# Roles of Competence on the Effect of Training and Development Systems on Work Productivity at Universal Corporation Human Resource Management

**Wanda Echoes Prasidio Akbar Hidayat**
Doctoral Program in Human Resource Development Studies,
Airlangga University Graduate School
Surabaya, Indonesia
wanda.gema.prasidio-2018@pasca.unair.ac.id

**Cholichul Hadi**
Faculty of Psychology Universitas Airlangga
Surabaya, Indonesia
cholichul.hadi@psikologi.unair.ac.id

**Subagyo Adam**
Faculty of Social and Political Sciences, Universitas Airlangga
Surabaya, Indonesia
subagyo.adam@fisip.unair.ac.id

**Dimas Agung Trisliaanto**
Doctoral Program in Human Resource Development Studies,
Airlangga University Graduate School
dimas.agung.trisliaatanto-2018@pasca.unair.ac.id

**Ismail Suardi Wekke**
Institut Agama Islam Negeri (IAIN) Sorong, Indonesia
Asosiasi Dosen Insan Cita Indonesia, Indonesia
The Jusuf Kalla Research Center for Cultural Studies, Universitas Muslim Indonesia
iswekke@stainsorong.ac.id

**Muhammad Makbul**
Institut Sains dan Teknologi An-Nuriyah Makassar, Indonesia
makbulm013@gmail.com

**Abstract**

This study aims to analyze the effect of training and development systems on job productivity through the competence of trainers at Universal Corporation's Human Resource Management. This type of research is an explanatory survey using path analysis method. The results of the study concluded: 1.) The effect of the training and development system on competence is significant with a value of 0.503; 2.) The effect of the training and development system on work productivity is significant with a value of 0.426; 3.) The effect of competence on work productivity is significant with a value of 0.495; 4.) The effect of the training and development system on work productivity through competence is significant with a value of 0.248. The effect of the training and development system on work productivity is significant with a value of 0, 426; The effect of competence on work productivity is significant with a value of 0.495; The effect of the training and development system on work productivity through competence is significant with a value of 0.248. The effect of the training and development system on work productivity is significant with a value of 0.426; The effect

of competence on work productivity is significant with a value of 0.495; The effect of the training and development system on work productivity through competence is significant with a value of 0.248. The effect of the training and development system on work productivity is significant with a value of 0.426; The effect of competence on work productivity is significant with a value of 0.495; The effect of the training and development system on work productivity through competence is significant with a value of 0.248. The effect of the training and development system on work productivity is significant with a value of 0.426; The effect of competence on work productivity is significant with a value of 0.495; The effect of the training and development system on work productivity through competence is significant with a value of 0.248.

## Keywords
Competence, Training and Development, Training and Development System, Work Productivity, Human Resource Management

## 1. Introduction

Competition in the world of work will be increasingly tight in the implementation of the ASEAN Economic Community since 2015. Indonesia and countries in the Southeast Asian region will form an integrated region known as the ASEAN Economic Community (AEC). In the era of entering the free market, there are many challenges and competition that must be faced by the increasingly complex business world and corporate organization. It is characterized by the rapid change in the environment with the advancement of information technology which is increasingly rapidly, demanding organizational sensitivity to respond to changes that will occur in order to continue to exist in the competitive arena (Valle, et.al., 2000; Khan & Baloch, 2017).

The demands for readiness of business organizations to face free market competition are getting closer and organizational restructuring demands are becoming more flexible and adaptive in responding to various changes that occur (Kum, Cowden, & Karodia, 2014). Only flexible and adaptive organizations are able to compete in an increasingly fierce global competition and as a result of opening up opportunities for business people from various countries (Huselid, 1995; Issahaku, Ahmed, & Bewa-Erinibe, 2014). Changes that occur such as economic and marketing pressures, information pressures, environmental pressures, employee expectations to develop, organizational structure and size etc. will encourage organizations to always improve organizational performance and employee productivity in order to compete globally (Schuler & MacMillan, 1984; Elnaga, 1984). & Imran, 2013;

Employee development related to work productivity is very necessary in a company organization, because with the program it can help improve the skills and abilities of employees (Tai, 2006; Zwick, 2015). Employee development is also designed to get skilled and flexible employees for an agency in moving in the future. The importance of education and training is not only for the employees concerned, but also for the benefit of the organization. Because with the increase in employee abilities or skills, it can increase employee work productivity (Sultana, et al., 2012; Wulnye, Aikins, & Abdul-Fatawu, 2018). Mbiya, Egessa, & Musiega (2014) state that an increase in work productivity means the organization concerned will get more results.

Education and training is also an effort to develop the intellectual abilities and personality of employees. Therefore, every organization or agency that wants to develop, educate and train its employees must receive greater attention so that it can improve the performance of its employees. Training is an activity carried out to improve skills, knowledge, and attitudes in order to improve current and future performance (Amin, Rasyid-Saeed, & Lodhi, 2013; Hervie & Winful, 2018). Onyago & Wanyoike (2014) explain that training programs are processes designed to maintain or improve current job performance, while development programs are processes designed to develop skills needed for future work activities.

Training needs analysis can use various information as input, including information from employee performance appraisals, observations, work accident data, counseling results, test results, interviews, surveys, job descriptions, and refers to company strategy (Matsuo, 2014; Sasidaran, 2018 ). After the training needs analysis is carried out, training targets and training evaluation standards can be set. Thus, the training program will be directed and a clear measure of its success which is indispensable in the evaluation process. In preparing training and development programs, according to Shaheen, Naqvi, & Khan (2013); Zwick (2015), Butler & Lobley (2016) need to detail various things, including materials, methods, instructors, facilities needed, location, time and budget required.
Referring to this, Human Resource Management Universal Corporation is a company that was founded in 2009 and is engaged in consulting services related to training and human resource development and has 64 national and international certified trainers and is trained in providing training and consulting to other corporate clients who are

have problems in reducing human resources, among others: performance, competence, work productivity problems, and others that are substantive and basic.

The results of the research by Jehanzeb & Bashir (2013), the results of the research by Majovski & Davitkovska (2016), increase that the competency variable has a positive and significant effect on the level of employee productivity. In his research, it is explained that competence through indicators of achievement, service, leadership, management, thinking, and effective personality has an influence on the level of work productivity of 48.71%, where the influence is in the medium category (Yusuf, M., & Wekke, I. S. 2020). In addition, the results of the study also prove that the competence variable has a positive but not significant effect on employee work productivity. In his research, it was explained that competence through the sub-variables of personal ability, ability to manage change, and ability to manage work culture had an influence of 16.3%, where the influence is included in the small category. This study tries to examine more deeply related to employee competencies through the components of attitudes, knowledge and skills (Lu, Tjosvold, & Shi, 2010; Martini, et. al., 2018).

Based on the existing problems, the researcher chose a research topic about the role of competence on the effect of training and development systems on work productivity at Universal Corporation's Human Resource Management. Based on the background of the problem, the formulation of the problem that can be described is whether there is an effect of the training and development system on work productivity through the competence of trainers at Universal Corporation's Human Resource Management (Ismail, R., Wekke, I. S., Dinesh Kumar, A., Pandi Selvam, R., Shankar, K., & Nguyen, P. T. 2019).

## 2. Literature Review

### 2.1 Training and Development: Definition, Objectives, and Measurement of Systems

The use of the term training and development has been suggested by experts. According to Knoke & Kalleberg (1994) the term training is for implementing (technical) employees and supervisors. While the term development is intended for management level employees. Wexley and Khan, Khan, & Khan (2011), Jehanzeb & Bashir (2013), Kum, Cowden, & Karodia (2014) suggest that the term training and development is a planned effort designed to facilitate the acquisition of relevant skills, knowledge and attitudes. by members of the organization. Development focuses on improving decision-making and human relations skills and presenting more factual and narrow subject matter. According to Majovski & Davitkovska (2016), the implementation of training can be achieved if it is based on the following principles: 1. ) individual differences; 2.) Relation to job analysis; 3.) Motivation; 4.) Active participation; 5.) Selection of trainers; 6.) Selection of trainers; 7.) Trainers for trainees; 8.) Training methods; 9.) The principle of learning (Tukwain, S. M. F., Fatimah, F., & Wekke, I. S. 2018).

According to Tai (2006), development is an effort to improve the technical, theoretical, conceptual, and moral abilities of employees according to the needs of their job/position through education and training. According to Kum, Cowden, & Karodia (2014), development can be interpreted as an effort to prepare employees (human resources) to be able to move and play a role in the organization in accordance with the growth, development, and change of an organization. organization, institution, or department. The development objectives of Sultana, Ahmed, & Mehmood (2013) are as follows: 1.) Work productivity; 2.) Efficiency; 3.) Reduce damage and minimize the risk of work accidents; 4.) Improving work services better; 5.) Morals become more formed; 6.) Career development; 7.) Conceptual technical skills, human skills, and better managerial skills; 8.) Leadership and human relations; 9.) Contribution in remuneration (salary, starting wage, and allowances); 10.) Consumers. According to Matsuo (2014), development is divided into two types, namely formal and informal development. Formal development is an employee assigned by the company to participate in education or training, whether carried out by the company or carried out by educational or training institutions. The system is a set of elements that make up an activity or procedure or part of a processing that seeks a goal together by operating data or goods at a certain time to produce information or energy or goods. A system has certain characteristics or properties, namely: a.) System components; b.) System Limits; c) External System Environment; d.) System Connector; e.) System input (system input); f.) System Output (system output); g) System Processing; h.) System Goals or Goals (Majovski & Daviskovska, 2016). The indicators used in measuring the training and development system in this study according to Khan & Baloch (2017) include clarity of goals/plans, system accuracy, and training system materials.

### 2.2 Job Productivity: Description and Factors

Productivity is defined as the results obtained from each production process using one or more production factors (Phusavat, et. al., 2013). In this case, Osibanjo, et. Al. (2015), productivity is usually calculated as an index, the ratio of output to input, and can be expressed in terms of physical productivity and financial productivity. Matin, Razavi, & Emamgholizadeh (2014) state that human resource productivity is an attitude of mind that has the spirit to work hard and wants to have the habit of making improvements. The level of employee productivity at work is

determined by the competencies possessed, so that the competencies possessed greatly affect the company's organization (Demerouti, Baker, & Halbeleben, 2015).

Creating a competitive advantage is a top priority for leaders in managing company organizations, in order to win the very tight business competition through various technologies and management tools that the company has implemented as a component in increasing work productivity (De Been & Beijer, 2014). ). Green road, et al. Al. (2016) mentions the factors that affect productivity, among others as follows: 1.) The physical condition of the company; 2.) The level of automation used; 3.) Layout; 4.) Job design; 5.) Employee skills and motivation; 6.) Wages. Productivity is indeed an important thing for employees in company organizations (Duari & Sia, 2013). To measure work productivity, an indicator is needed, as follows in Solanki (2013) it is explained that the productivity indicators are: 1.) Ability; 2.) Improve the results achieved; 3.) Work spirit; 4.) Self-development; 5.) Quality; 6.) Efficiency; 7.) Input and output (Wekke, I. S., Aghsari, D., Evizariza, E., Junaidi, J., & Harun, N. 2018).

### 2.3 Competencies: Roles, Characteristics, and Aspects

According to Lu, Tjosvold, & Shi (2010), competence is a basic characteristic of a person that allows employees to produce superior performance in their work. Based on the description above, the notion of competence contains a deep and inherent part of a person's personality with predictable behavior in various situations and work tasks. Predicting who performs well and not well can be measured by the criteria or standards used. Competency analysis is mostly prepared for career development, but determination of the level of competence is needed to determine the effectiveness of the expected level of performance in accordance with the level of competence, including the following: 1.) Skill; 2.) Knowledge; 3.) Self-concept; 4.) Self-image; 5.) Nature; 6.) Motives (Rantesalu, et al., 2016).

Skills and knowledge competencies tend to be more visible and relatively on the surface as characteristics possessed by humans (Sasidiran, 2018). Social roles and self-image tend to be less visible and can be controlled by outside behavior (Tai, 2006). Meanwhile, traits and motives lie deeper in the central point of personality. Knowledge and skill competencies are relatively easy to develop, for example with training programs to increase the level of human resource capabilities (Sultana, et. al., 2012). While the motives for competence and traits exist in a person's personality, so it is quite difficult to assess and develop (Wadsworth & Facer, 2016). One of the most effective ways is to select these characteristics in the selection process.

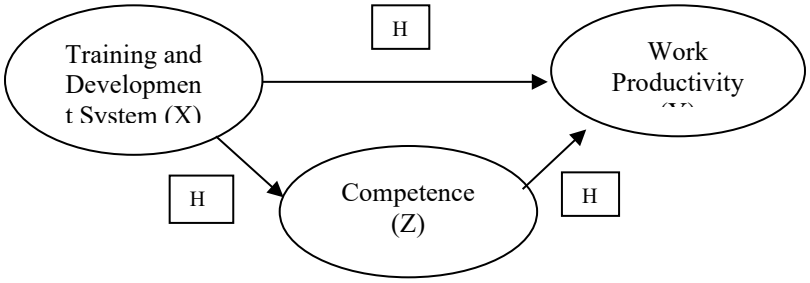
Spencer and Spencer in Warhust & Thompson (2006) state that competence is a person's underlying characteristics related to the effectiveness of individual performance in his work or individual basic characteristics that have a causal or causal relationship with reference criteria, effectiveness or excellent or superior performance at work. work or in certain situations. Based on this understanding, some of the meanings contained in it are as follows: 1.) The underlying nature; 2.) Causally related; 3.) Referred criteria (Zaim, Yasar, & Unal, 2013).

According to Sriekaningsih & Setyadi (2015), several aspects contained in the concept of competence are as follows: 1.) Knowledge; 2.) Understanding; 3.) Value; 4.) Skills; 5.) Attitude; 6.) Flowers. Ruky in Mastuo (2014) suggests that the concept of competence is becoming increasingly popular and has been widely used by large companies for various reasons, namely: 1.) Clarify work standards and expectations to be achieved; 2.) Employee selection tool; 3.) Maximizing work productivity; 4.) Basis for developing the remuneration system; 4.) Facilitating adaptation to change; 5.) Align work behavior with organizational values.

## 3. Methods

This type of research is an explanatory survey. The selection of this type is based on the consideration that this type will not only explain or describe empirical facts in the field but will also explain influence analysis (Bryman, 2007; Barnham, 2015). The unit of analysis in this study is all trainers who work in Human Resource Management Universal Corporation as many as 64 people were taken as respondents by total sampling. Furthermore, the respondent submitted a statement in the questionnaire which was a description of the indicators of the training and development system variables, work productivity variables, and competency variables. The data collection techniques used include field studies, literature studies, and observation studies (Zikmund & William, 2002; Zyphur & Pierides, 2017).

This study uses quantitative analysis through the path analysis method which is intended to determine the magnitude of the influence of the training and development system (X) on work productivity (Y) through competence (Z) on employees at Human Resource Management Universal Corporation which is described in the following research hypothesis analysis model. :




**Picture 1.** Hypothetical Analysis Model
(Source: Primary Data, 2019)

Based on Figure 1 above, it can be seen that there are several research hypotheses proposed, including:

H1: There is a positive and significant influence of the training and development system (X) on the competence (Z) of trainers at Universal Corporation's Human Resource Management

H2: There is a positive and significant influence of the training and development system (X) on work productivity (Y) on trainers at Universal Corporation's Human Resource Management

H3: There is a positive and significant effect of competence (Z) on work productivity (Y) on trainers at Universal Corporation's Human Resource Management

## 4. Results and Discussion

Validity shows the extent to which a measuring instrument measures what it wants to measure (Zyphur & Pierides, 2017). The validity test in this study was used to analyze the items of the questionnaire by correlating the score of each question in the questionnaire with the total score which was the sum of the scores of each item. The requirement that must be met is that it must have these criteria, if the correlation coefficient rcount > rtable (0.246) then the item is declared valid. The results of the validity test can be seen in table 2 below:

**Table 2. Validity Test**

| Variable | Questionnaire Items | table | calculate | Description |
|---|---|---|---|---|
| Training and Development System (X) | XQ.1 | 0.246 | 0.634 | Legitimate |
| | XQ.2 | 0.246 | 0.422 | Legitimate |
| | XQ.3 | 0.246 | 0.743 | Legitimate |
| | XQ.4 | 0.246 | 0.811 | Legitimate |
| | XQ.5 | 0.246 | 0.923 | Legitimate |
| | XQ.6 | 0.246 | 0.537 | Legitimate |
| | XQ.7 | 0.246 | 0.619 | Legitimate |
| | XQ.8 | 0.246 | 0.701 | Legitimate |
| | XQ.9 | 0.246 | 0.865 | Legitimate |
| | XQ.10 | 0.246 | 0.772 | Legitimate |
| Work Productivity (Y) | YQ.1 | 0.246 | 0.642 | Legitimate |
| | YQ.2 | 0.246 | 0.848 | Legitimate |
| | YQ.3 | 0.246 | 0.899 | Legitimate |
| | YQ.4 | 0.246 | 0.941 | Legitimate |
| | YQ.5 | 0.246 | 0.744 | Legitimate |
| Competence (Z) | ZQ.1 | 0.246 | 0.831 | Legitimate |
| | ZQ.2 | 0.246 | 0.756 | Legitimate |
| | ZQ.3 | 0.246 | 0.793 | Legitimate |
| | ZQ.4 | 0.246 | 0.612 | Legitimate |
| | ZQ.5 | 0.246 | 0.549 | Legitimate |

(Source: Primary Data, 2019)

The results of this validity test indicate that all items in the questionnaire have a count value of more than 0.246. Reliability tests were carried out on valid question items or statements. This test is used to determine the consistency of the measurement results if the measurement is carried out twice or more for the same symptoms using

the same measuring instrument (Zyphur & Pierides, 2017). To see the reliability of each instrument using Cronbach's alpha coefficient (α) where an instrument is said to be reliable if the Cronbach's alpha value is greater than 0.600. The results of the reliability test showed that all research instruments had a Cronbach's alpha coefficient (α) of more than 0.600. This can be seen in table 3 below:

**Table 3. Reliability Test**

| Variable | Limit Value | Alpha Cronbach() | Description |
|---|---|---|---|
| Training and Development System (X) | 0.600 | 0.861 | Reliable |
| Work Productivity (Y) | 0.600 | 0.938 | Reliable |
| Competence (Z) | 0.600 | 0.829 | Reliable |

(Source: Primary Data, 2019)

## 4.1 Testing Normality

The normality test is used to test whether the distribution of the dependent variable for each value of a particular independent variable is normally distributed or not (Barnham, 2015). In the linear regression model, this assumption is indicated by the error value () which is normally distributed. A good regression model is a regression model that is normally distributed or close to normal, so it is feasible to do statistical testing. Testing the normality of the data using the Kolmogorov-Smirnov Normality test where the basis for decision making can be based on probability (Asymtotic Significance), ie if probability > 0.05 then the regression model is normally distributed, and vice versa if probability < 0.05, the distribution of the regression model is not normal . It can be seen in table 4 below:

**Table 4.** Normality Test Using Kolmogorov-Smirnov

| Non-Standard Residual | Kolmogorov-Smirnov Z | Value Significance | Description |
|---|---|---|---|
| Model A | 0.629 | 0.824 | Normal Distributed |
| Model B | 0.684 | 0.793 | Normal Distributed |

(Source: Primary Data, 2019)

Based on table 4 above, it can be seen that the residuals of the two models produce a significance value of 0.824 and 0.793, respectively, both of which are significantly greater than the minimum significance value of 0.05. This concludes that the residuals of both models are normally distributed and the assumptions of the normality test are met. Normality of a variable is generally detected by graphs or statistical tests. The normality assumption can be checked by examining the normal output of the PP plot or the normal QQ plot. The assumption of normality is met when the distribution of plot output points follows the diagonal line of the plot. It can be seen in Figure 2 below:

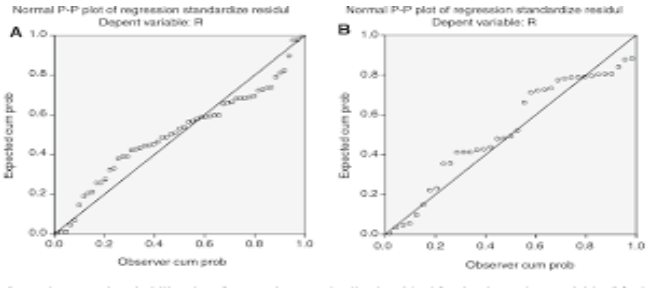



**Figure 2.** Normal Probability Plot on Model A and Model B

(Source: Primary Data, 2019)

## 4.2 Testing Normality

Heteroscedasticity testing aims to test whether in the regression model the variance of the residuals occurs from one observation to another (Barnham, 2015). If the variance from one observation to another observation remains, it is called homoscedasticity, and if it is different it is called heteroscedasticity. A good regression model is a regression model that does not occur heteroscedasticity. The following are the results of heteroscedasticity testing:

**Table 5.** Heteroscedasticity Test

| Model | Variable | Spearman Rank Coefficient | Significance | Description |
|---|---|---|---|---|
| Model A | Training and Development System (X) on Work Productivity (Y) | 0.074 | 0.837 | Non Heteroscedasticity |
| Model B | Competence (Z) on Work Productivity (Y) | 0.061 | 0.489 | Non Heteroscedasticity |

(Source: Primary Data, 2019)

Based on table 5 above, it can be seen that the two models produce a significance value of 0.837 and 0.489, respectively, and a Spearman Rank coefficient of 0.074 and 0.061, where the significance value and the magnitude of the Spearman Rank coefficient are greater than 0.05. This means that the assumptions of heteroscedasticity and heteroscedasticity are met in both models. This study also uses a method to test heterosity, namely by looking at the plot graph between the predictive value of the dependent and residual variables as shown in the following figure:

**Model A** **Model B**

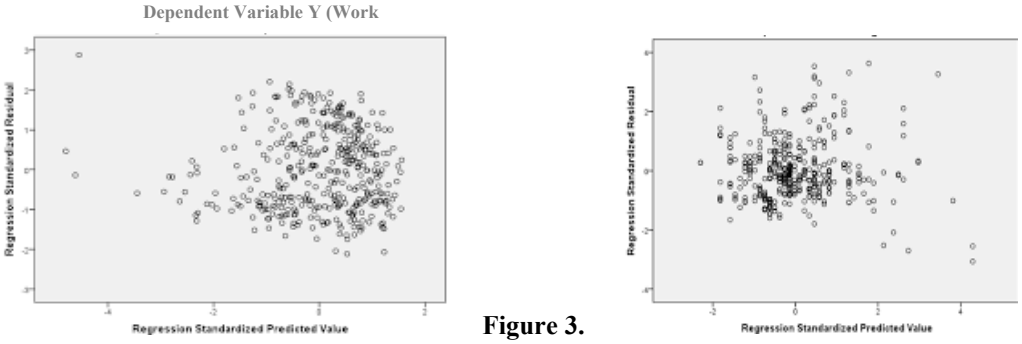



**Figure 3.**
Scatter Plot Heteroscedasticity Test Results on
Model A and Model B
(Source: Primary Data, 2018)

### 4.3 Autocorrelation Test

The type of test used to determine the presence of autocorrelation is the Durbin-Watson test (Barnham, 2015). Decision making on this assumption requires two auxiliary values obtained from the Durbin-Watson (DW) value table, namely between the values of Du and 4-dU as shown in the following table:

**Table 6**. Autocorrelation Test

| Model | Value Du | DW value Nilai | 4-dU Nilai value | Description |
|---|---|---|---|---|
| Model A | 1.385 | 2,199 | 2,767 | Non-Autocorrelation |
| Model B | 1,474 | 2018 | 3,003 | Non-Autocorrelation |

(Source: Primary Data, 2019)

Based on table 6 above, it shows that in both models each has a Durbin-Watson (DW) value that is between Du and 4-dU values. This means that there is no autocorrelation in both models and the assumption of the autocorrelation test is met.

### 4.4 Autocorrelation Test

Multicollinearity testing aims to test whether in the regression model there is a correlation between research variables (Barnham, 2015). A good regression model should have no correlation between independent variables. A low tolerance value equals a high VIF value. If the tolerance value is greater than 0.1 and the VIF value is less than 10, there is no multicollinearity.

**Table 7.** Multicollinearity Test

| Regression Model | Multicollinearity | | Description |
|---|---|---|---|
| | Tolerance | VIF | |
| Model A | 0.511 | 3,472 | Non Multicollinearity |
| Model B | 0.378 | 4.668 | Non Multicollinearity |

(Source: Primary Data, 2019)

Based on table 7 above, it can be seen that the tolerance value in both models is greater than 0.1 and the VIF value in both models is less than 10. This means that both models are free from multicollinearity and the multicollinearity test assumption is met.

## 4.5 Hypothetical Testing With Path Analysis Method

In this study, to examine the effect of the intervening variable, path analysis method was used. Path analysis is a technique used to analyze the pattern of relationships between variables to determine the direct and indirect role of a set of independent variables on the dependent variable (Barnham, 2015). Table 8 below is the results of hypothesis testing using path analysis regarding the effect of the training and development system on the competence of trainers at Universal Corporation's Human Resource Management:

**Table 8.** Influence of Training and Development System on Competence on Trainers in Universal Company Human Resource Management

| Variable | Tcount | Significance | Value on Path Coefficient | Directional Effect Shape |
|---|---|---|---|---|
| Training and Development System (X) | 4.792 | 0.000 | 0.503 | Positive |
| R-Square = 0.459 | | | | |

(Source: Primary Data, 2019)

Based on table 8 shows that the test related to the effect of the training and development system on competence resulted in a tcount of 4.792 with a significance value of 0.000 less than 0.05 (α = 5%), it can be concluded that training and system development have a significant effect on competence. The path coefficient value of 0.503 indicates that the training and development system has a positive effect on competence. It was explained that a well-implemented and well-targeted training and development system would be able to improve the competence of the trainers at Universal Corporation's Human Resource Management.

The R-Square value that appears is 0.459 indicating that the increase in competence is influenced by the training and development system by 45.9%, the remaining 54.1% is influenced by various other factors. The results of the path analysis of the influence of the training and development system on work productivity through the competence of trainers at Universal Corporation's Human Resource Management are listed in table 9 below:

**Table 9.** The Effect of Training and Development Systems on Work Productivity Through Competence on Trainers in Human Resource Management Universal Corporation

| Variable | tcount | Significance | Value on Path Coefficient | Directional Effect Shape |
|---|---|---|---|---|
| Training and Development System (X) | 4,699 | 0.000 | 0.426 | Positive |
| Competence (Z) | 4.028 | 0.000 | 0.495 | Positive |
| R-Square = 0.347 | | | | |

(Source: Primary Data, 2019)

Based on table 9 shows that testing related to the effect of training and development systems on work productivity produces a tcount of 4.699 with a significance value of 0.000 less than 0.05 (α = 5%), it can be concluded that training and development of development systems have a significant effect on work productivity. . The path coefficient value of 0.426 indicates that the training and development system has a positive effect on work productivity. It was explained that the training and development system that was implemented and targeted to be

significantly improved would be able to increase the work productivity of the trainers at Universal Corporation's Human Resource Management.

Table 9 also shows that the test related to the effect of competence on work productivity resulted in a tcount of 4.028 with a significance value of 0.000 less than (value = 5%), it can be concluded that competence has a significant effect on work productivity. The path coefficient value of 0.495 indicates that competence has a positive effect on work productivity. It was explained that competencies that were able to be improved carefully and carefully would be able to increase work productivity for the trainers at Universal Corporation's Human Resource Management.

The R-Square value that appears is 0.347 which indicates that the application of the training and development system to work productivity through competence is 34.7%, the remaining 65.3% is influenced by various other factors. Examining the analysis of calculations related to the influence between research variables, it can be seen the form and value of the direct or indirect influence according to the following table:

**Table 10.** The Form and Value of Intra-Variable Direct Effect

| Variable Direct Effect | Directional Effect Shape | Securities Value |
|---|---|---|
| Training and System Development (X) Towards Competence (Z) | Positive | 0.503 |
| Training and Development System (X) on Work Productivity (Y) | Positive | 0.426 |
| Competence (Z) on Work Productivity (Y) | Positive | 0.495 |

(Source: Primary Data, 2019)

Based on table 10, it can be seen that there are three types of direct influence between research variables that have a positive overall form, including: 1.) The influence of the training and development system on the competence of trainers at Human Resource Management Universal Corporation with an influence value of 0.503; 2.) The effect of training and development systems on work productivity of trainers at Human Resource Management Universal Corporation with an influence value of 0.426; 3.) The effect of competence on work productivity on trainers at Human Resource Management Universal Corporation with an influence value of 0.495.

**Table 11.** Intra-variable Indirect Effects and Values

| Variable Indirect Effect | Directional Effect Shape | Securities Value |
|---|---|---|
| Training and Development System (X) Towards Work Productivity (Y) Through Competence (Z) | Positive | 0.248 |

(Source: Primary Data, 2019)

Based on table 11, it can be seen that one type of indirect effect between research variables has a positive overall form, namely the influence of the training and development system on work productivity through the competence of trainers at Human Resource Management Universal Corporation with an influence value of 0.248. To calculate the error value for each effect variable (Pe), by looking at table 8 and table 9 regarding the results of the hypothesis with path analysis, it can be seen that the magnitude of the error value for each effect variable is obtained through calculation analysis as follows:

Pe1 = (1-0.459)0.5 = 0.735
Pe2 = (1-0.347)0.5 = 0.808

Based on these results, the inclusion of the model in the path analysis calculation can be calculated through the total value in the coefficient of determination (Rm2) with the composition of the calculation analysis as follows:

$$Rm^2 = 1 - P_{e1}^2 P_{e2}^2$$
$$RM2 = 1 - (0.7352 \times 0.8082)$$
$$RM2 = 0.647$$

The total value of the coefficient of determination (Rm2) of 0.647 indicates that 64.7% of all information contained in the research data can be explained by the model, while the remaining 35.3% is explained by other factors not used in the study. model in the results of the hypothesis by path analysis. The hypothetical model through path analysis in this study is a combination of variable X that affects variable Z directly and indirectly and affects variable Z through the intervening variable Y. In this hypothetical model it can be explained in Figure 4 as follows:

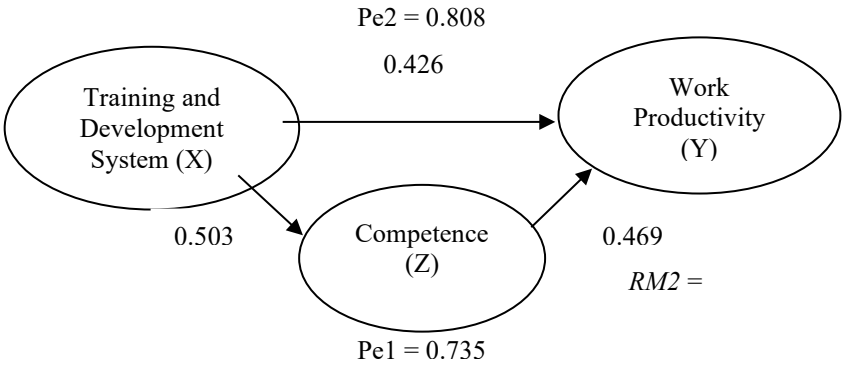



**Figure 4. Hypothetical Results With Path Analysis**
(Source: Primary Data, 2019)

**6. Conclusion**

Based on the results of the study, it can be concluded several things, including: 1.) The influence of the training and development system on the competence of trainers in Human Resource Management Universal Corporation with an influence value of 0.503; 2.) The effect of training and development systems on work productivity of trainers at Human Resource Management Universal Corporation with an influence value of 0.426; 3.) The influence of competence on work productivity on trainers at Human Resource Management Universal Corporation with an influence value of 0.495; 4.) The influence of the training and development system on work productivity through the competence of trainers at Human Resource Management Universal Corporation with an influence value of 0.248.

## References

Amin, A., Rashid-Saeed, M., & Lodhi, R. N. (2013). The impact of employees training on the job performance in Education Sector of Pakistan. *Middle-East Journal of Scientific Research, 17*(9), 1273-1278.

Amin, A., Rasyid-Saeed, M., & Lodhi, RN (2013). Impact of employee training on job performance in Pakistan's Education Sector. *Middle East Journal of Scientific Research*, 17(9), 1273-1278.

Barnham, C. (2015). Quantitative and qualitative research. *International Journal of Market Research, 57*(6), 837-854.

Bryman, A. (2007). *Business Research Methods*. Oxford: Oxford University Press.

Butler, A. & Lobley, M. (2016). Training as a social purpose: Are economic and social benefits delivered. *International Journal of Training and Development, 20*(4), 249-261.

De Been, I. & Beijer, M. (2014). The influence of office type on satisfaction and perceived productivity support. Journal of Facilities Management 12: 142-157.

Demerouti, E., Bakker, A. B., Halbeleben, J. R. B. (2015). Productive and counterproductive job crafting: A daily diary study. *Journal of Occupational Health Psychology, 20*, 457-469.

Duari, P. & Sia, S. K. (2013). Importance of happiness at workplace. *Indian Journal of Positive Psychology, 4*, 453-456.

Ellstrom, P. E. & Kock, H. (2008). Competence development in the workplace: Concepts, strategies, and effects. *Asia Pasific Education Review, 9*(1), 5-20.

Elnaga, A. & Imran, A. (2013). The effect of training on employee perfomance. *European Journal of Business and Management, 5*(4), 137-147.

Greenway, K. H., Thai, H. A., Haslam, S. A. & Murphy, S. C. (2016). Spaces that signal identity improve workplace productivity. *Journal of Personnel Psychology, 15*, 35-43.

Halawi, A. & Haydar, N. (2018). Effects of training on employee performance: A case study of Bonjus and Khatib & Alami Companies. *International Humanities Studies, 5*(2), 24-45.

Hervie, D. M. & Winful, E. C. (2018). Enhancing teachers' performance through training and development in Ghana Education Service: A case study of Ebenezer Senior High School. *Journal of Human Resource Management, 6*(1), 1-8.

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity and corporate financial performance. *Academy of Management Journal, 38*(3), 635-72.

Ismail, R., Wekke, I. S., Dinesh Kumar, A., Pandi Selvam, R., Shankar, K., & Nguyen, P. T. (2019). Character reorganization and categorization using hybrid algorithms by scanned documents. International Journal of Engineering and Advanced Technology, 8(6 Special Issue 2), 943-948. doi:10.35940/ijeat.F1287.0886S219

Issahaku, A., Ahmed, D., & Bewa-Erinibe, P. L. (2014). Enhancing employee performance through training: The case of Tamale Teaching Hospital in Ghana. European Journal of Business and Management, 6(29), 46-55.

Jehanzeb, K. & Bashir, N. A. (2013). Training and development program and Its benefits to employee and organization: A conceptual study. *European Journal of Business and Management, 5*(2), 243-252.

Khan, K. & Baloch, N. (2017). Impact of training on employee development and other behavioral outcomes: A case of public accountant trainees in Khyber Pakhtunkhwa. *Journal of Managerial Sciences, 11*(1), 93-107.

Khan, R. A. G., Khan, F. A. & Khan, M. A. (2011). Impact of training and development on organizational performance. *Global Journal of Management and Business Research, 11*(7), 1-7.

Knoke, D. & Kalleberg, A. L. (1994). Job training in US organizations. *American Sociological Review, 59*, 537-46.

Kum, F. D., Cowden, R. & Karodia, A. M. (2014). The impact of training and development on employee performance: A case study of Escon Consulting. *Singaporean Journal of Business Economics and Management Studies, 3*(3), 72-105.

Lu, J. F., Tjosvold, D. & Shi, K. (2010). Team training in China: Testing and applying the theory of cooperation and competition. *Journal of Applied Social Psychology, 40*(1), 101-134.

Majovski, I. & Davitkovska, E. (2016). Developing employee skills in challenging times. *Economic Development, 18*(3), 120-133.

Martini, I. A. O., Rahyuda, I. K., Sintaasih, D. K. & Piartini, P. S. (2018). The influence of competency on employee performance through organizational commitment dimension. *IOSR Journal of Business and Management, 20*(2), 29-37.

Matin, H. Z., Razavi, H. R. & Emamgholizadeh, S. (2014). Is stress management related to workforce productivity?. *Iranian Journal of Management Studies, 7*, 1-19.

Matsuo, M. (2014). Instructional skills for on-the-job training and experiential learning: An empirical study of Japanese firms. *International Journal of Training and Development, 18*(4), 225-240.

Mbiya, D. N., Egessa, R. & Musiega, D. (2014). The effects of training practices on employee's productivity in the public service: A case of the Ministry of Interior and Co-ordination of National Government, Kakamega Central Sub County. *International Journal of Social Sciences and Entrepreneurship, 1*(11), 636-649.

Onyango, J. W. & Wanyoike, D. M. (2014). Effects of training on employee performance: A survey of health workers in Soaya County, Kenya. *European Journal of Material Science, 1*(1), 11-15.

Osibanjo, A. O., Gberevbie, D. E., Adeniji, A. A., Oludayo, A. O. (2015). Relationship modelling between work environment, employee productivity, and supervision in the Nigerian public sector. *American Journal of Management, 15*, 9-23.

Phusavat, K., Comepa, N., Sitko-Lutek, A. & Keng-Boon, O. (2013). Productivity management: Integrating the intellectual capital. *Industrial Management & Data Systems, 113*, 840-855.

Rantesalu, A., Mus, A. R., Mapparenta, & Arifin, Z. (2016). The effect of competency, motivation and organizational culture on employee performance: The mediating role of organizational commitment. *Journal of Research in Business and Management, 4*(9), 8-14.

Sasidaran, S. (2018). Impact of training on employee performance: A case study of private organization in Sri Lanka. *IOSR Journal of Business and Management, 20*(1), 13-21.

Schuler, R. S. & MacMillan, I. C. (1984). Gaining competitive advantage through human resource management practices. *Human Resource Management, 23*(3), 241-255.

Shaheen, A., Naqvi, S. M. H. & Khan, M. A. (2013). Employees training and organizational performance: Mediation by employees performance. *Interdisciplinary Journal of Contemporary Research in Business, 5*(4), 112-123.

Solanki, K. R. (2013). Flextime association with job satisfaction, work productivity, motivation, & employee stress level. *Journal of Human Resource Management, 1*(1), 9-14.

Sriekaningsih, A & Setyadi, D. (2015). The effect of competency and motivation and cultural organization towards organizational commitment and performance on State University Lectures in East Kalimantan. *European Journal of Business and Management, 7*(17), 56-69.

Sultana, A., Irum, S., Ahmed, K. & Mehmood, N. (2012). Impact of training on employee performance: A study of telecommunication sector in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business, 4*(6).

Tai, W. T. (2006). Effects of training framing: General self-efficacy and training motivation on trainees' training effectiveness. *Emerald Group Publishers, 35*(1), 51-65.

Tukwain, S. M. F., Fatimah, F., & Wekke, I. S. (2018). Religious expression in coastal area of muslim society west papua. Paper presented at the IOP Conference Series: Earth and Environmental Science, , 156(1) doi:10.1088/1755-1315/156/1/012033

Valle, R., Martin, F., Romero, P. M. & Dolan, S. (2000). Business strategy, work processes and human resource training: are they congruent?. *Journal of Organizational Behavior, 21*, 283-297. *Journal of Business and Management, 3*(2), 13-21.

Wadsworth, L. L. & Facer, R. L. (2016). Work-family balance and alternative work schedules. *Public Personnel Management, 45*, 382-404.

Warhurst, C., & Thompson. P. (2006). Mapping knowledge in work: proxies or practices?. *Work, Employment and Society, 20*(4), 787–800.

Wekke, I. S., Aghsari, D., Evizariza, E., Junaidi, J., & Harun, N. (2018). Religion and culture encounters in misool raja ampat: Marine ritual practice of sasi laut. Paper presented at the IOP Conference Series: Earth and Environmental Science, , 156(1) doi:10.1088/1755-1315/156/1/012039

Wulnye, R. B., Aikins, E. & Abdul-Fatawu, I. (2018). Training and development: An effective management tool for increased performance. *International Journal of Economics, Commerce, and Management, 6*(5), 745-776.

Yusuf, M., & Wekke, I. S. (2020). Developing environmental awareness and actualizing complete piety based on quran. International Journal of Advanced Science and Technology, 29(5), 2039-2050.

Zaim, H., Yasar, M. F. & Unal, O. F. (2013). Analyzing the effects of individual competencies on performance: A field study in Services Industries in Turkey. *Journal of Global Strategic Management, 7*(2), 67-77.

Zikmund & William, G. (2002). *Business Research Methods*. London: Thomson Learning.

Zwick, T. (2015). Training older employees: what is effective?. *International Journal of labor, 30*(4), 393-407.

Zyphur, M. & Pierides, D. (2017). Is quantitative research ethical? Tools for ethically practicing, evaluating, and using quantitative research. *Journal of Business Ethics, 143*(1), 1-16.

## Biography

**Wanda Echoes Prasidio Akbar Hidayat,** Doctoral Program in Human Resource Development Studies, Airlangga University Graduate School, Surabaya, Indonesia. His research interest wide range on development, human development.

**Cholichul Hadi,** Faculty of Psychology Universitas Airlangga, Surabaya, Indonesia. Professor in psychology. Served as visiting lecture in Universiti Kebangsaan Malaysia. Advisor of Perkumpulan Dosen Indonesia Semesta, West Papua, Indonesia

**Subagyo Adam,** Faculty of Social and Political Sciences, Universitas Airlangga, Surabaya, Indonesia. His research are about social, development, and human resources. He join faculty of social and political science, Universitas Airlangga, Indonesia.

**Dimas Agung Trisliaanto,** Doctoral Program in Human Resource Development Studies, Airlangga University Graduate School, Indonesia. Recently, he is pursuing PhD program, and his research of interest are human develplment, education.

**Ismail Suardi Wekke** is a lecturer at Postgraduate Program in the Department of Islamic Education, State Islamic Institute (IAIN) Sorong, Indonesia, where he serves as chair (2020-2021). Ismail was born in the village namely Camba. A village in Maros Regency, South Sulawesi, Indonesia.

**M. Makbul**, a teacher of Islamic Religious Education at the 5 Makassar State Senior High School, as well as a lecturer at the DDI Islamic College of Makassar City, and now continuing his doctoral education at the Alauddin State Islamic University of Makassar. Makbul was born in Baraka, Enrekang, South Sulawesi, Indonesia.