

EFFECTIVENESS OF INDUSTRIAL TRAINING FOR ELECTRICAL TECHNOLOGY CERTIFICATE STUDENTS AT KOLEJ KOMUNITI SANTUBONG: INDUSTRY PERSPECTIVE

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ABSTRACT

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Keywords: Feedback; Industrial Training; Electrical Technology Certificate This study aims to assess industry feedback on the effectiveness of industrial training implemented by students of the Electrical Technology Certificate Programme at Kolej Komuniti Santubong for Session 1 2024/2025. The study evaluates aspects of knowledge, practical skills, and soft skills. Data was obtained through questionnaires from 8 participating industries and collected online via Google Forms. The study data was analysed using the Statistical Package for the Social Sciences (SPSS v25.0). Findings indicate that industrial training effectively improves students' skills and prepares them for future employment. The results of the study are expected to help Polytechnics and Community Colleges enhance the quality of industrial training.

1. Introduction

Industrial training is a vital component of the education system that provides students with realworld work exposure before graduation. Practical training has been recognized as an essential method for preparing students for careers. It offers students their first experience in a realistic work environment and helps them acquire the knowledge and skills required in their chosen industry (Khalid et al., 2014). For the Kolej Komuniti Santubong Electrical Technology Certificate Programme, students must complete a mandatory 16-week industrial training period in industries related to electrical, electronics, and engineering fields.

According to Norhidayah et al. (2021), graduates need job competencies and skills to remain competitive in today's job market. The job market increasingly demands that graduates possess a broad range of skills to enhance their employability (Ali, Che'Rus, Haron & Hussain, 2018). An industry assessment is necessary to evaluate the effectiveness of industrial training in enhancing graduates' employability.

In an era of global competition, industries require a workforce that possesses not only practical skills but also soft skills such as communication, teamwork, and adaptability. This study aims to identify students' skill gaps compared to industry requirements and provide relevant



suggestions for improvement. The findings are expected to enhance graduate employability and strengthen the effectiveness of industrial training in TVET programmes.

1.1 Literature Review

Numerous studies have examined the effectiveness of industrial training based on industry feedback. According to Osman, Shaharuddin & Zanudin (2024), industrial training is crucial in Technical & Vocational Education and Training (TVET) as it provides students with early exposure to real-world work environments, preparing them to become skilled workers in technical fields. The primary objective of industrial training is to offer students the opportunity to apply theoretical knowledge and develop practical and soft skills (Norhana, 2018).

Studies have shown that students' knowledge proficiency and practical skills, as perceived by industry representatives, are essential in determining their employability (Hamid & Mohamed, 2024). According to Ali, Kamaruddin & Samsuri (2024), industrial training enables students to apply theoretical knowledge; however, adapting to real-world scenarios can be challenging. A more structured industrial programme should be implemented to strengthen the connection between academic learning and practical experience. Industry feedback serves as a guide for students in identifying areas for improvement and preparing them for the workforce (Impak & Mustapha, 2020).

Literature review shows that industrial training in TVET programmes is very important to produce a skilled workforce through early exposure to the real world of work. While these trainings provide an opportunity to apply theory in practice, there is a need for more structured programs to connect academic and practical learning more effectively. Therefore, feedback from the industry on programs at community colleges plays an important role in increasing the employability of graduates.

2. Materials and Methods

This study employs a quantitative approach using an online questionnaire distributed via Google Forms to assess students' effectiveness in knowledge, practical skills, and soft skills. The study data was analysed using the Statistical Package for the Social Sciences (SPSS v25.0). The respondents included eight industry representatives responsible for supervising industrial training students in their respective companies. Based on Figure 1, 87.5% of the respondents represent companies in the private sector, while 12.5% are from government-linked companies (GLCs).







Figure 1. Industry categories

For the type of industry involved, 75% is from the field of Electrical & Electronics, 12.5% is from the field of Education & Training Services and 12.5% is from the field of Engineering Support as shown in Figure 2.



The analysis used was a descriptive analysis to determine the level of effectiveness. The table of interpretation of the mean score proposed by Nunally & Bernstein (1994) was used to analyse the data obtained. The table of interpretation of the mean score is as shown in Table 1.



Table 1. Interpretation of Mean Score

	Mean Score	Level	
	1.00 to 2.00	Low	
	2.01 to 3.00	Average Low	
	3.01 to 4.00	Average High	
	4.01 to 5.00	High	
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Source: Nunally & Bernstein (1994)

3. Results

The study items are divided into three aspects, namely Knowledge, Practical Skills and Soft Skills. Table 2 shows the results of the analysis of the study items for the Knowledge aspect. Each item studied obtained a mean score at a high level. The highest mean score (4.75) proves that students have successfully mastered new knowledge at industrial training grounds.

Items	Mean Score	Level
Students have knowledge based on work	4.62	High
Childrente prestice the lenguiled as they have		
Students practice the knowledge they have	4.50	High
learned at the institution		
Students master new knowledge at LI place	4.75	High
Students are able to solve problems in	4.25	High
assignments		
Students can think creatively and innovatively	4.50	High

Table 2. Knowledge Aspect Analysis

Table 3 shows the results of the analysis of the study items for the Practical Skills aspect where each study item also obtained a mean score at a high level. Based on the table, two study items obtained the highest mean score (4.75) where students practiced the skills they had learned at the institution and were exposed to appropriate skills based on work needs.



Items	Mean Score	Level
Students practice skills already learned at the institution	4.75	High
Students adhere to the established work procedures	4.62	High
Students meet pre-set work targets	4.62	High
Students comply with the safety features at LI premises	4.50	High
Students are exposed to appropriate skills based on work needs	4.75	High

Table 3. Analysis of Aspects of Practical Skills

The mean score for each study item for the Soft Skills aspect obtained a high level as evidenced in Table 4. The study item that scored the highest mean score (4.88) showed that students can work in a team in performing tasks throughout industrial training.

Items	Mean Score	Level
Students receive reprimands positively	4.62	High
Students are able to adapt to the work culture in the industry	4.75	High
Students do not violate the rules set by the industry	4.75	High
Students have integrity in performing assignments	4.75	High
Students are able to plan assignment-related work	4.50	High
Students can work in teams in performing tasks	4.88	High
Students demonstrate leadership traits	4.38	High
Students are able to communicate well	4.50	High
Students are able to communicate in English	4.13	High
Students are able to work on their own with minimal supervision	4.38	High
Students optimize the resources supplied by the industry	4.38	High

Table 4. Analysis of Aspects of Soft Skills

4. Discussion

Overall, industry feedback indicates that the industrial training programme at Kolej Komuniti Santubong effectively enhances students' knowledge, practical skills, and soft skills. The study confirms that students gain valuable knowledge during industrial training, improving their competence and employability. Additionally, students successfully apply skills learned at their institution and exhibit strong teamwork abilities.

The role of industry in industrial training is crucial in guiding students to understand workplace ethics and exposing them to the latest industry technologies. According to Hamid & Mohamed



(2024), significant efforts from various industries in guiding students through industrial training programmes contribute to producing a competent workforce capable of addressing challenges across various economic sectors.

To ensure higher education institutions produce holistic graduates who meet market needs, institutions must establish and maintain effective industry networks. The findings of this study provide Polytechnics and Community Colleges with valuable insights to enhance the quality of education, ensuring that students acquire relevant skills aligned with industry demands.

5. Conclusion

This study identifies gaps between students' skills and industry expectations while offering suggestions for improvement. The findings confirm that industrial training enhances students' knowledge, practical skills, and soft skills. However, improvements are necessary, particularly in English communication skills, as English is a key language in professional and industry settings. Additionally, students must take the initiative to develop their skills and stay updated with the latest technological advancements to remain competitive in the workforce.

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