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The Impact of Training and Development on Employee Performance in Agriculture Sector

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Abstract: Apart from capital, employees represent as one of the most valuable assets of a company. The fates of company reputation depend on them. The performance of an employee is affected by elements such as organizational policies, working environment, training programs and development opportunities, and workforce relations. Some public and private organizations either locally or globally lack the initiative to acknowledge the significance of upgrading the employee productivity through training. Some organizations even slash first their spending budget on training when the going gets tough which result in increasing staff turnover, higher cost to re-hire new staffs and would therefore finally detrimental to the firm's productivity and profitability. The purpose of this paper is to ascertain the level and impact of employee performance towards training and development among workers in agricultural sector. Employing the quantitative method, the result reveals a high relationship level and a positive significant relationship between the variables. The findings of this research are beneficial for organizations to map out appropriate training and development programs for their employees.

Keywords: Performance, Training and development, Agriculture sector

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1. Introduction

Malaysian agriculture products are largely export-oriented. Referring to Human Resource Fund (2018), agricultural sector engaged in commodity agriculture plantation with mainly oil palms and rubber and perennial agricultures that engage in food production such as vegetables, fruits, corns, paddy and pineapples amongst others. Agricultural activities in Malaysia are affected by weather changes such as monsoon season, dry spell, floods and other man-made disaster such as haze and pandemic which are not within the farmers' capacity to control. Other than that, government policies, technological and technical advancements, environmental awareness, soil quality and climatic changes influence the production capacity. Nowadays, technology plays an important role in increasing the production capacity. The acquisition of the necessary technologies requires a capable workforce. Therefore, training programs and development opportunities is needed to upgrade the workforce performance and skills (Khan *et al*., 2017).

The performance of an employee is affected by elements such as organizational policies, working environment, training programs and development opportunities, and workforce relations (Khan *et al.*, 2016). Training will cultivate the expertise while development program will upgrade the workforce quality to be more knowledgeable, effective, professional and experienced (Khan *et al.*, 2017). The positive effect in work performance will ensure the target is met without jeopardizing the interests of the employees and the organizations (Stephen *et al*., 2017).

Satisfied and convincingly motivated employees are loyal, diligent, and unwilling to quit (Said, 2015). They are involved and encouraged in the formation of outstanding services or quality product. A previous study revealed that the benefit of investing in training was gained by both the employee and the organization because it improved customers' satisfaction, employee capabilities, behaviors, and the performance (Kiyana & Bett, 2017). Investing on training and development will have the effect on employee performance (Younas *et al*., 2018). However, some public and private organizations either locally or globally lack the initiative to acknowledge the significance of upgrading the employee productivity through training. During the economic downturn where the sales are going downhill, the first thing that some organizations do is to slice the training budget (Abdullahi *et al*., 2018). This will increase the staff turnover, incur higher cost to re-hire new staffs and would therefore finally jeopardize the firm's productivity and profitability.

This study intends to ascertain the level of training and development programs and employee performance amongst agriculture employee, and to examine the impact of training and development on employee performance in Kedah, Malaysia.

2. Literature Review

2.1 Agriculture Industry in Malaysia

Malaysia is serious in improving the agricultural sector with the introduction of 5-Year Malaysian Plan series starting from Year 1966 where agriculture plays a major component in the plan. During the 8th Malaysian Plan (2001-2005) period, the agriculture sector's performance was improving with increasing production, higher value, and increasing commodity exports. Later, the 9th Malaysia Plan (2006-2010) outlined this sector as the third income generator in the country (Shaffril *et al*., 2010).

As for Kedah, agriculture sector had increased from 0.1 percent in 2018 to 2.0 percent in 2019 (Laporan Sosioekonomi Negeri Kedah, 2019). According to the similar report, oil palm which is the greatest contributor to agriculture grows 1.5 percent in 2019. The increasing harvest is mainly caused by the acceptance of technical and cultural changes in the agricultural sector with new techniques and

farming concepts. The knowledge of these new techniques, ideas and method however must be disseminated to the farmers by training and development programs.

2.2 Employee Performance

Performance refers to the evaluation of achievement of certain assignment within a specific category, accuracy, accomplishment, expenditure and time lapse. Employee performance is a factor that shape the success of an organization. Okechukwu (2017) stated that employee performance is the results of an accomplished task performed according to the company's target. Performance will be increased when the employees are highly motivated and have the knowledge in how to increase productivity through training on the use of new technologies. Human resource management approaches are greatly and substantially related to the workforce performance and development (Afshan *et al.*, 2012). Studying the factors that stimulate employee performance have been the interest of many researchers. Research was done in Indonesia to evaluate the effect of education and work training on the performance of employees which found that education had a great influence on the performance of employees (Alnawfleh, 2020). Employee performance could be evaluated annually or quarterly basis to appraise the accomplished goals and to identify areas that need improvement (Khan *et al.*, 2017). Employee performance may also be upgraded by training the employee to instill team working capabilities. Employee capabilities will be upgraded if an organization enhance its workers' knowledge and abilities through training which in turn will produce more productive workforce that will create a more effective bonding between the organization and the employees (Hafeez & Akbar, 2015).

2.3 Training and Development (T&D)

Two aspects of training are teaching and learning (Khan *et al.*, 2017). Training is the process of delivering certain capabilities and conducted to increase employee's flexibility and productivity. It includes teaching, instructing, and educating employees to enable them becoming as skilled as possible to complete their tasks and able to cope in more demanding and accountable positions (Habib *et al.*, 2015). Development is the learning opportunities and designed to support the progress of learning capabilities. Training and development are structured learning proficiency that groom individuals for their current and forthcoming undertakings.

Training and development focus on the advancement of technical and operational knowledge, concept understanding, and methodical and practical implementation (Abogsesa & Kaushik, 2017). It is a technique to improve employee performance and simultaneously suppress unwanted behaviors (Okechukwu, 2017). Performance will be upgraded at both the organizational and individual stages. Furthermore, it is an organization's instrument to acquire necessary skills, attitude and know-how to successfully accomplish the given tasks (Iyayi, 2007). Training is the fundamental technological traits for an employee to operate equipment and provide services at the designated level of merit.

2.4 Training and Development with Employee Performance

To manage and empower people, training and development programs are very important to any organization because effective training and development program benefits both the organization and the employee. T&D program which comprises of technology-based learning, off-the-job training, coaching and mentoring have significant effect on minimizing employee turnover, upgrading job satisfaction and morale, upgrading employee's performance and finally propelling a higher productivity and financial gains (Stephen *et al*., 2017). Salah (2006) found a significant positive correlation between the training and development with the performance and productivity. Other study also showed that employee training and development possess a significant positive influence on their performance and productivity (Habib *et al*., 2015). T&D also generate higher confidence level amongst the employees. As such, most employees agree that training and development enhance their performance while the organizations coincide that T&D have a beneficial and substantial effect on employee work performance and productivity. Based on the above, the hypotheses are proposed as follows:

H_1: There is a significant corelation between training and development and employee performance.

H_2: There is a significant effect of training and development on employee performance.

2.6 Research Framework

This study is conducted to examine the effect of training and development on employee performance. Framework in Figure 1 is adopted from Alnawfleh (2020), Franklin *et al.* (2014) and Mdhlalose (2020).

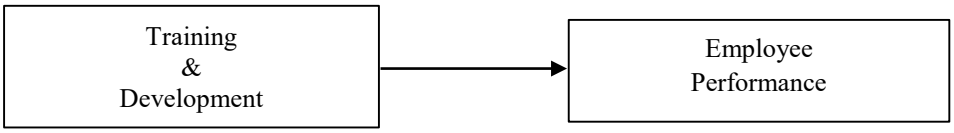

Figure 1: Research Framework

3. Research Methodology

3.1 Research Design

This study engages the quantitative research strategies to examine the effect of training and development on employee performance in agriculture sector. Quantitative research comprises of a thorough study in order to extract precise information to achieve the objectives of the research. To generate measurable causes and effect relationship between the variables, quantitative research is an important method (Creswell, 2013). To exercise this method, questionnaire was disseminated among the farms' owners and employees in Kedah. This study also employs descriptive research approach to illustrate the issues related to the effect of training and development on employee performance in agriculture sector.

3.2 Unit of Analysis

Bhattacherjee (2012) stated that the target of the study which comprises the elements of objects, organizations, groups, countries, person, technologies or collective is the unit of analysis. It elaborates on the characteristics of that elements and analyze the information that is extracted to form an evaluated data of the subject. This study has chosen the workers and owners of the farms in an agricultural sector as the target respondents and the unit of analysis in examining the correlation and effect of training and development towards employee performance.

3.3 Population and Sampling

According to Bell, Bryman & Harley, (2019), population is the number of residents or people in a certain perimeter or locality. This study focuses on the farms' owner and employees as the population sampling. There are about 4,042 hired employees working for Kedah's agriculture sector (Felda's Annual Report, 2018). Using the table by Krejcie and Morgan's (1970), the required sample for this study is 351.

3.4 Research Instrument

Likert scales were engaged to measure the items in section A, B, and C of this study. The scale ranged from 1 = strongly disagree to 5 = strongly agree. Respondents' profiles and demographics of four items in section D were gathered using a nominal scale. In training and development section, 6 items from Franklin *et al*. (2014) were implemented, while 2 items were adopted with 1 from Mdhlalose (2020) and 1 from Alnawfleh (2020). Likewise, employee performance was also represented with 8

items in which 6 items from Franklin *et al*. (2014), while 2 items were adopted with 1 from Mdhlalose (2020) and 1 from Alnawfleh (2020)

3.5 Data Collection

This study is conducted by approaching the employees or farm owners in the agriculture sector to distribute the questionnaires. This method is very much uncomplicated because it is inexpensive, wider coverage, straightforward implementation, and easy to understand. The estimated time taken to collect the data was approximately 2 months; from 24 October 2021 to 24 December 2021. The questionnaire was handed out physically and via online platforms. The primary data was the farms' owners and its employees while the secondary data is derived from available information recorded by other writers or researchers for different purposes but relevant to the study such as articles, journals and theses by scholars which can be obtained offline and online.

3.6 Data Analysis

The data from questionnaires yield descriptive statistics when evaluated by engaging Statistical Package for Social Science (SPSS) to enable the generation of charts. The data will be interpreted and from there recommendation will emerge and the items will be discussed to arrive at a conclusion (Said, 2015). The descriptive analysis used mean or average interpretation scale. The values of low (between 1.00 and 2.33), medium (between 2.34 and 3.67), and high (between 3.68 and 5.00) represented in the mean scale. Cronbach's alpha (α) is applied to ascertain the reliability analysis to validate the data used in the study (Taber, 2018). According to (Zikmund 2000) if α close to 1, data is expected to be reliable while if α is fewer than 0.5, the data is unreliable. Table 1 illustrates the interpretation of Cronbach's alpha coefficient.

Table 1: Cronbach's alpha (α) coefficient

Cronbach's alpha (α)	Interpretation	Cronbach's alpha (α)	Interpretation
$\alpha > 0.9$	Very good	$\alpha > 0.6$	Questioned
$\alpha > 0.8$	Good	$\alpha > 0.5$	Weak
$\alpha > 0.7$	Acceptable	$\alpha < 0.5$	Not acceptable

Before further analyses is carried out, normality test is conducted. It is a statistical process that comprises of a diagnostic hypothesis test where a normally distributed data will undertake the Pearson correlation test for parametric analysis. Instead, Spearman correlation test will be conducted for abnormal condition. Kolmogorov-Smirnov or the Shapiro-Wilk test is engaged to resolve the data normality distribution. Kolmogorov-Smirnov test is recommended to ascertain if normal curve is obtained (Aldrich & Cunningham, 2016). As stated by Rahim (2013) normally distributed data when Sig (p-value) > 0.05. The term used for alliance between two variables is called correlation (Gogtay & Thatte, 2017) and used to gauge the strength of a connection between two or more variables. It justifies the impact of two or more variables causing similar influence, which means the existence of relationship amongst them (Lani, 2010). Moreover, it is a method to ascertain the existence of relationship between the independent and the other dependent variables (Gogtay & Thatte, 2017). The variable is significant if the significance value is less than 0.005 and the variable is not significant if the value is greater than 0.005. The normality test using Kolmogorov-Smirnov and Shapiro-Wilk will indicate whether the data has normal distribution. Since this study employs Kolmogorov-Smirnov test because this analysis was conducted on 71 respondents which was more than 50 respondents. The analysis showed variables P value was <0.005 i.e: 0.00 for training and development as well as for employee performance. This indicated a not normally distributed data. As such, non-parametric Spearman's Rho correlation test was engaged to illustrate the correlation between two variables. Table 2 illustrates the correlation coefficient's strength.

Table 2: Correlation coefficient (*r*)

r coefficient	Correlation Strength
1	Perfect
0.7-0.9	Strong
0.4-0.6	Moderate
0.1-0.3	Weak
0	Nil

The same approach is used for multiple regression. The squared variable (quadratic) component might be applied as a forecaster in the existence of theoretical or statistical evidence which show that there is one or another predictor variables possess curvilinear correlation towards the dependent variable. The coefficients measure the intensity of variable changes that can be either negative or positive (George & Mallery, 2019).

3.7 Pilot Study

The effectiveness of a questionnaire is tested on a trial run. This exercise is called a pilot study (Doody & Doody, 2015) which is conducted before the main research to generate ideas, methods, and indications that were unnoticed beforehand and eliminate misleading enquiries (Prescott *et al*., 1989). For the purpose of this study, the suitability of questionnaires was assessed on 15 respondents. The reliability test for the pilot study in training and development was $\alpha = 0.878$ and employee performance reliability test was $\alpha = 0.840$ which showed a good Cronbach's alpha value. This indicated the items were suitable in measuring the variables and reliable to proceed further studies.

4. Results and Discussion

4.1 Rate of Response

71 out of 351 distributed questionnaire forms were responded. This represents the rate of response of 20.23 percent. In view of the study that was carried out during the active COVID-19 pandemic period it was foreseen that the response rate would be low. The researcher was unable to collect data physically in certain remote location that either inaccessible or outreached from network coverage. This was aggravated further with some of the employees were not well versed in digital application. Table 3 depicts the rate of response from the respondents.

Table 3: Rate of response

Population	Sample Size	Distributed Questionnaires	Returned Questionnaires	Percentage (%)
4,042	351	351	71	20.23

4.2 Demographic Analysis

The collected data revealed that the male respondents are higher in number than the female respondents which is 40 (56.3%) male employees as against to female respondents which is 31 (43.7%). Regarding the age range of the respondents, there are 23 (32.4%) respondents of age between 20-25 years old, 3 (4.2%) respondents of age between 26-30 years old, 13 (18.3%) respondents of age between 31-35 years old, 14 (19.7%) respondents of age between 36-40 years old, 4 (5.6%) respondents of age between 41-45 years old, and 14 (19.7%) respondents of age 46 years old and above. The ethnicities of the respondents segregated as Malays (38 =53.5%), Indian (14=19.7%), Chinese (2=2.8%) and other ethnic (17=23.9%) respondents. In education level section, 2 (2.8%) respondents were master's degree holder 20 (28.2%) respondents were degree holder, 13 (18.3%) respondents with diploma, 33 (46.5%)

respondents with SPM/STPM. In work experience section, 30 (42.3%) respondents with less than 5 years' work experience, 21 (29.6%) respondents with 6-10 years' work experience, 9 (12.7%) respondents with 11-15 years' work experience, and 11 (15.5%) respondents with 16 years and above of working experience. 39 (54.9%) respondents were working full time while 21 (29.6%) respondents were working part time. 10 (14.1%) respondents were the farm owners. 67 (94.4%) of the respondents are Malaysian citizen while 4 (5.6%) respondents are Thailand citizen. The respondents' demographic information is depicted in Table 4.

Table 4: Demographic information

Demographics	Items	Frequency (N=71)	Percentage (%)
Gender	Male	40	56.3
	Female	31	43.7
Age (years)	20-25	23	32.4
	26-30	3	4.3
	31-35	13	18.3
	36-40	14	19.7
	41-45	4	5.6
	46 years old and above	14	19.7
Ethnicity	Malay	38	53.5
	Chinese	2	2.9
	Indian	14	19.7
	Others	17	23.9
Education Level	SPM/STPM	33	46.5
	Diploma	13	18.3
	Degree	20	28.2
	Master	2	2.8
	Other	3	4.2
Working Experience (years)	Less than 5	30	42.2
	6-10	21	29.6
	11-15	9	12.7
	16 years and above	11	15.5
Employment Status	Part time	21	29.6
	Full time	39	54.9
	Owner	10	14.1
	Other	1	1.4
Citizenship	Malaysian	67	94.4
	Thailand	4	5.6

4.3 Reliability Analysis

The reliability test was conducted on all 71 agriculture workers. The training and development revealed the Cronbach's alpha coefficient of 0.960 while the dependent variable in the study which was employee performance coefficient was 0.966. This outcome revealed that the questionnaires were at outstanding and collective level. The items were suitable for the correlation and regression analyses because they possessed excellent internal consistencies amongst them.

4.4 Descriptive Analysis

(a) Descriptive analysis of training and development

As illustrated in Table 5 below, question 4 which was "The organization has a system for calculating the cost and benefits of training" ($\mu = 3.77$, $\sigma = 0.959$) revealed the lowest mean value, while questions 6 and 8 with the statement of "T&D has resulted in higher productivity and financial returns for the organization" ($\mu = 3.97$, $\sigma = 0.940$) and "The T&D program that I receive from the organization is very

effective" (μ =3.97, σ = 0.970) respectively were revealing the two highest mean values. This study however found out that although question 4 showed the lowest mean value, the level range was still high. This condition led to a conclusion that respondents concurred the existence of a system where the organizations were taking parts in spending for training because not only the employees but also the companies benefitted from the program.

Table 5: Descriptive analysis for training and development (T&D)

No.	Item	Mean (μ)	Std Deviation (σ)	Level
1.	My organization conduct extensive T&D programs for the employees	3.94	0.892	High
2.	I normally will go for T&D program every year that my organization provided	3.80	1.063	High
3.	There are formal training programs to teach new employees the skills they needed	3.92	0.990	High
4.	The organization has a system for calculating the cost and benefits of training	3.77	0.959	High
5.	T&D has helped reduce employee turnover in the organization	3.88	0.903	High
6.	T&D has resulted in higher productivity and financial returns for the organization	3.97	0.940	High
7.	The T&D that provided by the organization is easy to understand and have clear directions	3.92	0.946	High
8.	The T&D programme that I receive from the organization is very effective	3.97	0.970	High
	Total Average Score	3.89	0.957	High

(b) Descriptive analysis of employee performance

In Table 6 below, question 3 which was "With T&D it helped me to reduce frequency of supervision" indicated the lowest mean value of (μ = 3.88, σ = 0.079) while questions 6 which was "Through T&D it helps me to decrease material wastage" and question 7 which was "With T&D it helps me to enhance the use of tools and machine, and also operational safety" were indicating two highest mean values of (μ = 4.04, σ = 0.947) and (μ = 4.04, σ = 0.932) respectively. This study however found out that although question 3 showed the lowest mean value, the level range was still high. In general, training will inculcate new skills and know-how that will produce better employees' performance that will ultimately enhance the productivity of the farms.

Table 6: Descriptive analysis for employee performance

No.	Item	Mean (μ)	Std Deviation (σ)	Level
1.	Quality of my work output has improved in last five years	3.98	0.819	High
2.	Through T&D helps it helps me to increase productivity	4.02	0.925	High
3.	With T&D it helped me to reduce frequency of supervision	3.88	0.979	High
4.	T&D gives me motivation which enhance my performance	4.02	0.955	High
5.	T&D improves the quality of products that I produced by the result of fewer mistakes	3.95	0.885	High
6.	Through T&D it helps me to decrease material wastage	4.04	0.947	High
7.	With T&D it helps me to enhance the use of tools and machine, and operational safety	4.04	0.932	High
8.	I have enough training that enables me to do my job as required on time	4.02	0.940	High

Total Average Score	3.99	0.922	High

4.5 Correlation Analysis

The analysis of correlation revealed a convincing positive and significant relationship between training and development, and employee performance which was of (r= 0.873**, p=0.000) which indicated a strong correlation between the independent and the other dependent variables. The correlation value was significant at the 0.01 level (2-tailed), therefore H_1: "there is a significant relationship between training and development, and employee performance" was supported.

4.6 Regression Analysis

Table 7: Model analysis of training and development and employee performance

R	R^2	Adjusted R^2	Std. Error of the Estimate	F	Sig. F
0.873	0.763	0.760	0.40779	222.084	0.000

In the Table 7 as shown above, the F statistic for the final model indicates a value of 222.084 comes with a significant value of 0.000. This indicates a significant model which confirms the existence of the effect between training and development with R value of 0.873. It clarifies the 76.3% of the variation within the dependent variable, employee performance (R^2= 0.763) and 76.0% of the variation of employee performance within real populations (Adjusted R^2= 0.760). Therefore, H_2: "there is a significant impact of training and development on employee performance" was supported

5. Discussion and Conclusion

There is a significant convincing correlation between training and development towards employees' performance. Upon analysis, the study has found out that with average mean score of $\mu = 3.89$ and standard deviation of $\sigma = 0.957$, employees in Kedah's agriculture sector are operating at a high level of training and development. As such it is well accepted that the employees are receiving sufficient and consistent training program that beneficial not only to them but also to the organizations as well which corresponds to research findings by Asfaw *et al*. (2015) that confirmed training programs instill new employees' capabilities and coherently increase the performance of the employees. The findings also agree with Cole (2002) who recommended that installing programs for the purpose of training and development will serve as the platform to train and develop the human potential to complete tasks at excellence level. Moreover, the study later found out that employees in the specified agricultural sector showed a relatively high level of performance. This is shown by the average mean score of $\mu = 3.99$ and standard deviation of $\sigma = 0.922$. It means to show that employees perform excellently after they enrolled in their designated training and development programs. Additionally, most respondents generally believed that participating in training programs improves their practical capabilities as confirmed by Nzeru *et al.* (2015) and enhance their performance (Salah, 2016). The respondents in this study are more satisfied if they are provided with ample training and development program. As such, the findings significantly upheld the connection between employee training and development towards employee performance This is in line with the opinion of Karim *et al*. (2019) who found out that employees believed strongly training and development upgrades skills, capabilities, know-how, job satisfaction, and performance. Furthermore, training and development programs are effective in upgrading employee performance if the employees participate in the program. Conclusively, the level of relationship is high on training and development towards employee performance.

To sum up, the researcher concludes that this study seems to have has achieved all research objectives which are to examine and identify the level of training and development towards employee

performance amongst agriculture workers, particularly in Kedah. This study had also evaluated the correlation between training and development towards employee performance, and the effect of training and development towards employee performance. It was found that both elements of training and development and employee performance indicated a high level of relationship and a convincing correlation between training and development towards employee performance. Finally, in understanding the policies of human resource management, any organization or the farm owners which are the subject of this study could implement training and development programs to assist employees at work to perform better, continuously motivated, and productive. This study is significant to create awareness to organizations about the importance of suitable training and development programs to improve their employees' capabilities, talents, and skills in order to remain relevantly competitive and prosperous.

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