

The Effect of Education and Training, Motivation and Discipline on Job Satisfaction and Performance of Makassar Industrial Training Center Alumni

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ABSTRACT

Research objectives (1) To knowing and analyzing the effect of education and training on job satisfaction of Makassar Industrial Training Center alumni(2) For knowing and analyzing the influence of motivation on job satisfaction of Makassar Industrial Training Center alumni(3) For knowing and analyzing the influence of discipline on job satisfaction of Makassar Industrial Education and Training Center alumni(4) For knowing and analyzing the effect of education and training on the performance of Makassar Industrial Education and Training Center alumni (5) To determine and analyze the influence of motivation on the performance of Makassar Industrial Education and Training Center alumni(6) For knowing and analyzing the influence of discipline on the performance of Makassar Industrial Training Center alumni (7) To find out and analyze the effect of job satisfaction on the Makassar Industrial Education and Training Center alumni performance (8) To find out and analyze the influence of education and training on alumni performance through job satisfaction of Industrial Education and Training Center alumni Makassar (9) To determine and analyze the effect of motivation on employee performance through job satisfaction of Makassar Industrial Training Center alumni (10) To determine and analyze the effect of discipline on employee performance through job satisfaction of BDI Makassar alumni

This study uses a quantitative approach using a survey method with a total sample of 134

respondents. The study was conducted from September to December 2021. The data were analyzed using Structural Equation Modeling (SEM) with the help of Amos Version 18.0. And SPSS Version 22.0

The results of this study indicate that: (1) Education and training have a positive and significant effect on job satisfaction (2) Work motivation has a positive and significant effect on job satisfaction (3) Discipline has a positive and significant effect on job satisfaction (4) Education and training has a positive and significant effect on performance (5) Work motivation positive and significant effect on performance (6) Discipline has a positive and significant effect on performance (7) Job satisfaction has a positive and significant effect on performance (8) Indirectly education and training have a positive and insignificant effect on performance through job satisfaction (9) Indirectly, work motivation has a positive and insignificant effect on performance through job satisfaction (10) Indirectly, discipline has a positive and insignificant effect on performance through job satisfaction.

Keywords: Education, training, motivation, discipline, job satisfaction, performance

PRELIMINARY

In accordance with the Regulation of the Minister of Industry of the Republic of Indonesia Number 40/M-IND/PER/5/2014 dated May 26, 2014, the Industrial Training Center is a government institution under the

Ministry of Industry of the Republic of Indonesia which has duties and functions in producing superior Industrial Human Resources. As a technical implementer in the field of education and training, the Industrial Training Center is required to always adapt to the needs of the industry in the present and in the future. The readiness to provide appropriate, effective, and efficient physical and non-physical infrastructure facilities will provide great benefits to the results of activities carrying out main tasks and functions that can meet the needs of Human Resources in the industrial sector.

With the tasks it carries, the Makassar Industrial Education and Training Center has continuously carried out training with the Three in One (3 in 1) system since 2015. This system integrates training programs, competency testing to job placements into one unified whole process. It is hoped that the education and training held can be in accordance with the needs of the workforce in the industry, useful and right on target in realizing the Makassar Industrial Training Center's vision, namely "Becoming an Industrial Training Institute that is Able to Improve Industrial Human Resource Competence.

Education and training are a learning process that involves the acquisition of skills, concepts, rules, or attitudes to improve workforce performance. Simamora (2019).

Education and training are intended to improve the mastery of various skills and techniques for carrying out certain, detailed and routine work, namely preparing employees to do current jobs. Hani Handoko (2018).

According to Law No. 11 of 2020 concerning job creation, it is stated that job training is an entire activity to provide, obtain, improve, and develop work competencies, productivity, discipline, attitudes, and work ethic at certain skill and expertise levels according to the level and job and job qualifications.

Efforts taken to realize organizational goals, one of which is to have employees who have good performance, good performance will be able to help achieve organizational goals as planned.

According to Gibson (2018), performance is influenced by individual, organizational and psychological factors. Among the factors in question are motivation, discipline, and job satisfaction. Strong motivation from an employee will move his efforts to the maximum so that it appears into performance.

According to Terry and Rue (in Suharto and Cahyono, 2019) say that motivation is "... getting a person to exert a high degree of effort ..." which means "motivation makes someone to work more accomplished.

Makassar Industrial Training Center is also very concerned about the performance of its alumni. One of the efforts to measure the performance of the education and training alumni is the implementation of post-training monitoring and evaluation activities.

Monitoring and evaluation after the education and training is part of the education and training implementation system which is a follow-up to the education and training implementation activities. The purpose of this activity is to obtain information that can be used as input in the preparation of future education and training programs.

In the monitoring and evaluation report carried out in 2020, a number of respondents from the training and education alumni that were collected were 329 (three hundred and twenty-nine) people. Based on the initial research conducted, several phenomena were found, namely;

1. The performance of alumni has not been maximized, which is indicated by the large number of alumni who change businesses / do not work, namely 23%, who work for companies by 33%, and 44% as entrepreneurs. For more details, please see the following table:

Table 1. Profile of Makassar BDI Education and Training alumni in 2020

No	Training Alumni	Amount	Percentage (%)
1	work	109	33
2	Businessman	145	44
3	Moving / not working	75	23
	Number of Respondents	329	100

Source: Primary data for the 2021 Education and Training Development and Cooperation Section;

2. Employee motivation is still low because it has not been fully able to realize self-actualization by getting promoted due to education.
3. Judging from the discipline, employee attendance is still low, especially in relation to the accuracy of attendance, absence, and return. This condition is supported by rules that are not explicitly applied to employees and their presence is not proportional.
4. Judging from job satisfaction, employee relations with co-workers are not yet harmonious and existing policies and work procedures have not been implemented.

From the problems that exist in the Makassar Industrial Training Center Alumni, then the provisional hypothesis is formulated as follows:

- a. There is a simultaneous influence of Education and Training, Motivation, Discipline on the Performance of Makassar BDI Education and Training alumni through job satisfaction
- b. There is a partial influence of Education and Training, Motivation and discipline on the performance of BDI Makassar alumni through job satisfaction

LITERATURE REVIEW

1. Education and Training

According to Simamora in Ambar (2019), that in principle the main purpose of holding education and training is as a means of formulating expected abilities such as:

1. Improve performance
2. Reducing study time for new employees to become competent in employees
3. Help solve operational problems
4. Prepare employees for promotion
5. Meeting personal growth needs

Education and training are important to be implemented to achieve the goals expected by the company/organization. According to Notoadmodjo (2019), there are several important points for holding education and training for employees, namely:

1. Human resources or employees who occupy a certain position in the organization, do not necessarily have the abilities that are in accordance with the requirements needed in that position. This happens because someone occupies a certain position not because of his abilities but because of the availability of formations. Therefore, these new employees or staff need to add the skills they need.
2. The progress of science and technology will clearly affect an organization or agency. Therefore, positions that were not needed before are now needed. The ability of the person who occupies the position is sometimes non-existent. Thus, it is necessary to add or increase the capabilities required by the position.
3. Promotion in an organization / agency is a must if someone wants to grow. The importance of promotion for someone is as one of the rewards and incentives (rewards and incentives). The existence of rewards and incentives in the form of promotions can increase work productivity for an employee. Sometimes the ability of an employee who will be promoted to occupy a certain position is still not enough. This requires additional education and training.
4. During this development period, organizations or agencies, both government and private, feel compelled to organize trainings for their employees in order to obtain work effectiveness and efficiency in accordance with the development period.

Ji-Hun Lee (2017) in his research A Study on the Effects of Job Education and Training Program on task Efficiency and

Job Satisfaction. This study uses multiple regression analysis stating that the Efficiency and Skills of the Adult Education Method have a significant effect on job satisfaction. The efficiency education method has a significant effect on job satisfaction. Third, efficiency has a significant effect on job satisfaction. There are differences in the recognition of efficiency and job satisfaction. In this study, it is important to verify the effect of education and training on job satisfaction.

Nur Mukorromah (2018) in his research entitled The Relationship of Education and Performance with Nurse Job Satisfaction stated that the results of statistical analysis with multiple linear regression test showed the following equation: $Y = 0.0639 + 0.049 X_2$ from the calculation results that the regression coefficient for higher performance than the regression coefficient for education and between education and performance variables with job satisfaction there is an influence even though the effect is weak and not correlated. These results are based on the results of the cross tabulation between education and performance with job satisfaction of nurses. It was obtained from 75 respondents who were studied that the performance factor had a greater influence on job satisfaction than the education factor.

2. Work motivation

George, J, M and Jones in Cahyo Wibowo (2018) indicators of work motivation consist of:

1. Behavior direction

That is, the behavior that a person chooses at work is measured by the desire to complete the work and obedience to the rules.

2. Effort level

That is knowing how hard a person's effort to work in accordance with the behavior that has been chosen is measured by seriousness in working and the desire to be better than before.

3. Persistence level

That is how hard employees will continue to try to carry out the behavior that has been chosen is measured by the desire to develop skills and advance the company as well as persistence in working even though the environment is not supportive.

Assessing the understanding of motivation needs to be understood the term. Motivation comes from the word "move" which means encouragement or driving force. According to Rivai (2008), the term motivation is literally defined as an impulse that arises in a person consciously or unconsciously to take action according to certain goals.

Robbins (2016) states that hierarchically and chronologically according to Maslow, every human being is motivated to fulfill the main needs, namely physiological needs. After this need is met or satisfied, then step on the second (higher) need, namely the need for security. The third need is only implemented after the second need is fulfilled. This process continues until the fifth need (self-actualization) is finally fulfilled. The process shows that these needs are interdependent and mutually support a person to be motivated.

Herzberg in Gibson (2016) Douglas McGregor developed a maintenance theory or two-factor theory X and Y about motivation. The two factors are called factors that make people feel dissatisfied and factors that make people feel satisfied or factors that make people feel healthy and factors that motivate people or extrinsic. In essence, the manifestation of this theory is also known as the motivator-hygiene theory (HM Theory).

Gibson, Ivancevich and Donnely (2016) McClelland suggested that motivation theory is closely related to the concept of achievement. Many achievements are earned with purpose, human relations and power. There are three types of needs for achievement proposed by McClelland, namely the need for achievement (n-Ach),

the need for affiliation (n-aff) and the need for power (need for power / n-Pow). McClelland argued that if a person's achievement needs feel very urgent, then that need will motivate the person to try hard to meet those needs. For example,

3. Discipline

The concept of leadership has been researched by hundreds of experts for decades, through Siagan (2019) states that work discipline is a management action to encourage organizational members to meet the demands of various provisions.

Work discipline is a very important part or variable in the development of human resources. Therefore, work discipline is needed in an organization so that there is no negligence, deviation or negligence that causes waste in doing work (Nurchahyo, 2019).

Discipline is a person's awareness or willingness to obey all organizational or company regulations and applicable social norms. Discipline can be interpreted if: Employees always come and go home on time. Do all the work well, comply with all employee regulations and applicable social norms. Hasibuan (2017)

From some of the definitions above, it can be concluded that discipline is an attitude of willingness and willingness of a person to obey and obey all the rules and regulations that apply around him. The placement of discipline in the life of an organization is intended so that all rules and regulations apply without coercion. So that employees in the organization can control themselves and comply with the norms that apply in the organization, then this becomes the main capital that is very important in achieving the desired goals. Discipline will also be created if employees can comply with the provisions that apply to the organization. Hasibuan (2017)

Hasibuan (2017) states that good work discipline is when employees comply with regulations, namely employees come on time, orderly and regularly. Timely, orderly and orderly owned by the employee

indicates that the employee has high work discipline, so that it has an influence on the employee's performance. Second, dress neatly. Dressing neatly is also supported by uniforms that match the specified attributes. Employees who use uniforms and attributes that comply with the provisions indicate that the employee complies with company regulations. It can also give confidence to employees so that the employee's performance increases. Third, being able to use work equipment carefully. The careful attitude shown by the employee can be interpreted that the employee does not shy away from his obligations. This indicates that the work discipline has been owned by the employee. Fourth, follow the way of working determined by the company. Employees who follow the workings and regulations that have been determined by the company, the employee's work discipline has an influence on their performance. Fifth, have a high responsibility. High responsibility affects work discipline. then the employee's work discipline has an influence on its performance. Fifth, have a high responsibility. High responsibility affects work discipline. then the employee's work discipline has an influence on its performance. Fifth, have a high responsibility. High responsibility affects work discipline.

Employees who have responsibility for everything indicate that the employee has a high level of work discipline (Ardiansyah & Wasilawati, 2017)

According to Saydam (2017) about the form of good work discipline will be illustrated as follows:

- a. The high sense of employee concern for the achievement of the goals to be achieved
- b. High enthusiasm and enthusiasm for work as well as employee work initiative in doing their work
- c. The magnitude of the responsibility of employees to carry out their duties as well as possible

- d. The development of a sense of belonging and a high sense of solidarity among employees.
- e. Increase work efficiency and productivity.

4. Job Satisfaction

Job satisfaction is a positive or pleasant emotional condition towards work, which means that the meaning of work for satisfied workers is positive. With this positive meaning of work, workers become more prepared to face the demands of their work. Thus, although the individual is faced with a job that has the possibility of giving great stress, the level of stress and the impact of the stress he experiences are not too great.

In general, it can be found that solving organizational problems from a human perspective can be done through the principles of job satisfaction. With high job satisfaction, there will be a positive bond between workers and their work, so that from these workers an optimal result can be expected. From almost all companies experiencing rapid progress, it is marked by symptoms of high job satisfaction among their workers.

Zakky Mubarak (2017) If job satisfaction is associated with Islamic teachings, what emerges is about sincerity, patience, and gratitude. These three things in our daily lives are closely related to problems that arise at work, especially job satisfaction. Working sincerely, patiently and gratefully sometimes does not guarantee increasing output. But as a process, working with all three aspects has its own value

Job satisfaction is basically something that is individual. Each individual has a different level of satisfaction according to the value system that applies to him. The higher the assessment of the activity is felt in accordance with the wishes of the individual, the higher the satisfaction with the activity. Rivai (2018: 620).

Everyone who works expects to get satisfaction from his place of work. Job satisfaction will affect the productivity that managers really expect. For this reason,

managers need to understand what must be done to create job satisfaction for their employees. Wibowo (2018:415)

According to Dadang, (2013:15) job satisfaction is a pleasant or unpleasant emotional state towards work, job satisfaction reflects one's feelings towards his work. Meanwhile, according to Badeni, (2017: 43) employee job satisfaction is a person's attitude towards his work which can be in the form of a positive or negative attitude, satisfied or dissatisfied.

Diana Sulianti(2019) mentions that human resource management and organizational behavior experts provide definitions or concepts of job satisfaction with language expressions and views from different perspectives but the meaning contained in the definitions they express is generally the same, namely that job satisfaction is an attitude and the general feeling of an employee towards his job. Some definitions put forward by experts as follows:

1. Job satisfaction is an attitude that individuals have about their jobs. It results from their perception of their job, based on factors of the work environment, such as the supervisor's style, policies and procedures, work group affiliation, working conditions, and fringe benefit (Gibson et al., 1997:75).
2. Job satisfaction is the degree to which individuals feel positively or negatively about their job. It is an emotional response to one's tasks, as well as the physical and social conditions of the workplace. In concept, job satisfaction also indicates the degree to which the expectation in someone's psychological contract is fulfilled (Schermerhorn et al., 1991:55).
3. Job satisfaction is part of life satisfaction. The nature of one's environment off the job influences one's feelings on the job. Similarly, since a job is an important part of life, job satisfaction influences one's general life

satisfaction (Davis and Newstrom 1997:110).

From several definitions of job satisfaction that have been described above, it can be concluded that job satisfaction is an effectiveness or emotional response to various aspects of work. This definition means that job satisfaction is not a single concept. On the other hand, a person can be relatively satisfied with one aspect of his job and dissatisfied with one or more other aspects.

The definition of job satisfaction according to Stephen P. Robbins in Sholihin (2021) job satisfaction is a general attitude towards one's work, the difference between the amount of rewards an employee receives and the amount they believe they should receive. Meanwhile, according to Hasibuan (2017) job satisfaction is an emotional attitude that is pleasant and loves his job. This attitude is reflected by work morale, discipline and work performance. Job satisfaction is enjoyed on the job, outside of work and a combination of inside and outside. Based on the two definitions above, it can be concluded that job satisfaction is a pleasant emotional attitude in the form of loving one's work wholeheartedly.

5. Performance

Furthermore, according to Mangkunegara (2017) the term employee performance is defined as achievement or

work (output) both quality and quantity achieved by an employee in carrying out his work duties in accordance with the responsibilities given.

Meanwhile, another understanding explains that performance is a combination of three factors consisting of, first is knowledge, especially those related to work that is the responsibility of working. This factor includes the type and level of education and training that has been followed in the field, the second is experience, which is not just the amount of time or length of work, but also relates to the substance being worked on which if done and carried out in a long time will increase the ability to do work. a certain field. The third is personality, in the form of conditions within a person in dealing with his field of work, such as interests, talents, ability to cooperate/openness, perseverance, honesty, work motivation, and attitudes towards work. M. Manullang (2019)

In terms of performance according to the description above, it can be concluded that performance has three important elements, namely the first is the element of ability, the second is the element of effort, and the third is the element of opportunity that will be seen from the work achieved. From several understandings of performance, it can be concluded that performance is what an employee does or does not do in carrying out his main tasks.

Table 2 Mapping Theory

No.	Variable	Core Theory
1	Education and Training (X1)	<p>Education and training are activities that focus on improving the skills and abilities needed for a job which will ultimately improve the performance of individual employees and improve the performance of institutions/agencies in general. Nurhayati (2018)</p> <p>Education and training is a learning process that involves the acquisition of skills, concepts, rules, or attitudes to improve workforce performance. Simamora (2019)</p> <p>According to Mangkunegara (2017) education and training indicators are:</p> <ol style="list-style-type: none"> 1. Training Content, namely whether the content of the training program is relevant and in line with the training needs and whether the training is up to date 2. The training method is whether the training method is suitable for the subject and whether the training method is in accordance with the learning style of the trainee 3. Instructor attitudes and skills, namely whether the instructor has the attitudes and delivery skills that encourage people to learn. 4. The length of the training time is how long it takes to provide the main material that must be studied and how fast the tempo of the delivery of the material. <p>Training facilities, namely whether the place where the training is held can be controlled by the instructor, is it relevant to the type of training and whether the food is satisfactory.</p>

No.	Variable	Core Theory
2	Motivation (X2)	<p>Yuliana Fransiska (2020) Motivation is an activity that causes a person to complete his work enthusiastically, willingly and full of responsibility. Motivation serves as a driving force or encouragement for employees to want to work diligently in order to achieve the agency's goals properly.</p> <p>According to Hasibuan (2017) motivation is the provision of a driving force that creates enthusiasm for one's work, so that they are willing to work together, work effectively and be integrated with all their efforts to achieve satisfaction.</p> <p>George, J, M and Jones in Cahyo Wibowo (2016) indicators of work motivation consist of:</p> <ol style="list-style-type: none"> 1. Effort level 2. Behavior direction 3. Persistence level <p>The term motivation is also often interpreted as the power of motion, the cause of a person doing various activities with a specific purpose. There are five theories of motivation that support, namely:</p> <ol style="list-style-type: none"> 1. Maslow's hierarchy of needs theory 2. McGregor's Theory X and Y, 3. McClelland's theory of achievement 4. Expectancy theory from Vroom and 5. ERG theory from Clayton Alderfer.
3	Discipline (X3)	<p>Siagan (2019) states that work discipline is a management action to encourage organizational members to meet the demands of various provisions.</p> <p>Discipline is a person's awareness or willingness to obey all organizational or company regulations and applicable social norms. Hasibuan (2017)</p> <p>According to Saydam (2017) about the form of good work discipline will be illustrated as follows:</p> <ol style="list-style-type: none"> a. The high sense of employee concern for the achievement of the goals to be achieved b. High enthusiasm and enthusiasm for work as well as employee work initiative in doing their work c. The development of a sense of belonging and a high sense of solidarity among employees. d. Increase work efficiency and productivity. <p>According to Hasibuan (2017) there are several indicators of discipline as follows:</p> <ol style="list-style-type: none"> 1. Job Objectives and Employee Abilities. 2. List of attendees. 3. Leadership Example. 4. Remuneration. 5. Justice. 6. Supervision attached. 7. Legal sanctions. 8. Human Relations.
4	Job satisfaction	<p>Sholihin (2021) job satisfaction is a general attitude towards one's work, the difference between the amount of rewards an employee receives and the amount they believe they should receive.</p> <p>Handoko (2019) says that job satisfaction as an emotional response shows pleasant feelings related to employees' views of their work.</p> <p>Several theories put forward by experts related to job satisfaction include:</p> <ol style="list-style-type: none"> 1. The theory of two factors (two factor theory) according to Herzberg in Rivai (2008) 2. The theory of discrepancy (discrepancy theory) according to Walker (2007) 3. The theory of justice (equity theory) according to Robbins (2006) 4. Satisfaction Theory according to Luthans (2007). <p>According to Brahmasari & Suprayetno (2018) job satisfaction indicators are:</p> <ol style="list-style-type: none"> 1. Psychological factors 2. Social factors 3. Physical Factor 4. Financial factor
5	Performance (Y2)	<p>According to Gibson (2018), performance refers to the level of success in carrying out tasks and the ability to achieve the goals that have been set. Performance is said to be good and successful if the desired goals can be achieved properly according to the results assessed.</p> <p>M. Manullang (2019) Performance is a combination of three factors consisting of, first is knowledge, especially those related to work that is the responsibility of working. This factor includes the type and level of education and training that has been followed in the field, the second is experience, which is not just the amount of time or length of work, but also relates to the substance being worked on which if done and carried out in a long time will increase the ability to do the work. a certain field. The third is personality, in the form of conditions within a person in dealing with his field of work, such as interests, talents, ability to cooperate/openness, perseverance, honesty, work motivation, and attitudes towards work.</p> <p>According to Mangkunegara (2017) who says that the purpose of employee performance appraisal is to improve or develop job descriptions.</p> <p>Performance indicators by Fitrianasari, (2017) are as follows:</p> <ol style="list-style-type: none"> 1. Accuracy in completing work 2. Initiative level at work 3. mental agility 4. Punctuality and absenteeism

Sources of Literature Review

HYPOTHESES

Hypothesis	Reference
H1	Education and Training on Job Satisfaction Ji-Hun Lee (2017) , Nur Mukorromah (2018), Rahmatina Aulia (2017), Artha Riana N, (2017)
H2	Motivation on Job Satisfaction Ogunnaike (2019), Ni Luh Gede Poniasih (2019), Widya Parimita (2018), Basthoumi Muslih (2017), Mauritz ds lumentut (2017)
H3	Discipline on Job Satisfaction Munawaroh (2020), Alamsyah Yunus (2020), Rivo Manoppo (2017), Ahmad Saputra (2018), Izaz Dany Afianto (2017)
H4	Education and training on Performance Bhardwaj(2019), Verra Nitta Turere (2019), Edi Saputra Pakpahan (2018) ,Sri Mulyani (2019), Dhita Ayu Meitaningrum (2016), Bambang Swasto Sunuharyo (2017) , Yulianto (2017)
H5	Motivation for Performance H. Muhammad Arifin (2018), I Wayan Juniantara (2019), Doni bachtiar (2019), Fransiskus Ady (2017), Bayu Dwilaksono Hanafi (2017), Noermijati (2019)
H6	Discipline of Performance Nova syafrina (2017), Jeli Nata Liyas (2017), Jasman Saripuddin Hasibuan (2019), Wahyudi (2019), Arista Martiana(2017)
H7	Job Satisfaction on Performance Weihui Fu (2018), Ayu Desi Indrawati (2017), Garry Surya Changgriawan (2017), Agus Tunggal Saputra (2016), Rosita(2016), Wanda Febriyana (2020)
H8	Education and Training on Performance through Job Satisfaction Indra Setiawan (2021), Muhammad Khoirul Fikri (2020) Yulianto (2017)
H9	Motivation on Performance through Job Satisfaction Noermijati (2019), Rindi Andika (2019), Reiny Irianti Poetri (2020)
H10	Discipline on Performance through Job Satisfaction Arista Martiana(2017)M. Aditya Putra Pratama (2017), Ayu Puspitasari Wawan Prahiawan (2018)

Research Methods

This research is a quantitative research using a survey method, namely research that takes samples from the population and uses a questionnaire as the main data collection tool. Based on the research problems previously stated, this research is explanatory (explanatory research) or hypothesis testing research.

The population in this study is the alumni of the Makassar Education and Training Center 2020 who are domiciled in the city of Makassar totaling 201 (two hundred and one) people. And the research sample was 134 people.

The data analysis technique used in explaining the phenomenon in this research is descriptive statistical analysis technique and Structural Equation Modeling (SEM) analysis.

1. Descriptive Analysis

Descriptive statistical analysis is used to analyze data by describing, depicting or painting in a systematic,

factual and accurate manner regarding the phenomena or relationships between the phenomena being investigated.

2. Inferential Analysis

Inferential analysis used is Structural Equation Model (SEM) analysis is a statistical analysis technique that combines several aspects of path analysis and confirmatory factor analysis to estimate several simultaneously.

3. Data Validity and Reliability

Validity is the accuracy of the measuring instrument against what is measured even though it is done many times and everywhere. This means that the measuring instrument must have good accuracy, especially if the measuring instrument is used so that the validity will increase the weight of the truth of the data desired by the researcher. (Semmaila, B and Reza.AA 2017:107).

RESEARCH RESULT

A. Descriptive variable

Table 8. Description of Education and Training Variables (X1)

Dimension		Respondent's Answer Score					Score	N	mean
		5	4	3	2	1			
Training content (X1.1)	F	68	63	3	0	0	601	134	4.48
	%	51	47	2	0	0			
Training Method (X1.2)	F	82	52	0	0	0	618	134	4.61
	%	61	47	0	0	0			
Instructor (X1.3)	F	82	47	5	0	0	613	134	4.57
	%	61	35	4	0	0			
Training time (X1.4)	F	62	60	12	0	0	586	134	4.37
	%	46	45	9	0	0			
Training facilities (X1.5)	F	88	36	10	0	0	614	134	4.58
	%	66	27	7	0	0			
Total	F	382	258	30	0	0	3.032		

Table 8 shows that the highest score is the training method indicator of 618. This shows that most of the education and training alumni are satisfied with the

training methods applied to the training held by the Makassar Industrial Education and Training Center.

Table 9. Description of Motivation Variable (X2)

Dimension		Respondent's Answer Score					Score	N	mean
		5	4	3	2	1			
Behavior direction (X2.1)	F	89	40	5	0	0	620	134	4.6
	%	66	30	4	0	0			
Effort level (X2.2)	F	79	52	3	0	0	612	134	4.5
	%	59	39	2	0	0			
Persistence level (X2.3)	F	95	34	5	0	0	626	134	4.7
	%	71	25	4	0	0			
Total	F	263	126	13	0	0	1858		4.6

Table 9 shows that the highest score is the persistence level dimension of 626. This shows that most of the education and

training alumni Desire to develop skills and advance the company and be persistent in their work.

Table.10. Discipline variable description (X3)

Dimension		Respondent's Answer Score					Score	N	mean
		5	4	3	2	1			
Goals and abilities	F	51	70	12	1	0	573	134	4.3
	%	38	52	9	1	0			
list of attendees	F	63	63	8	0	0	591	134	4.4
	%	47	47	6	0	0			
Exemplary leader	F	58	65	6	5	0	578	134	4.3
	%	43	49	4	4	0			
Remuneration	F	48	68	13	0	0	551	134	4.1
	%	36	51	9	0	0			
Justice	F	45	72	11	3	3	570	134	4.2
	%	34	54	8	2	2			
Clinging Guard	F	56	69	9	0	0	583	134	4.3
	%	42	51	7	0	0			
Legal sanctions	F	50	65	16	3	0	564	134	4.2
	%	37	49	12	3	0			
Human relations	F	57	58	0	0	0	612	134	4.5
	%	58	43	0	0	0			
Total	F	428	530	75	12	0	4622		4.3

Source: 2021 data processing results

Table 10 shows that the highest score is the human relations dimension of 612. This shows that most of the education

and training alumni have a harmonious relationship with their superiors.

Table.11. Description of job satisfaction variable (Y1) .

Dimension		Respondent's Answer Score					Score	N	mean
		5	4	3	2	1			
Psychological Factors (Y1.1)	F	55	72	7	0	0	584	134	4.4
	%	41	54	5	0	0			
Social Factors (Y1.2)	F	91	41	0	2	0	623	134	4.6
	%	68	31	0	1	0			
Physical Factor (Y1.3)	F	78	51	5	0	0	509	134	3.8
	%	58	38	1	0	0			
Financial Factors (Y1.4)	F	44	58	22	7	3	535	134	3.9
	%	33	43	17	5	2			
Total	F	268	222	34	9	3	2,251		4.2

Table 11. shows that the highest score is the social factor dimension of 623. This shows that most of the education and

training alumni have good and mutually supportive relationships with their colleagues at work.

Table 12. Description of Performance Variables (Y2)

Dimension		Respondent's Answer Score					Score	N	mean
		5	4	3	2	1			
Finishing accuracv	F	51	70	13	0	0	574	134	4.2
	%	38	52	10	0	0			
Occupation (Y2.1)	F	83	41	10	0	0	609	134	4.5
	%	62	31	7	0	0			
Initiative at work (Y2.2)	F	74	47	13	0	0	597	134	4.4
	%	55	35	10	0	0			
Mental dexterity (Y2.3)	F	53	71	10	0	0	579	134	4.3
	%	40	53	7	0	0			
Total	F	261	229	46	0	0	2,359		4.3

Table 12. shows that the highest score is the initiative dimension at work of 609. This shows that most of the education

and training alumni always do a good and serious job even though there is no supervision from their superiors.

B. Instrument Testing

1. Test validity and reliability

Table 13. The results of testing the validity and reliability of the instrument

Variable	Items	Coefficient	Sig.	Information	Cronbach	Information
	Statement	Correlation			Alpha	
Education and Training (X1)	X1.1	0.888	0.000	Valid	0.938	Reliable
	X1.2	0.877	0.000	Valid		Reliable
	X1.3	0.912	0.000	Valid		Reliable
	X1.4	0.885	0.000	Valid		Reliable
	X1.5	0.918	0.000	Valid		Reliable
Work motivation (X2)	X2.1	0.833	0.000	Valid	0.806	Reliable
	X2.2	0.842	0.000	Valid		Reliable
	X2.3	0.874	0.000	Valid		Reliable
Discipline (X3)	X3.1	0.759	0.000	Valid	0.935	Reliable
	X3.2	0.810	0.000	Valid		Reliable
	X3.3	0.827	0.000	Valid		Reliable
	X3.4	0.835	0.000	Valid		Reliable
	X3.5	0.857	0.000	Valid		Reliable
	X3.6	0.853	0.000	Valid		Reliable
	X3.7	0.871	0.000	Valid		Reliable
	X3.8	0.822	0.000	Valid		Reliable
Job satisfaction (Y1)	Y1.1	0.834	0.000	Valid	0.880	Reliable
	Y1.2	0.865	0.000	Valid		Reliable
	Y1.3	0.859	0.000	Valid		Reliable
	Y1.4	0.880	0.000	Valid		Reliable
Alumni Performance (Y2)	Y2.1	0.856	0.000	Valid	0.867	Reliable
	Y2.2	0.821	0.000	Valid		Reliable
	Y2.3	0.868	0.000	Valid		Reliable
	Y2.4	0.840	0.000	Valid		Reliable

2. Table 13. Shows that the results of the validation test on the indicators for each variable of Education and Training (X1), Work Motivation (X2), Discipline (X3),

Job Satisfaction (Y1) and Alumni Performance (Y2) are declared valid to be used as tools measure the variables, because all of them have a correlation

value (correlation bivariate) whose value is greater than 0.30.

Based on the reliability test shows the probability value (p) of all indicators of each research variable Education and Training (X1), Work Motivation (X2), Discipline (X3), Job Satisfaction (Y1), Alumni Performance (Y2). Is zero or less than 0.05. Likewise, the Cronbach Alpha value is greater than 0.60. Thus, it can be concluded that the indicators or questionnaires used for the variables of Education and Training (X1), Work Motivation (X2), Discipline (X3), Job Satisfaction (Y1) and Alumni Performance (Y2) are all declared reliable or trustworthy as measuring tools.

C. Testing Research Analysis Model data

1. Outliers Test

The results of the examination show that there are several research variables or indicators that are outliers. The distance of the mahalanobis to the centroid was significant ($p < 0.05$). however, descriptively based on the mean and standard deviation (with the help of SPSS 21 software) it was found that all research indicators have a mean value greater than the standard

deviation, so that all indicators do not contain data outliers. Therefore, all indicators used in this study deserve to be analyzed to prove the hypothesis.

2. Data Normality Test

The results of the examination of the assumption of normality of the data presented in the appendix show that multivariate the data is not normally distributed ($cr = 39,070$) while the critical value of Z at $= 0.05$ is 1.96) However, this assumption is not critical if the sample size is large, namely $N > 30$. Referring to the Limit Central Theory, when the sample size is larger, the statistics obtained will approach the normal distribution. The sample size in this study $N = 134$ is considered to have met the Central Limit Theorem, so the assumption of normality can be ignored.

3. Linearity Test

After testing the data, the following is a model test or goodness of fit model test. The model is said to be good if the development of a hypothetical model is conceptually and theoretically supported by empirical data. The results of the complete SEM analysis in the early stages can be seen in the appendix.

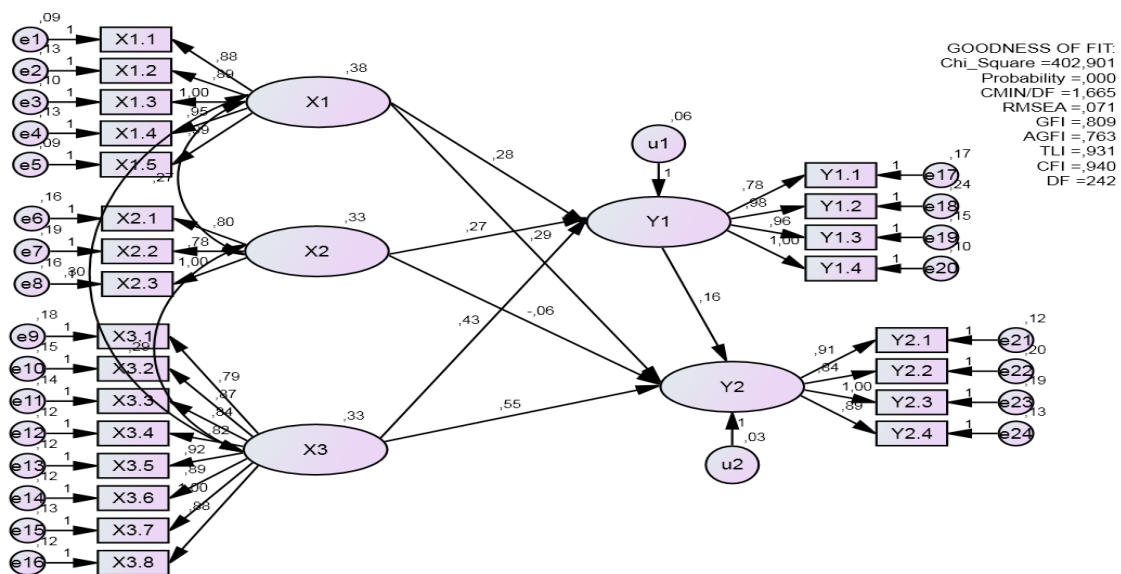


Figure 7. Test of Goodness of Fit Early-Stage Model

The results of the goodness of fit overall model for testing the hypothesis in the picture above can be seen in the following table:

Table 14. Testing the goodness of fit overall model in the early stages.

Goodness of fit index	Cut-off Value	Model Results	Information
Chi_square	Expected small	402,901 < (0.05: 242 =279,287)	Marginal
Probability	0.05	0.000	Marginal
CMIN/DF	2.00	1,665	Well
RMSEA	0.08	0.071	Well
GFI	0.90	0.809	Marginal
AGFI	0.90	0.763	Marginal
TLI	0.94	0.931	Marginal
CFI	0.94	0.940	Well

Based on Table 14, it can be explained that the significance level (p) of 0.000 indicates that the null hypothesis which states there is no difference between the sample covariance matrix and the estimated population covariance matrix is rejected. With the rejection of the null hypothesis, it means that there is a difference between the sample covariance matrix and the estimated population covariance matrix, so the model is not feasible to use. Other indices (GFI, TLI,

AGFI) also show the degree of rejection of the model.

Based on the modification indices instructions, modifications were made to improve the model so that it was valid for proving the hypothesis. Modification of the model is prioritized only on the correlation between items and errors, and does not modify the influence path. The results of these modifications are presented in the final SEM model as follows:

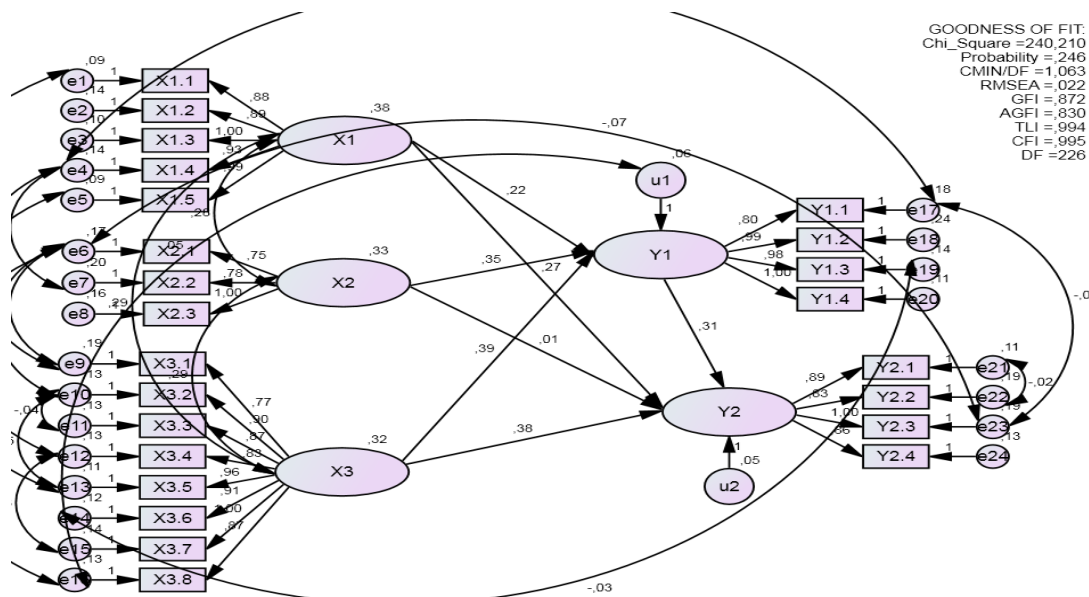


Figure 8. The goodness of fit test of the final stage of the model.

Based on Figure 8, some of the results of the final model goodness of fit overall test for hypothesis testing can be seen in the following table:

Table 15. Testing Goodness Of Fit Overall Final Stage Model

Goodness of fit index	Cut-off Value	Model Results	Information
Chi square	Expected small	240,210 < (0.05:226 =262,069)	Well
Probability	0.05	0.246	Well
CMIN/DF	2.00	1.063	Well
RMSEA	0.08	0.022	Well
GFI	0.90	0.946	Well
AGFI	0.90	0.928	Well
TLI	0.94	0.994	Well
CFI	0.94	0.995	Well

Based on table 15, it can be explained that the significance level (p) of 0.246 indicates that the null hypothesis which states there is no difference between the sample covariance matrix and the estimated population covariance matrix is acceptable. With the acceptance of the null

hypothesis, it means that there is no difference between the sample covariance matrix and the estimated population covariance matrix, so the model is feasible to use. Other indices (CMIN/DF, GFI, AGFI, TLI, CFI and RMSEA) also show the level of acceptance of the model.

D. Confirmatory Analysis

1. Education and Training Variable (X1)

The loading factor of each indicator for the Education and training variable (X1) can be seen in the table as follows:

Table 16. Loading factors of education and training variables (X1)

Indicator Variables	Loading Factor (λ)	Critical Ratio	Probability	Information
X1.1	0.875	15,051	0.000	Significant
X1.2	0.833	13,533	0.000	Significant
X1.3	0.883	15,205	0.000	Significant
X1.4	0.847	13,814	0.000	Significant
X1.5	0.903	FIX	0.000	Significant

Based on empirical facts as in table 16, it can be explained that the indicators of the education and training variables consist of training content (X1.1), training methods (X1.2), instructor skills (X1.3), training duration (X1.4) and training facilities (X1.5) is a significant indicator as a measure of

education and training variables at the Makassar Industrial Training Center. Meanwhile, the training facility (X1.5) is a fixed indicator to measure the education and training variables for the Makassar Industrial Education and Training Center alumni.

2. Work Motivation Variable (X2)

The loading factor of each indicator for the work motivation variable can be seen in the table as follows:

Table 17. Loading work motivation variable factors (X2)

Indicator Variables	Loading Factor (λ)	Critical Ratio	Probability	Information
X2.1	0.767	8,955	0.000	Significant
X2.2	0.721	8,537	0.000	Significant
X2.3	0.801	FIX	0.000	Significant

The results of the confirmatory analysis as in table 17 can be explained that the indicators of the work motivation variable consisting of the direction of behavior (X2.1), the level of effort (X2.2) are significant indicators as a measure of the

work motivation variable at the Makassar Industrial Training Center. Meanwhile, the level of persistence (X2.3) is a fixed indicator to measure the work motivation variable for the Makassar Industrial Education and Training Center alumni.

3. Discipline Variable (X3)

The loading factor of each indicator for the discipline variable (X3) can be seen in the table as follows:

Table 18. Loading Discipline Variable Factors (X3)

Indicator Variables	Loading Factor (λ)	Critical Ratio	Probability	Information
X3.1	0.717	9,481	0.000	Significant
X3.2	0.787	10,818	0.000	Significant
X3.3	0.794	11,134	0.000	Significant
X3.4	0.810	11,533	0.000	Significant
X3.5	0.836	12,099	0.000	Significant
X3.6	0.830	11,900	0.000	Significant
X3.7	0.842	FIX	0.000	Significant
X3.8	0.809	11,340	0.000	Significant

The results of the confirmatory analysis as in table 18 can be explained that the indicators of the discipline variable (X3) consist of goals and abilities (X3.1), attendance list (X3.2), exemplary leader (X3.3), remuneration (X3. 4), Justice (X3.5), inherent supervision (X3.6) and

human relations (X3.8) are significant indicators as a measure of disciplinary variables in Makassar Industrial Training Center alumni. Meanwhile, the legal sanction (X3.7) is as a definite indicator (fix) to measure the discipline variable in Makassar Industrial Training Center alumni.

4. Job Satisfaction Variable (Y1)

The loading factor of each indicator for the job satisfaction variable (Y1) can be seen in the table as follows:

Table 19. Job satisfaction variable loading factor (Y1)

Indicator Variables	Loading Factor (λ)	Critical Ratio	Probability	Information
Y1.1	0.755	10,272	0.000	Significant
Y1.2	0.778	10,723	0.000	Significant
Y1.3	0.808	11,456	0.000	Significant
Y1.4	0.878	FIX	0.000	Significant

The results of the confirmatory analysis as shown in table 19 can be explained that the indicators of job satisfaction variable (Y1) which consist of psychological factors (Y1.1), social factors (Y1.2), physical factors (Y1.3) are significant indicators as measuring the

variable of job satisfaction in Makassar Industrial Education and Training Center alumni. While the financial factor (X3.7) is a definite indicator (fixed) to measure the job satisfaction variable at the Makassar Industrial Education and Training Center alumni.

5. Alumni performance variable (Y2)

The loading factor of each indicator for the Alumni Performance variable (Y2) can be seen in the table as follows:

Table 20. Loading factor of alumni performance variable (Y1)

Indicator Variables	Loading Factor (λ)	Critical Ratio	Probability	Information
Y2.1	0.825	10,138	0.000	Significant
Y2.2	0.736	8,936	0.000	Significant
Y2.3	0.789	FIX	0.000	Significant
Y2.4	0.806	9,711	0.000	Significant

The results of the confirmatory analysis as shown in table 20 can be explained that the indicators of the alumni performance variable (Y2) consisting of accuracy in completing work (Y2.1), initiative in work (Y2.2), punctuality (Y2..4) are indicators which is significant as a measure of the alumni performance variable at the Makassar Industrial Training Center alumni. While mental dexterity (Y2.3) is a definite indicator (fixed) to measure performance variables on alumni of Makassar Industrial Education and Training Center

E. Hypothesis Testing

To test the hypothesis in this study, the Structural Equation Model (SEM) with the help of AMOS 21 is used. This hypothesis testing is carried out by paying attention to the p value, i.e. if the p value is 0.05 then the influence between the variables is significant, as well as better. The test results also explain the direct effect (indirect effect) and the total effect (total effect) between the variables analyzed. For more details on hypothesis testing, it can be seen in the following table:

Table. 21. The direct effect of exogenous variables on endogenous variables

Hip	Variable			Direct	Indirect	Total	P-Value	Note:
	Independent	Intervining	Dependent					
1	Education and Training	-	Job Satisfaction (Y1)	0.234	-	0.234	0.024	(+) Significant
2	Motivation (X2)	-	Job Satisfaction (Y1)	0.345	-	0.345	0.026	(+) Significant
3	Discipline (X3)	-	Job Satisfaction (Y1)	0.380	-	0.380	0.014	(+) Significant
4	Education and Training	-	Performance (Y2)	0.288	-	0.288	0.011	(+) Significant
5	Motivation (X2)	-	Performance (Y2)	0.351	-	0.345	0.021	(+) Significant
6	Discipline (X3)	-	Performance (Y2)	0.365	-	0.365	0.022	(+) Significant
7	Job Satisfaction (Y1)	-	Performance (Y2)	0.311	-	0.311	0.048	(+) Significant
8	Education and Training	Job Satisfaction	Performance (Y2)	0.234	0.073	0.307	0.135	(+) Not Significant
9	Motivation (X2)	Job Satisfaction	Performance (Y2)	0.345	0.107	0.452	0.139	(+) Not Significant
10	Discipline (X3)	Job Satisfaction	Performance (Y2)	0.380	0.118	0.498	0.123	(+) Not Significant

The test results with the SEM analysis model in table 21 are as follows:

1. Hypothesis 1

Hypothesis 1 shows that education and training have a positive and significant effect on job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.234 of a significant value of 0.024 or less than 0.05. This means that education and training at the Makassar Industrial Training Center has a positive and significant effect on job satisfaction of Makassar Industrial Education and Training Center alumni.

2. Hypothesis 2

Hypothesis 2 shows that work motivation has a positive and significant effect on job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.345 from a significant value of 0.026 or less than 0.05. This means that the work motivation of Makassar Industrial Training Center alumni has a positive and significant effect on job satisfaction of Makassar Industrial Education and Training Center alumni.

3. Hypothesis 3

Hypothesis 3 shows that discipline has a positive and significant effect on job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.380 from a significant value of 0.014 or less than 0.05. This means that the discipline of the Makassar Industrial Training Center alumni has a positive and significant effect on the job satisfaction of the Makassar Industrial Education and Training Center alumni.

4. Hypothesis 4

Hypothesis 4 shows that education and training have a positive and significant effect on performance. This is evidenced that the regression coefficient which has a positive value is 0.288 from a significant value of 0.011 or less than 0.05. This means that education and training at the Makassar Industrial Education and Training Center has a positive and significant impact on the performance of Makassar Industrial Training Center alumni.

5. Hypothesis 5

Hypothesis 5 shows that work motivation has a positive and significant effect on performance. This is evidenced that the regression coefficient which is positive is 0.345 of a significant value of 0.021 or less than 0.05. This means that the work motivation of Makassar Industrial Training Center alumni has a positive and significant impact on the performance of Makassar Industrial Education and Training Center alumni.

6. Hypothesis 6

Hypothesis 6 shows that discipline has a positive and significant effect on performance. This is evidenced that the regression coefficient which has a positive value is 0.365 of a significant value of 0.022 or less than 0.05. This means that the work motivation of Makassar Industrial Training Center alumni has a positive and significant impact on the performance of Makassar Industrial Education and Training Center alumni.

7. Hypothesis 7

Hypothesis 7 shows that job satisfaction has a positive and significant

effect on performance. This is evidenced that the regression coefficient which has a positive value is 0.311 from a significant value of 0.048 or less than 0.05. This means that the job satisfaction of Makassar Industrial Training Center alumni has a positive and significant impact on the performance of Makassar Industrial Education and Training Center alumni.

8. Hypothesis 8

Hypothesis 8 shows that education and training indirectly have a positive and insignificant effect on performance through job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.307 of a significant value of 0.135 or greater than 0.05. This means that education and training at Makassar Industrial Training Center has a positive and insignificant effect on performance through job satisfaction of Makassar Industrial Training Center alumni.

9. Hypothesis 9

Hypothesis 9 shows that work motivation indirectly has a positive and insignificant effect on performance through job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.452 of a significant value of 0.139 or greater than 0.05. This means that the work motivation of Makassar Industrial Education and Training Center alumni has a positive and insignificant effect on performance through job satisfaction of Makassar Industrial Education and Training Center alumni.

10. Hypothesis 10

Hypothesis 10 shows that discipline indirectly has a positive and insignificant effect on performance through job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.498 of a significant value of 0.123 or greater than 0.05. This means that the discipline of Makassar Industrial Education and Training Center alumni has a positive and insignificant effect on performance through job satisfaction of Makassar Industrial Education and Training Center alumni.

CONCLUSION

1. Education and training have a positive and significant effect on job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.234 of a significant value of 0.024 or less than 0.05. This means that education and training at the Makassar Industrial Training Center has a positive and significant effect on job satisfaction of Makassar Industrial Training Center alumni.
2. Work motivation has a positive and significant effect on job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.345 from a significant value of 0.026 or less than 0.05. This means that the work motivation of Makassar Industrial Training Center alumni has a positive and significant effect on job satisfaction of Makassar Industrial Education and Training Center alumni.
3. Discipline has a positive and significant effect on job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.380 from a significant value of 0.014 or less than 0.05. This means that the discipline of the Makassar Industrial Training Center alumni has a positive and significant effect on the job satisfaction of the Makassar Industrial Education and Training Center alumni.
4. Education and training have a positive and significant effect on performance. This is evidenced that the regression coefficient which has a positive value is 0.288 from a significant value of 0.011 or less than 0.05. This means that education and training at the Makassar Industrial Education and Training Center has a positive and significant impact on the performance of Makassar Industrial Training Center alumni.
5. Work motivation has a positive and significant effect on performance. This is evidenced that the regression coefficient which is positive is 0.345 of a significant value of 0.021 or less than

- 0.05. This means that the work motivation of Makassar Industrial Training Center alumni has a positive and significant impact on the performance of Makassar Industrial Education and Training Center alumni.
6. Discipline has a positive and significant effect on performance. This is evidenced that the regression coefficient which has a positive value is 0.365 of a significant value of 0.022 or less than 0.05. This means that the work motivation of Makassar Industrial Training Center alumni has a positive and significant impact on the performance of Makassar Industrial Education and Training Center alumni.
 7. Job satisfaction has a positive and significant effect on performance. This is evidenced that the regression coefficient which has a positive value is 0.311 from a significant value of 0.048 or less than 0.05. This means that the job satisfaction of Makassar Industrial Training Center alumni has a positive and significant effect on the performance of Makassar Industrial Education and Training Center alumni.
 8. Indirectly education and training have a positive and insignificant effect on performance through job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.307 of a significant value of 0.135 or greater than 0.05. This means that education and training at Makassar Industrial Training Center has a positive and insignificant effect on performance through job satisfaction of Makassar Industrial Training Center alumni.
 9. Indirectly, work motivation has a positive and insignificant effect on performance through job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.452 of a significant value of 0.139 or greater than 0.05. This means that the work motivation of Makassar Industrial Education and Training Center alumni has a positive and insignificant effect on performance through job satisfaction of Makassar Industrial Education and Training Center alumni.
 10. Indirectly, discipline has a positive and insignificant effect on performance through job satisfaction. This is evidenced that the regression coefficient which has a positive value is 0.498 of a significant value of 0.123 or greater than 0.05. This means that the discipline of Makassar Industrial Education and Training Center alumni has a positive and insignificant effect on performance through job satisfaction of Makassar Industrial Education and Training Center alumni.

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