

The Effectiveness of Industrial Training: Perception among University Students

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ABSTRACT

Nowadays, industrial training has become a mandatory component of academic programs to enhance graduate employability and workplace readiness. However, issues such as skills mismatched, insufficient soft skills and unemployment among graduates persist. Hence, the objectives of this study are to determine the level of perceived effectiveness of industrial training among students at Universiti Teknologi MARA (UiTM) Kedah Branch using Kirkpatrick Training Model as the underpinning theory. Secondly, the relationship between the three factors toward the effectiveness of industrial training is also examined. Lastly, the most dominant factors towards the effectiveness of industrial training among university students are analysed. This study focused on investigating three factors which are departmental support, pre-placement activities, and host company support. This study employed a cross-sectional and quantitative study design with data collected using a set of questionnaires among 63 students determined using census procedure. The findings indicated all independent variables tested (departmental support, pre-placement activity, and host company support) have positive relationships with the dependent variable (Effectiveness of Industrial training) with the value of $p < 0.005$. The multiple regression analysis reported that departmental support is the most influential factor toward the effectiveness of industrial training among respondents. The findings provided insights that helped higher education institutions and industry stakeholders improve the industrial training program system.

Key Words: Effectiveness Industrial Training, Departmental Support, Pre-placement Activity, Host Company

INTRODUCTION

Industrial training or internship is a structured educational system designed to give students exposure to real workplace environments while they are still being undergraduate. Industrial training serves as a mechanism for students to apply their theory into practical application, allowing students to develop professional skills, workplace adaptability, and career readiness (Karunaratne & Perera, 2019). As employers nowadays demand job-ready graduates, industrial training has become an integral component of many academic programs especially in administrative and management-related fields. Universities worldwide have made industrial training compulsory within their syllabus, as they want graduates to demonstrate practical competencies, communication skills, and the ability to function effectively in organizational settings after they graduate as industrial training provides students with early exposure to professional environments and industry practices. In Malaysia, this approach has been made compulsory through policies introduced by the Ministry of Higher Education for undergraduate programs beginning in 2010. This policy aims to narrow the gap between in-class learning and workplace demands by equipping students with real life experiences that aligned with their fields of study.

Despite positive side, the effectiveness of industrial training is still inconsistent. Past research have pointed out some of the existing problems including the lack of match between the tasks they are assigned and the subject they study, poor supervision, insufficient mentoring, insufficient preparatory guidance, and poor institutional

support. These weaknesses could impact students learning experience, motivation, and the perception of the value of internship in students. The study conducted by Karunaratne and Perera (2019) highlighted the perceptions of students regarding the effectiveness of internships are highly determined by three dimensions, namely departmental support, pre-placement preparation, and host organization support. All these are the factors that influence the perception that students develop towards the quality and usefulness of their industrial training experience.

As the evidence in Malaysian context, where graduate unemployment and underemployment rate continue to increase due to the failures of the graduates to match their skills with the needs of the industry despite the increasing focus on employability skills by employers over university qualifications (Farah et al, 2025). This situation raises concerns about whether current industrial training programs are effective in equipping students with the practical and soft skills required by the job market. Furthermore, Audrey et al. (2024) reported a significant gap between students' expectations and actual internship experiences among Malaysian public university students. While more than half of the students anticipated comprehensive exposure combining relevant job tasks and structured learning, only a small proportion reported receiving such experiences making the industrial training experience do not fulfill the goal to improve student's skills and increase their practical experience. Similarly, Afrina (2024) noted that although a high percentage of Malaysian graduates had completed internships, interns often faced under compensation and were assigned menial duties, this especially for students that do their internship at government sector when they mostly done photocopy or filing task that unrelated to their field of study, raising concerns about the overall design and implementation of internship programs.

In response to these challenges, the Malaysian government introduced several initiatives to strengthen industrial training implementation. Some of the initiatives were the HRD Corp Industrial Training Scheme (ITS), the 1:3 Practical Training Policy and the 2u2i academic model to advance collaboration between industry academia and to improve the quality of internship. However, Karunaratne and Perera (2019) reports of poor supervision, lack of task congruency and preparations, which hint at the possibility that policy interventions may fall short of producing effective outcomes in terms of industrial training. The perceptions of students are important points to the effectiveness of internship and quality of program.

Despite generalized and wide study of industrial training, relatively there are some scarcities of empirical studies with specific interest in Administrative Science students in Universiti Teknologi Mara (UiTM) at Kedah. Since the field is administrative and managerial, high caliber industrial training is more so considered in nurturing organizational, inter-personal as well as professional skills. It is also necessary to understand how students perceive the effectiveness of their industrial training and what factors impacted the perception to enhance the design and implementation of internship.

Therefore, this paper lets a look at the way students think industry training can be effective with reference to Administrative science students at Universiti Teknologi Mara (UiTM) Kedah. It concentrates on the functions of the departmental support, pre-placement activities, and host company support in the influence on the internship experiences of the students. Within this context-specific gap, the study focuses on offering empirical evidence that will inform academic institutions and possibly policymakers and host organizations on the need to improve the quality and effectiveness of industrial training programs within Malaysian public universities.

LITERATURE REVIEW

Underlying Theory: Kirkpatrick's Model of Training Evaluation

Industrial training refers to the placement of students in an organization to undertake supervised practical training in a chosen industry (MyGovernment, 2025). The Kirkpatrick Training Evaluation Model is the theoretical basis used to study the effectiveness of training. It is one of the earliest and most widely used frameworks for evaluating training programs that is widely recognized in educational and organizational contexts (Nisa et al., 2022). The effectiveness of industrial training is systematically assessed through four levels such as reaction, learning, behavior, and results. Next, at the learning level, it refers to what is gained from training such as skills

and knowledge. In addition, the behavioral level refers to the ability of students to apply what has been learned to real tasks, while the outcome level refers to the overall results obtained, which is the effectiveness of the training. So, each of these levels provides a conceptual lens to explain how key supports such as pre-placement activities, departmental support and host company support can shape the student learning experience and contribute to the perceived effectiveness after the training. Furthermore, a study by Meade (2020) has found more relevant information about adaptive systems leadership that plays a role in helping the effectiveness of training using this model. Overall, this model is suitable for this study when it is in line with the independent variables and variables where the effectiveness of industrial training through student perceptions is related to the level of results while other independent variables are in line with the level of learning, behavior and reaction. The supporting factors studied in this study can remain as a comprehensive and evidence-based framework.

Effectiveness of Industrial Training

The effectiveness of industrial training is assessed through the perceptions of students who have undergone industrial training because they have gained experience and workplace exposure during the placement (Adilla et al., 2025). An effective internship program not only benefits the students, but it also enhances the reputation of the university by reducing the administrative burden and allowing the university to gain a competitive advantage over other universities (Karunaratne & Perera, 2019). In addition, the effectiveness of industrial training goes beyond the development of technical and generic skills, as it also shapes students' career perceptions, industry commitments and long-term professional aspirations, making industrial training an important platform for career preparation (Ahlawat et al., 2025).

Various studies have been found and discussed about the effectiveness of industrial training. One of the studies from the global level, namely the study by Commey et al. (2023), proved that the abilities and development of knowledge and skills of students are assessed based on the significant increase in creativity, leadership, problem-solving ability, and self-confidence. Therefore, this shows that industrial training programs can build professional capabilities in students. Similarly, a study by Priyantha (2025) emphasizes that academic, organizational, and personal are a combination of factors that can have a positive impact on practical training. These factors are the cause of the formation of self-motivated students, a supportive host company with clear supervision and exposure to real tasks that contribute to better learning outcomes. In the Malaysian context, the gap between academic knowledge and actual workplace application can be overcome through the effectiveness of practical training programs (Yusof et al., 2024). This can thus increase their readiness to meet the demands of the workforce. In addition, the experience is meaningful and successful when students perceive their training to be of very high quality as evidenced by the strong positive correlation between the quality of practical training, trainee satisfaction and perceived effectiveness of the training. Even during the COVID-19 pandemic, Nik Roseley et al. (2021) confirmed that industrial training remains significant in achieving course outcomes, proving its resilience across different learning conditions where the findings show that most students are satisfied with the industrial experience they gain from the training. This proves that the core objectives of industrial training are resilient and can be met even through distance or adapted learning modes. From an employer perspective, a study by Ameerudin and Hayari (2025) confirmed that industrial training supports the strength of implementation and contributes to the development of student competencies as most participating firms evaluated the training program as supporting the effectiveness of industrial training. It is clear that employers consider students to have also acquired relevant competencies through the program.

Determinants of Effectiveness of Industrial Training among Students

The effectiveness of industrial training depends on a combination of academic, organizational, and individual elements that influence the development of students' skills, professional behaviors and career aspirations. Based on the Kirkpatrick Training Evaluation Model and supported by real-world research, this study found three key factors that influence the effectiveness of industrial training in Malaysia: departmental support, pre-placement activities and host company support. These factors interact in complex ways that influence how students learn and how far they go from university to the workplace.

Departmental or faculty support is responsible for assisting and resources such as communication, regular monitoring of student progress, visits from academic supervisors and helping to provide guidance in resolving challenges faced by students. All of these are provided by the academic department or faculty to support students throughout their industrial placement (Commey et al., 2023). In addition, any concerns that arise during the placement will be addressed immediately by the departmental support to ensure that students have quality learning experience. Through a study by Priyantha (2025) which widely recognizes institutional support, it states that students who receive a briefing before the placement and have contact and support from academic mentors will be better prepared to work in the workplace (Priyantha, 2025). Therefore, this step can be interpreted as the importance of departmental support because it supports students to understand what is required by the world of work. Institutional alignment is also important because it ensures that what is taught in the classroom is relevant to what needs to be done in the workplace. Moreover, this departmental support and encouragement helps students apply theoretical knowledge to practical assignments where it can enable students to recognize the relevance of their academic studies to real-world scenarios. There are studies that have found that departmental support also contributes significantly to a successful training environment through task distribution and supervision (Priyantha, 2025). Therefore, strong support from the department serves as an understanding for students so that students can know what to apply to manage their professional tasks with increased confidence and clarity.

Pre-placement activities are activities that include briefings and preparations for students before starting industrial training. This preparation is important to aid and guidance to students by providing guidelines, and delivering an orientation program (Commey et al., 2023). So, the initial preparation offered by this academic department is important because it helps create a foundation for the entire internship experience because students need to have a clear plan before entering the professional world. All procedures built by universities or ministries offer clear advice to students about institutional standards, training providers and their responsibilities to ensure students get job exposure. In addition, internship orientation programs strengthen industrial relations when they can further minimize the expectation gap between these parties while increasing student confidence (Karunaratne & Perera, 2019). This orientation facilitates a smooth transition because students and host companies begin internships with the same level of confidence and understanding of what can be applied in the job. Furthermore, industrial training must be well planned so that students gain meaningful practical experience and develop a genuine interest in their field (Priyantha, 2025). Good planning acts as a strategic bridge in the preparation phase because it is what is able to shape training that can develop a student's professional skills at the training site.

Host company support refers to the organization or host supervisor assisting and encouragement to students throughout the industrial training. This support includes being led by an experienced mentor, having the opportunity to participate in relevant projects and conducting consistent performance reviews by the supervisor on the students (Commey et al., 2023). The support provided by the host organization is important because it transforms a conventional internship into a superior learning environment where students can effectively address their career challenges. With the support of the host company, students can adapt to the work environment, which in turn brings positive things to the team and better team performance (Majid et al., 2025). In addition, when host companies prioritize student integration into the team, they will strive to master the learning and create a long-term talent pool for the industry. Students are more likely to value their internship when they realize that their organization is supporting them. So, enthusiasm, commitment and participation can be fostered higher in the activity (Majid et al., 2025). Students' perception of themselves as important professional contributors is what has driven this increase in participation. This has made the overall industrial training program more effective. The analysis outlined above lays the foundation for the following hypothesis:

H1: There is no significant positive relationship between departmental support and the effectiveness of industrial training. H2: There is no significant positive relationship between pre-placement activity and the effectiveness of industrial training. H3: There is no significant positive relationship between host company support and the effectiveness of industrial training.

Conceptual Framework

The conceptual framework supports the research by adapting from previous studies to identify gaps in the existing body of knowledge on the phenomenon and to state the methodological basis that supports the investigation. The hypothesis of this study is to argue for the determinants of the effectiveness of industrial training among Malaysian students, especially students in Administrative Sciences, by operationalizing the independent variables, namely departmental support, pre-placement experience activities, and host organization support. This study provides a conceptual framework to empower industrial training, clearly attempting to improve the outcomes of professional internships in higher education. This research aims to identify the key elements of effective professional internships by critically examining the independent variables, departmental support, pre-placement activities, and host company support.

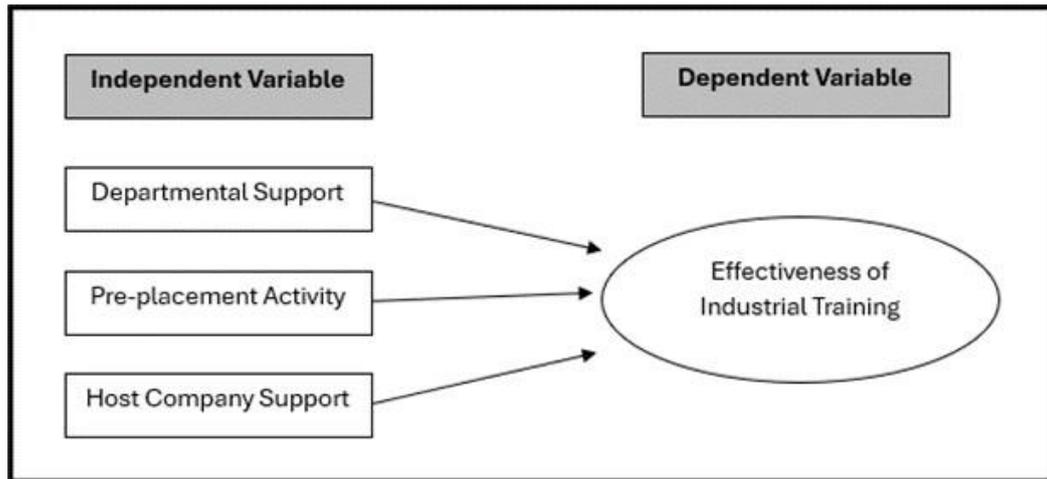


Figure 1: Conceptual Framework of the Factors That Contribute to Effectiveness of Industrial Training among students.

METHODOLOGY

The study is focused on students of Bachelor of Administrative Science (AM238) at Universiti Teknologi MARA (UiTM) Kedah who have gone through their industrial training. Quantitative, correlational and cross-sectional research design is used. This will allow data to be taken at one time to address the relationships among certain independent variables, which are the support of departmental, pre-placement activities and host company support and the dependent variable as the perceived effectiveness of the industrial training. This study has a theoretically based concept of the effectiveness of industrial training based on the Four-Level Training Evaluation Theory by Kirkpatrick. The model provided by Kirkpatrick suggests that the effectiveness of training could be measured in four levels: reaction, learning, behavior, and results (Nisa et al., 2022). The level of reaction will record the happiness and impressions of the students about their experience during the internship, and this could affect their motivation and interest during the training process. Learning level reflects on how students perceive to have acquired the knowledge, skills and professional competencies that are relevant to them. The behavioral level looks at the level at which students can put the learnt into practice when doing the real jobs in the workplace whereas the results level investigates the larger outcomes like employability readiness and perceived overall effectiveness of the industrial training program. In this framework, the three support factors considered as important influencing factors that affect the learning experiences of the students in the four levels are departmental support, pre-placement activities, and the host company support. In this research, the main emphasis is made on perception of training effectiveness of students, which can be related to reaction and learning level of the Kirkpatrick model. Use of this theory offers an approachable platform towards assessing the perception of study participants (students) on the results and benefit of their industrial training experience. The study population is a population of 63 AM238 students at UiTM Kedah who went through industrial training in the academic session of 2025. The size of the population is small and manageable hence a census method was used. The census procedure entails complete enumeration of all units within the population whereby all members of the population are accounted for instead of choosing a sample. This method is believed to be suitable in cases

when the population universe is small because it implies the full collection of data and reflective representation of the population (Sankar et al., 2020). Departmental support, pre-placement activities, and host company support are the independent variables that will be considered in this study, but the dependent variable is the perceived effectiveness of industrial training. A structured questionnaire was used to gather data based on Karunaratne and Perera (2019). The effectiveness of the industrial training and factors used in its support in the perception of students were measured on a five-point Likert scale. The validity and reliability of the data collected with the help of the already determined measurement items is improved, and the data provided is consistent with the prior research.

Table 3.1. Results of Cronbach’s Alpha (Pilot Study)

Variable	Cronbach’s Alpha	Number of Item
Dependent Variable		
Effectiveness Of Internship Among Students	0.876	6
Independent Variable		
Departmental Support	0.771	4
Pre-Placement Activity	0.828	3
Host Company Support	0.861	6

Source: Researcher’s Own

As Table 3.1 indicates, the pilot study results show that the dependent variable, perceived effectiveness of internship among the students has reached a Cronbach alpha of 0.876, which is described to be good. Departmental support gave Cronbach's alpha of 0.771, which is also in the good range, as it is an independent variable. The value generated by pre-placement activities was 0.828, which is an indication of good reliability. The host company support was 0.861, which is also considered to be good. As a result, the coefficient of reliability of all variables exceeds the minimum required coefficient of 0.7 making the reliability of all items in the questionnaires consistent and reliable. On this basis, the scales in the main study did not have any items dropped.

Table 3.2. Measurement of variables, normality test, and reliability test result

Variable	Skewness	Kurtosis	Cronbach’s Alpha
Effectiveness of Industrial Training (DV)	-1.878	4.890	0.918
Departmental Support (IV1)	-2.110	6.448	0.941
Pre-Placement Activity (IV2)	-1.624	5.517	0.809
Host Company Support (IV3)	-1.622	5.018	0.927

Table3.3. Data screening

Variable	Valid	Missing
Effectiveness of industrial training	6	0

Departmental support	4	0
Pre-placement activity	3	0
Host company support	6	0

The results according to Table 3.3 indicates that all variables showed full responses and no unanswered data. The six valid items constructed the construction of industrial training with zero missing values. Similarly, the constructions of departmental support, pre-placement activity construct, and the host company support construct were measured using four, three, and six valid items respectively; all these constructions also did not show any missing data. No single observations were left out, and this shows that the respondents answered all the questionnaires. The dataset obtained was, therefore, considered clean and fit to be used in further descriptive and inferential statistics.

FINDINGS

Demographic Profiles

In a sample of 63 respondents, most respondents were women (n = 55, 87.3%), and only 12.7 were men respondents (n = 8). In terms of age, 56 respondents (88.9%) had the age between 22-23 years. Regarding the place of origin, 41 respondents (65.1) were urban and 22 respondents (34.9) were rural. As far as the modality of practical training is concerned, 59 respondents (93.7% practice physical training). With regards to organizational affiliation, the respondent group was split equally in terms of public (n = 31, 49.2%) and private (n = 31, 49.2%) organizations. On the geographical aspect, 48 respondents (76.2 percent) had their practical training in the Northern region. Moreover, 44 interviewees (69.8) had either past working or part-time experience before they started their training. Lastly, nearly all respondents led lives with their families when undergoing the practical training (n = 62, 98.4), and most of them had satisfactory internet access (n = 35, 55.6%).

Table 4.1 Demographic profiles

Profile		Frequency (n)	Percentage (%)
Gender	Male	8	12.7
	Female	55	87.3
Age Group	22-23 years-old	56	88.9
	24-25 years-old	6	9.5
	26 years-old and above	1	1.6
Location of hometown	Urban area	41	65.1
	Rural area	22	34.9
Mode of practical training	Physical	59	93.7
	Online	1	1.6
	Hybrid	3	4.8
Type of organization	Public organization	31	49.2

	Private organization	31	49.2
	Statutory body	1	1.6
Practical training location in state/region	Western part (Perlis, Penang, Kedah, Perak)	48	76.2
	Central part (Selangor, Kuala Lumpur, Putrajaya)	10	15.9
	Southern part (Johor, Melaka, Negeri Sembilan)	3	4.8
	Eastern part (Kelantan, Terengganu, Pahang)	2	3.2
Experience/ part-time work before starting your practical training	Yes	44	69.8
	No	19	30.2
Place of resident during practical training	Family	62	98.4
	Hostel/Rented House	1	1.6
Internet access during the practical training	Fair	7	11.1
	Good	35	55.6
	Excellent	21	33.3

Mean Analysis

The range of the perceived effectiveness of industrial training was divided into the range of 1.00 to 3.00 (low level), 3.01 to 4.00 (moderate level), 4.01 to 5.00 (high level) (Sekaran & Bougie, 2013). The overall mean score of perceived industrial training effectiveness was high ($\bar{x} = 4.15$) as shown in table 5 indicating that students had a positive perception of the industrial training program which supports their learning and professional growth. The mean values of each of the six measured items were above 4.00, and these indicate that there were always positive attitudes of the respondents.

The statement, which had the highest mean score was the statement that the practical training program helped me to know the rules and regulations of the organization ($\bar{x} = 4.22$ SD =0.832) which shows that students were positively impacted by being exposed to the organizational policies and organizational procedures. This was succeeded by the sentence The practical training made me more interested and engaged in my study field ($\bar{x} = 4.19$, SD = 0.644), which hints that the experience of the training made students more inspired and academic. Overall, the mean values show that the industrial training program was rated highly effective among the Administrative Science students at the Universiti Teknologi MARA (UiTM) Kedah.

Table 4.2. Mean analysis

Item	Mean	Level
The practical training increased my interest and engagement in my field of study.	4.19	High
The practical training was helpful in describing myself.	4.06	High

The practical training program helped me to understand the rules and regulations of the organization.	4.22	High
I received adequate support and guidance from the practical coordinator.	4.11	High
The practical training helped improve my skills relevant to my academic and career goals.	4.16	High
The practical training experience has prepared me to perform job-related tasks more effectively.	4.17	High
Overall Effectiveness of Industrial Training	4.15	High

Pearson Correlation Analyses

Relationship between Departmental Support and Effectiveness of Industrial Training

Table 4.3. Pearson correlation between departmental support and effectiveness of industrial training

Relation between variables	R- value	P- value	Decision
Departmental support	0.732	0.001	H1 rejected

The results of a Pearson correlation analysis of hypothesis 1 on the relationship between departmental support and the effectiveness of industrial training are summarized in Table 6. The findings indicate that there is a strong positive relationship between the two variables ($r = 0.732$, $p = < 0.001$). According to Evans (1996), this value represents a strong correlation. Considering that the p-value is less than the traditional alpha of 0.05, hypothesis 1 is rejected. Therefore, the results suggest that there is a statistically significant correlation between the departmental support and the efficacy of the industrial training. In this way, the research achieves its purpose in relation to this relationship.

Relationship between Pre-placement Activity and Effectiveness of Industrial Training

Table 4.4. Pearson correlation between pre-placement activity and effectiveness of industrial training.

Relation between variables	R- value	P-value	Decision
Pre-Placement Activity	0.707	0.001	H2 rejected

Table 4.4 shows the results of Pearson correlation analysis to determine the relationship between pre-placement activity and effectiveness of industrial training (hypothesis 2). The findings show that there is a significant positive correlation between departmental support and effectiveness of industrial training ($r = 0.707$, $p = .001$). According to Evans (1996), this value represents a strong correlation. Since the p-value is less than 0.05 the hypothesis 2 is rejected. These results support to the fact that there is statistically significant correlation between departmental support and effectiveness of industrial training. As a result, the purpose of the study in relation to this relationship has been achieved.

Relationship between Host Company Support and Effectiveness of Industrial Training

Table 4.5. Pearson correlation between host company support and effectiveness of industrial training.

Relation between variables	R- value	P-value	Decision
Host Company Support	0.736	0.001	H3 rejected

The Pearson correlation analysis results are shown in table 8 that was carried out to find out the correlation between the support of the host companies and effectiveness of industrial training (hypothesis 3). The findings indicate that there is a strong positive correlation between host company support and industrial training effectiveness ($r = 0.736$, $p = 0.001$). By referring to Evans (1996), this value represents a strong correlation. Since the p-value is smaller than 0.05, the hypothesis (H3) is rejected. This implies that the effectiveness of industrial training is strongly associated with the host company support whereas the strength of the association is relatively high. Therefore, the research confirms that there is a relationship between host company support and student effectiveness of industrial training.

Multiple Regression

Table 4.6. Regression analyses

Variable	Standardized Coefficients Beta	P- value	Decision
Departmental Support	0.339	0.007	Based on the beta value, departmental support is the most influential factor affecting the effectiveness of industrial training
Host Company Support	0.289	0.031	Significant
Pre-Placement Activity	0.264	0.032	Significant

Multiple regression analysis was used to determine the relationship between the departmental support, pre-placement activities and host company support with the effectiveness of industrial training among the students. The aim of the analysis was to establish the direct impact of multiple independent variables on one dependent variable, which was the perceived effectiveness of industrial training. Before the interpretation of the regression outcomes, diagnostic tests were conducted to make sure that no assumptions that are inherent to multiple regression were not violated. Also, a multicollinearity analysis was conducted in which the inter correlations between the independent variables were tested. The analysis showed that the Variance Inflation Factor (VIF) values were less than 10 and the tolerances were greater than 0.01, hence this served as confirmation that no multicollinearity was present in the regression model.

Table 8 indicates that the overall effect of airport support, pre-placement activities and support of host companies explains 64.8% of the difference in the perceived effectiveness of industrial training ($R^2 = 0.648$). The 35.2 percent variation that is left can be explained by other factors which were not reflected in the research model. Regression was identified to be significant with an F value of 36.187 and a p-value of below 0.05 meaning that the combined effect of the independent variables has a significant effect on the effectiveness of industrial training.

The standardized beta coefficients indicate that host firm support has the highest effect on training efficacy ($\beta = 0.339$, $p = 0.05$), departmental firm support ($\beta = 0.289$, $p = 0.05$), and pre-placement activities ($\beta = 0.264$, $p = 0.05$). These coefficients indicate that among other variables, departmental support influences the improvement of perceived performance of industrial training the most. The statistically significant p-values of each of the variables confirm the existence of an independent effect of the variables on the perceptions of students regarding training effectiveness.

In general, the results show that among the Administrative Science students at the Universiti Teknologi MARA (UiTM) Kedah, the departmental support is the most dominant predictor of the effectiveness of industrial training. This has been found to be the same conclusion as given in above correlation analysis and supports the significance of strong departmental involvement, effective coordination and strict follow-up of the quality of the industrial training programs as a means of ensuring their effectiveness.

DISCUSSION

Industrial training is not just a mandatory academic requirement; it is a systematic learning framework that ensures students gain experience and hone their professional skills that form the basis of their career preparation. In addition to acquiring practical skills, industrial training has a profound impact on students' work readiness, professional identity and career aspirations (Ahlawat et al., 2025). A successful industrial training program provides students with a supportive and meaningful environment and learning opportunities that enable the application of academic information in a real-world organizational setting (Karunaratne & Perera, 2019). It is clear that the quality of support and preparation provided to students can prove to be related to the effectiveness of industrial training. Therefore, this discussion examines the influence of departmental support, pre-placement activities, and host company support on the perceived effectiveness of industrial training among Administrative Science students at UiTM Kedah.

The findings from the first objective show that industrial training for Administrative Science students at UiTM Kedah is mostly beneficial when it can record a high increase in overall mean score. The assessment shows that industrial training effectively offers students sufficient exposure to an authentic business environment, enabling them to understand the rules, processes, work ethics and professional culture of the organization. The implementation of theoretical knowledge acquired during the classroom into a practical work environment can enhance experiential learning. This finding is consistent with the study of Karunaratne and Perera (2019), who reported that industrial training can improve students' understanding of organizational systems and workplace regulations.

This study shows a strong and statistically significant correlation between departmental support and the effectiveness of industrial training. This shows that continuous departmental guidance and support from academic supervision are important in influencing students' internship experiences. This can prove that good support from the department can strengthen students' confidence and learning effectiveness to ensure that internship activities are aligned with academic outcomes. This study is in line with the findings of Brandt et al. (2025) who emphasized that industrial training programs will be effective and sustainable when they receive excellent faculty or departmental support. This means that the support department has a key role in launching the internship program, especially in monitoring student progress and providing academic support during the internship period.

Furthermore, the results of the study showed a significant positive correlation between pre-employment activities, which proves how useful industrial training is perceived by the public. Pre-placement activities such as orientation seminars, information workshops and basic skills training help students to know several things in advance such as understanding their duties and responsibilities before they start working. This early preparation is very useful because it can reduce uncertainty, increase students' confidence, and ease the transition to the professional world. As a result, students are more likely to perceive their industrial training as useful. The findings of this study are in line with Singh (2025) who found that pre-employment training increases employability and facilitates a smooth career transition by providing students with relevant skills and realistic job expectations.

Support from the host company and the effectiveness of the industrial training program have a strong and significant correlation. Therefore, the support of the host company provides students with the opportunity to experience real tasks, helping them apply theoretical knowledge to the tasks. The work environment can enable students to improve their practical skills, problem-solving skills and confidence in their work. The constant assistance provided by the company supervisors throughout the field gives students better first-hand experience and shows students how a real organization works. This result is consistent with the study by Comney et al. (2023), which shows that there is an improvement in skills and training outcomes among students who receive significant support from the host company.

Among the factors that play an important role in influencing the effectiveness of industrial training is departmental support. This finding proves that continuous departmental involvement before, during and after the training session is important to facilitate the learning process of students in industrial training. In addition, departmental support not only helps students understand the actual tasks but also shapes them into more

professional and prepared for the world of work. So, continuous educational support during industrial training helps students identify suitable tasks and students and feel comfortable with the work environment. This result is in line with Blau et al. (2020), who emphasize the importance of continuous institutional support in increasing student engagement and job outcomes.

Overall, the data found proves that the effectiveness of industrial training is influenced by a combination of departmental support, pre-placement activities and host company support. The significant influence of departmental support underlines the need for academic engagement to be crucial with closer collaboration between universities and organizations to enhance the benefits of industrial training programs.

CONCLUSION

The outcome of successful industrial training lies in the fact that the students will feel that the program is significantly relevant to their academic studies, skills acquisition, and workplace preparation which consequently also impacts their self-esteem and readiness to work in the future. The results of the research show that the perceived effectiveness of the Administrative Science industrial training among the Administrative Science students of the Universiti Teknologi MARA (UiTM) Kedah was mostly high and thus this implied that the program could fulfill its main goals. The findings also indicate that the departmental support, pre-placement activities, and the host company support have significant implications to the level of influence on the internship experience of the students, but the departmental support is the most influential aspect. This reinforces the importance of the academic departments in offering an unrelenting direction, straightforward correspondence, and fruitful monitoring during the industrial training stage. The research additionally underscores the significance of structured pre-placement activities in equipping the students with professional surroundings. Sufficient orientation and briefing and adequate preparatory instructions can make the students know the workplace expectations, professional ethics and task demands thus alleviating the uncertainty and enhancing the outcomes of learning. Moreover, the support of the host company, especially in the assignment of tasks, supervision and mentoring was also identified to be a strong factor towards ensuring that the students can use theoretical knowledge and assist them to develop practical skills. All these results add to the literature available on the effectiveness of Industrial training by offering empirical data on the context of Administrative Science students in a Malaysian government university.

However, there are bound to be research limitations. The sample size was also small, only 63 respondents, which only included Administrative Science (AM238) students of Universiti Teknologi MARA (UiTM), Kedah. Consequently, the results are contextual, and they might not be applicable to other students in other academic programs, institutions and geographical areas where structures of industrial training and support systems might not be similar. Moreover, the researcher used a cross-sectional quantitative design and used only self-reported questionnaire information that was obtained after the industrial training was done. This method will only get the perception of the students at one moment and will be prone to recall bias or interpretation, which might lead to the inaccuracy of the answers. It is thus recommendable that future studies should broaden the area of research through incorporation of students of different academic fields, UiTM campuses and other higher educational institutions including private universities. Bigger and more diverse samples would be able to compare and thus enhance the generalizability of results. Moreover, longitudinal research designs would be effective in offering more information on how the perceptions of students can change prior to, during and after the industrial training. A more in-depth exploration of the experiences, challenges, and learning process of students would also have been possible through the inclusion of qualitative or mixed-method approaches e.g. interviews or reflective journals. These methods have the potential to enhance the knowledge of industrial training efficacy and help the establishment of more efficient and holistic internship programs in Malaysian higher education.

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