many academic and professional organisations use industrial training programme students in order to blend students' theoretical knowledge with real-world experiences Students could benefit from a comprehensive industrial internship programme developed in conjunction with industry to get relevant practical experience and expertise (Karunaratne & Perera, 2019). This necessitates the creation of an online training curriculum during a pandemic (Abdul Aziz, Mohd, Selamat, & Omar, 2021).

SKILLS

It was observed that students who had a basic understanding of information technology and industrial work experience exposure were better prepared to handle technical issues in the workplace (Ojodale, O., & M., 2020). Those who work in government institutions, including the organised private sector, have better access to opportunities for building employability skills (Ibidapo, 2020). Electronic industrial training session and supervisors reported great

satisfaction and documented learning gains such as the development of technical and soft skills unique to working remotely (Teng, C. C., Lin, R. T., Chow, D. S., Narayanasamy, S., Liow, C. H., & Lee, J. J.-M., 2021). A student's personal and business acumen can be honed through an industrial internship programme (Karunaratne & Perera, 2019). Despite South Africa's persistent youth unemployment, the lack of marketable skills and work experience that young people need to gain employment and start their own businesses is a major factor in the problem (Ngwenya & Shange, 2019).

ATTITUDE

Attitude is concerned with how people think, act, and behave. Learning experiences are what shape our attitudes. People's social perceptions are heavily influenced by their attitudes, making them an essential part of the puzzle when trying to comprehend them. Student attitudes toward the Students' Industrial Work Scheme (SIWES) have improved over time, even among students who have faced hardships in their academic careers or careers after graduation (Ojodale, Aiyedun, & Emeja, 2020). They found that most students were enthusiastic about the programme because they saw it as an effective way to expose students to real-world work situations and help them develop an understanding of their professional responsibilities in the areas of social responsibility, cultural competency, environmental stewardship, and business acumen (Ibidapo, 2020). There was a noticeable difference in attitudes about distance learning between students who took practical courses and those who took conceptual courses. Basnatia (2021) suggested practical approaches to building a strong foundation of motivation and a positive attitude toward the remote learning system among students and other distance learning system workers.

3.0 RESEARCH METHODOLOGY

The analysis was completed using quantitative methods. The questionnaire surveys was adapted from Mat et al., 2010 on their study of UKM’s students on practical training. Self-administered questionnaires were used in the research, and respondents were given to participants using Google Link. The questionnaire has four sections: Section A, Section B, Section C, and Section D. Respondents' personal information, such as their occupation, salary, and the effect of their industrial training, is all included in Section A. Section B provides a summary of Section A. Section C provides a breakdown of Section A. Sections B, C, and D contained additional in-depth questions pertaining to the student’s knowledge, skills, and attitudes during practical training, respectively. Likert scales of 1 (strongly disagree) to 5

(strongly agree) were used to measure each variable. Students of the Politeknik Sultan Salahuddin Abdul Aziz Shah and the Politeknik Sultan Abdul Halim Mu'adzam Shah are the primary targets of this study.

4.0 FINDINGS

Cronbach's alpha is a statistical measure used to assess the reliability of questionnaires and scales. The result shows that knowledge with a value of 0.91 indicates a high level of reliability. For skills, a value of 0.90 can be considered excellent. While an attitude with a value of 0.89 is considered good. Therefore, all of the constructs are reliable with a value of more than 0.6 and can be accepted.

Table 1 Demographic Profiles

DEMOGRAPHY PROFILE	FREQUENCY	PERCENTAGE (%)
Politeknik		
Politeknik Sultan Salahuddin Abdul Aziz Shah.	53	41.7
Politeknik Sultan Abdul Halim Muadzam Shah.	74	58.3
Department		
JPG	116	91.3
Others	11	8.7
Program		
DPM	52	40.9
DPR	32	25.2
DAT	40	31.5
Others	3	2.4
Gender		
Male	19	15
Female	108	85

In general, demographic analysis of the respondents shows that 41.7% of the respondents come from Politeknik Sultan Salahuddin Abdul Aziz Shah and 58.3% from Politeknik Sultan Abdul Halim Muádzam Shah. The Commerce Department (JPG) contributed for 91.3% of the respondents. And the respondents come from a variety of academic backgrounds, with 40.9% coming from Business Studies, 31.5% from accounting, and 25.2%

from Marketing, with the rest coming from various other fields of study. The group consists of 85 % females and 15 % males.

Table 2 General Information on Industrial Training

DEMOGRAPHY PROFILE	FREQUENCY	PERCENTAGE (%)
Industry Involved		
Sales And Marketing	31	24.4
Services	18	14.2
Accounting & Audit	37	29.1
Others	41	32.3
Method of Industrial Training Placement		
I've Applied Myself	118	92.9
Offered by UPLI	6	4.7
Others	3	2.4
Allowance Received		
None	18	14.2
RM0-RM200	24	18.9
RM201 – RM400	40	31.5
RM401-RM600	26	20.5
RM601 & above	19	15
What Do You Think the Benefit of Industrial Training to You in Person?		
Career Opportunities	70	55.1
Qualification Enhancement	63	49.6
Career Guidance	76	59.8
Gain Experience	119	93.7
To Fulfill Diploma Requirement	71	55.9
Others	8	6.3
Do You Agree with Existing Industrial Training Period (20 weeks)?		
Yes	117	92.1
No	10	7.9

Your Current Status		
Unemployed	36	28.3
To Further Study	48	37.8
Working With Same Company (Industrial Training)	12	9.4
Working With Other Company	26	20.5
Others	5	3.9

29.1 % of students are in the accounting and auditing professions, followed by sales and marketing with 24.4 %, services with 14.2 %, and the rest doing industrial training in other industries with 32.3%. The majority of pupils, 92.9% applied on their own for the industrial internship. More than 85% received an allowance, compared to just 14.2% of those who didn't receive any. Students also believe that practical training can help them gain experience (93%), get career advice (59%), meet diploma requirements (54.9%), increase their employment opportunities (55.1%), and upgrade their qualifications (49.5%). The majority, 92.1%, thought 20 weeks of industrial training was sufficient. 37.8% of those polled are currently awaiting further education; 28% are still unemployed; 20.5% are employed by a different firm from the one where they received their practical training; and 9.4% are still employed by the company where they received their practical training.

Table 3 Descriptive analysis- Knowledge

	SD	**D**	**N**	**A**	**SA**	**Mean**	**Standard Deviation**
During my industrial training, I am able to gain knowledge in the field of endeavor.		1%	8%	47%	44%	4.35	0.659
During my industrial training, I am able to gain the ability to apply knowledge.		2%	9%	40%	50%	4.37	0.711
During my industrial training, I have the ability to gain new knowledge.		1%	6%	35%	58%	4.51	0.64
During my industrial training, I have the ability to solve technical problems.		2%	12%	47%	40%	4.25	0.723
During my industrial training, I am able to gain consciousness of the need for continuous learning.		1%	10%	35%	54%	4.43	0.707

Analysis of the results showed with mean 4.38, respondents agreed with the effectiveness of industrial training on their knowledge. This can be interpreted as very high (Moidunny, 2009). Highest mean result score 4.51 resulted from (During my industrial training, I have the ability to gain new knowledge). And the lowest mean result score is 4.25 is from (During my industrial training, I developed the ability to solve technical problems.) This finding was supported by a previous study done by Leask, Cronje, Holm, and Ryneveld (2020), which agreed that knowledge gained through practical experience enhances one's theoretical understanding.

Table 4 Descriptive analysis- Skills

	SD	D	N	A	SA	Mean	Standard Deviation
During my industrial training, i am able to improve my oral presentation skills.		2%	14%	44%	41%	4.23	0.75
During my industrial training, i am able to improve my written communication.		1%	17%	43%	39%	4.21	0.741
During my industrial training, i am able to improve my ability to communicate ideas.		2%	11%	44%	43%	4.29	0.725
During my industrial training, i am able to improve my discuss skills.		2%	9%	44%	45%	4.33	0.711
During my industrial training, i am able to improve my ability to listen and respond.		0%	6%	44%	50%	4.45	0.6
During my industrial training, i am able to improve my ability to make decisions.		2%	11%	46%	41%	4.25	0.745
During my industrial training, i am able to improve my leadership skills		3%	15%	44%	38%	4.17	0.794

The results for skills showed that mean = 4.28 agreed with the effectiveness of industrial training. This can also be analysed as being very high (Moidunny, 2009). The highest mean score for skills is (During my industrial training, I can improve my ability to communicate ideas) with a mean of 4.45, which is considered to be very high. It showed that the students were able to gain new knowledge during their practical training. The lowest mean score is 4.17 for the item (During my industrial training, I can improve my oral presentation skills), but this lowest mean is still considered a high mean interpretation. In an earlier study, the results also

showed that internship programmes benefit Pakistani business students in terms of professional development and skill acquisition (Anjum, 2020).

Table 5 Descriptive analysis- Attitude

	SD	D	N	A	SA	Mean	Standard Deviation
I have a very good self-esteem.		2%	13%	54%	33%	4.17	0.71
I am very confidence with myself.		1%	22%	45%	32%	4.05	0.799
I have very good self-management.		1%	15%	50%	33%	4.16	0.706
I have very good time management.		1%	11%	48%	39%	4.24	0.742
I am very curious during my industrial training.		4%	21%	42%	34%	4.06	0.838
I am able to work independently.		2%	12%	50%	35%	4.19	0.731
I can adapt well.		2%	13%	40%	46%	4.3	0.748
I am able to work in group.			7%	43%	50%	4.43	0.624
I am able to work under stress.		6%	13%	47%	34%	4.07	0.874

And attitude with mean = 4.19 or resulted contributed to the effectiveness of the practical training of the students. The highest mean score for attitudes is (I am able to work in The highest mean score for attitudes is "I am able to work in groups," with a mean of 4.43, which is considered to be high. It showed that the students were able to work in groups. But the lowest mean score is 4.06 for item (I am very confident with myself and I am very curious during my industrial training.) However, this lowest mean is still considered a high mean interpretation (Moidunny, 2009). Students' attitudes can be improved through practical training (Mat et al., 2010), which revealed the same finding on attitudes.

5.0 CONCLUSION

From the analysis, results revealed that students were able to complete their practical training, gain additional knowledge, improve their abilities, and develop the proper attitudes that they would use when entering the workforce in the future. The level of perception of the effectiveness of industrial training on knowledge is judged to be very high. Meanwhile, the level of perception of the effectiveness of industrial training on abilities also very high. However, even though the perception of the effectiveness of industrial training for attitude is considered as high, it can still be considered good. This demonstrates that even in the midst of

the COVID-19 pandemic, students may develop the necessary knowledge, abilities, and attitudes and be ready to enter the real workforce. This is supported by White (2022), who mentioned that practical training prepares students for the workforce upon graduation. Students can also upgrade and develop their skills and adapt to a continuously changing environment. Students must gain high-quality on-the-job experience. Also, Ojodale, Aiyedun, and Emeja (2020) suggested students choose internships that are related to what they are studying.

RECOMMENDATION

The results of this research were only able to be derived from 127 people who participated in the survey at two different polytechnics. The majority of those who answered the survey are coming from Department of Commerce. Therefore, the recommendation is to make use of more extensive samples from other polytechnics as well and community colleges. Researchers in the future will be able to expand the number of variables investigated by employing new conceptual frameworks and a variety of sampling strategies. It has also been proposed that the analysis can be carried out using methods other than descriptive ones, such as correlation, regression, and a great deal more.

REFERENCES

Abdul Aziz, S., Mohd, R. H., Selamat, M. N., & Omar, N. H. (2021). Is Online Training Program Effective for Undergraduates' Learning During COVID 19? A Quasi-experimental Study Using the Malaysian Sample. *International Journal of Academic Research in Progressive Education & Development,* 201-219.

Anjum, S. (2020). Impact of Internship Programs on Professional and Development of Business Students: A Case Study From Pakistan. *Future Business Journal*.

Basnatia, T. K. (2021). The Attitude Of Learners Of Practical Based Courses And Learners Of Theory Based Courses Towards Distance Learning System. *The Online Journal of Distance Education and e-Learning,* 162-172.

Ibidapo, A. B. (2020). Attitude of Student's Towards Industrial Work Experience Scheme. *International Journal of Research and Analytical Reviews,* 127-134.

Karunaratne, K., & Perera, N. (2019). Students' Perception on the Effectiveness of Industrial Internship Programme. *Asian Institute of Research,* 822-832.

Karunaratne, Kingsley,, Perera, & Niroshani. (2019). Students' Perception on the Effectiveness of Industrial Internship Programme. *Education Quarterly Reviews,* 822-832.

Leask, R., Cronje, T., Holm, D. E., & Ryneveld, L. V. (2020). The Impact of Practical Experience on Theoretical. *Journal of the South African Veterinary Association*.

Mat, K., Omar, M. Z., Osman, S. A., Kofli, N. T., Rahman, M. A., Jamil, M., & Jamaluddin, N. (2010). The Effectiveness of Industrial Training on UKM Engineering. *Kongres Pengajaran dan Pembelajaran UKM*, 656-665.

Moidunny, K. (2009). The Effectiveness of the National Professional Wualification for Educational Leaders (NPQEL). Bangi. Retrieved from Business Communication: https://bizcommunicationcoach.com/

Ngwenya, J. C., & Shange, N. L. (2019). Learners' Views On Challenges Encountered During Practical Work in Consumer Studies: A case of one School In KwaZulu-Natal. *African Journal of Hospitality, Tourism and Leisure*.

Nik Roselina, Kalosang, S., Amedorme, S. K., Saad, N., Venkatason, K., & Makhsin, S. (2021). The Effectiveness of Industrial Training during Covid- 19 Pandemic: Perspective of Undergraduate Students of Mechanical Engineering. *Asian Journal of University Education · November 2021*, 11-22.

Ojodale, O. M., A. E., & E. H. (2020). Attitudes of Vocational and Technical Education Students. International Journal of Advanced Research in Social Sciences, Environmental Studies & Technology, 67-78.

Sekaran, U. (2004). *Research Methodology For Business.*

Teng, C. C., Lin, R. T., Chow, D. S., Narayanasamy, S., Liow, C. H., & Lee, J. J.-M. (2021). Internships before and during Covid -19: Experience and Perceptions of Undergraduate Intern and Supervisors. *Higher Education, Skills and Woek-Based Learning Emerald Publishing Limited*.

Unit Perhubungan dan Latihan Industri. (2023). *Portal Rasmi Politeknik Premier Sultan Salahuddin Abdul Aziz Shah*. Retrieved frot https://psa.mypolycc.edu.my/: https://psa.mypolycc.edu.my/index.php/jabatan-unit/77-pelajar/59-latihan-industri

White, D. (2022). *The necessity for practical work-based learning.* Retrieved from college.jobs.ac.uk:https://college.jobs.ac.uk/article/the-necessity-for-practical-work-based-learning/