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WORKFORCE TRAINING MODEL WITH A SIMPLE ADDITIVE WEIGHTING APPROACH

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ABSTRACT

In community development, training is one of initiatives to improve the ability of community members to face the demands and changes in their surrounding environment. In particular, training equips the community to apply the existing knowledge and skills at work while embracing changes in work habit and professional attitudes. The Manpower Office in Tomohon City plays a pivotal role in addressing critical unemployment rate but lacks of permanent training models to empower the unemployed. This research proposed a workforce training model as a form of decision-making using the Simple Additive Weighting SAW method from the sum of the ranking values of existing criteria for prospective workforce. The program for implementing the workforce training model must include the following stages: 1) Preparation stage, namely determining and providing training materials; 2) Grouping stage, consisting of identifying training targets, selecting or compiling criteria, and pretesting training instructors; 3) Implementation stage, namely carrying out training and monitoring training; 4) Evaluation and development stage, namely evaluation, assessment of training needs and resources, and development. The model is expected to improve human resource and, by extension, the economy and welfare of the Tomohon City community. this training model is a training process in analysing training needs related to the components of the training needs analysis in the basic concept, making it easier for training participants (targets) to learn the learning materials, in addition to the abilities they already have will be capital to understand new learning materials.

KEYWORDS: Workforce, Training, Simple Additive Weighting, Welfare, Unemployment, Manpower Office, Tomohon City

1. INTRODUCTION

The driving force of the human resources sector in the economy is determined by the skills of the workforce, alongside other supporting factors that are essential for a country or region (Surya et al., 2021; Salasiah & Ghufron, 2023). In many cases, the gap between the large workforce and the limited job opportunities is a constraint on the workforce management system in Indonesia in general, resulting in an increase in unemployment. Whether realized or not, this is a result of the low skill qualifications, especially among young people, and the low level of formal education, which opens up opportunities for workers in the informal sector (Herlambang et al., 2024; Putri et al., 2025).

In response to the aforementioned obstacles, the government is making every effort to mitigate these impacts by refining policies through workforce training programs, as part of the ongoing progress in empowering community resources in the informal sector. These training programs should be complemented by training models to ensure a comprehensive and skilled workforce. The majority of educational and training institutions currently lack the capacity to meet the demands of the industrial workforce. This is expected to prepare competitive and productive human resource management.

In community development, training is provided as an effort to improve the abilities of community members to face the demands and changes in their surrounding environment (Harinurdin et al., 2025, Wahyuningtyas et al., 2023). Empowered community can actively embrace and participate in the inevitable changes (Sunarto & Ansori, 2020). While equipping individuals with practical knowledge and skills, training can modify work habit and professional attitudes (Febriani & Ramadani 2021, Qonita et al. 2023).

Training is part of an educational and professional process for upskilling workers' specific abilities or skills (Schellekens et al., 2021; Vanegas et al., 2025; Robert & Mori, 2024; Santos & Serpa, 2026) to improve their work performance. In Indonesia, according to Article 1 paragraph 9 of Law Number 13 of 2003 on Manpower, job training encompasses all activities to provide, acquire, improve, and develop work competencies, productivity, discipline, attitudes, and work ethic at specific skill and expertise levels according to the level and qualifications of positions and jobs. In other words, training focuses on acquiring specific skills or knowledge of how to perform specific jobs (Beier et

al., 2025; Black et al., 2023). Training can include experiential learning, planned activities, and design in response to identified needs (Dagerman & Wallo, 2024; Lungka et al., 2026).

Tomohon City is an autonomous region in North Sulawesi Province, Indonesia, led by a Mayor and Deputy Mayor with several agencies or offices, including the Manpower Agency. Based on the Mayor Regulation Number 25 of 2023, the Manpower Agency is primarily tasked to foster, control, and supervise employment; provide training to prospective workers and develop specialized skills in line with job seekers' demands; provide broad employment opportunities, improve job placement services, and provide information on the labour market and job fairs in Tomohon City.

Based on data from the Tomohon City Central Statistics Agency, in 2025, the number of productive-age residents in Tomohon City will be 67,805, with 94% working as employees (in both the government and private sectors), entrepreneurs, and farmers. The agricultural sector is a central sector in Tomohon City, with its abundant natural resources suitable for agriculture (Singkoh et al., 2024). Meanwhile, the number of residents with a fixed income is 37,104, meaning that 30,701, or 46% of the productive-age population, are unemployed and/or lack a fixed income. This is a problem that must be addressed immediately by the Tomohon City government, given that one of its primary visions and missions is to reduce unemployment (Polii et al., 2023).

Currently, the Tomohon City government has strived to reduce unemployment. Through the Manpower Office, the Tomohon City government has conducted various training programs. However, the training model used has not been effective in reducing unemployment in Tomohon City, as the training model changes each time and is only conducted once a year. The Tomohon City Government has also collaborated with several private job training institutions for vocational training activities. However, this also requires a significant budget allocation, as collaborating with the private sector means having to pay for the services provided by the private training institutions.

Another limitation lies in the number of private job training institutions in Tomohon City. According to data from the Indonesian Ministry of Manpower's employment data, there were only 15 private job training institutions in North Sulawesi in 2022, with 2% of these institutions focusing on migrant workers. This number is significantly

disproportionate compared to the number of job seekers. Furthermore, job seekers also face financial difficulties when seeking training in the private sector, given their unstable financial situation and the prohibitive fees required to attend private training institutions.

An alternative that can be taken to reduce the unemployment rate and increase the workforce's insight and improve their skills is workforce training, while at the same time this answers the mission and vision of the Tomohon City Manpower Office. This vision and mission are in line with one of the focused objectives of the Tomohon city government, namely to improve community welfare through expanding employment opportunities, competency training, and monitoring industrial relations.

The Tomohon City Manpower Office plays a crucial role for unemployed or underemployed individuals, with a variety of backgrounds contributing to their unemployment, ranging from lack of a college degree due to limited education, lack of knowledge about jobs or producing goods or services due to lack of skill and job training, lack of information about the job market due to economic constraints and low social status that make information difficult to access in any form, and physical limitations. However, The Tomohon City Manpower Office does not yet have a fixed training model that can be used as a reference in implementing training because the training is only carried out once a year and depends on the cooperation between the Tomohon City Government through the Manpower Office and special private training institutions, so that the focus of expertise, training methods, curriculum and materials, as well as facilities and infrastructure continue to change every year. Therefore, it is necessary to propose a model for training the workforce (trainees) as a form of leadership decision-making.

The proposed workforce training model is based on Simple Additive Weighting (SAW). Also known as the weighted summation method, SAW is based on the weighted summation of performance ratings for each alternative across all attributes (Cahyana et al., 2025; Taherdoost, 2023). The SAW method requires normalizing the decision matrix to a scale that can be compared across all available alternative ratings. The SAW method is used to calculate the weighted sum of performance rankings for several training methods, which can help the staff to identify the best training model that suits the needs. (Andila & Oetama, 2023). In this study, SAW is

utilized to obtain a qualified workforce and produce workers who are reliable, resilient, skilled, and adhering to occupational safety. The SAW-based training model can equip training participants with competitive mindset in the workforce and entrepreneurial skills to create jobs using the knowledge gained during the training (Meri, 2020; Zandi et al., 2025).

This study uses the workforce training model built with the SAW method for decision-making by summing the rankings of each existing criterion for prospective workforce participants at the Tomohon City Manpower Office. The ultimate goal is to improve human resources in the city and, ultimately, improves production, economy, and welfare of the Tomohon City community, as well as the lives of individual workers.

2. RESEARCH METHOD

This research was conducted at the Tomohon City Manpower Office, focusing on the Placement and Expansion of Employment Opportunities Sector, from June to December 2025. Then, in this study the researchers used descriptive research, because descriptive method is a research method used to obtain an overview of the conditions, processes, procedures, and so on of a phenomenon being studied. Descriptive research does not aim to test hypotheses or make generalizations, but rather to provide information about the phenomenon being studied. The descriptive method namely a workforce training model (training participants), was applied to accurately describe individual characteristics and conditions needed within the Tomohon City Manpower Office. This allows for systematic, factual, and accurate solutions to the facts and characteristics of the population at the Tomohon City Manpower Office.

2.1. Descriptive research (Furidha, 2024) was conducted through several steps tailored to the research context:

1. The research data was collected using a data collection method that combines quantitative and qualitative methods. Interview data was used to determine the classification of each training participant. Furthermore, quantitative data in numerical form was obtained from the researchers' direct observations during the training.
2. The research process was conducted by tabulating data obtained in the field to facilitate understanding of the workforce training model using the SAW approach. Direct observation and data collection from samples were

conducted to obtain the necessary data, using data recording techniques, namely measuring tools or modelling instruments. This was supplemented by training participant classification and interviews, and the results were compiled in the form of a formulation table.

- Analyse the data obtained in the field using the SAW approach.

The data analysis technique used in this research is the SAW approach, with the basic concept of finding the weighted sum of performance ratings. The SAW approach requires a normalization process for the decision matrix (X) to a scale that can be compared across all existing alternative ratings. The formula for this normalization is (Więckowski' & Saabun, 2020, Mhlaga & Lall, 2021, Ersoy, 2022, Vafaei et al, 2022):

- $r_{ij} = \frac{x_{ij}}{\text{Max}_i x_{ij}}$ if j is the benefit attributes

- $r_{ij} = \frac{x_{ij}}{\text{Max}_i x_{ij}}$ if j is the cost attributes

R_{ij} = Normalized performance rating value

X_{ij} = Attribute value for each criterion

(Row and column of the matrix)

Max x_{ij} = Largest value for each criterion

(Maximum value for each row and column)

Min x_{ij} = Smallest value for each criterion

(Minimum value for each row and column)

Benefit = If the largest value is best

Cost = If the smallest value is best

Where r_{ij} is the normalized performance of alternative A_i on attributes C_j , $i = 1, 2, \dots, m$ and $j = 1, 2, \dots, n$ in the decision matrix Z

$$\begin{bmatrix} x_{11} & x_{12} & \dots & x_{1j} \\ \vdots & \vdots & \dots & \vdots \\ x_{i1} & x_{i2} & \dots & x_{ij} \end{bmatrix}$$

Next, the preference value for each alternative (V_i) is given as in the following formulation:

$$V_i = \sum_{f=1}^n w_j r_{ij}$$

Description:

V_i = ranking for each alternative (final value of the alternative)

W_j = weighted value of each criterion (predetermined weight)

r_{ij} = normalized performance rating value (normalized matrix)

The sampling technique used in this study was purposive sampling, which is a technique for determining samples based on specific considerations (Sugiyono, 2025). Furthermore, the sample in this study was participants in job training

at the Tomohon City Manpower Office, from June to December 2025. The representative sample size for this study was five job training participants with the highest scores. Five characteristics and criteria were then weighted based on these five participants. Therefore, there were importance and suitability ratings ranging from very low (1), low (2), moderate (3), high (4), and very high (5). which were described in the training model using the SAW approach.

The design of the workforce training model using the SAW method at the Tomohon City Manpower Office is expected to provide the following contributions:

- Training materials that are verbally and orally practical.
- Model, pattern, or form of training that are feasible by the prospective workers (training participants);
- A decision-making process that involves summation of the weighted scores of the workers as a basis for evaluating the success of the training.

3. DISCUSSION

The development of the training model (Figure 1) reflects the observational research findings and reflects the need for training programs to focus on systematic and structured workforce management. This facilitates effective implementation of the training program for participants. It is hoped that this will produce graduates who are more independent, having mastered the knowledge (training materials) for both group and organizational training, enabling them to apply it both in the short and long term. Understanding the model of a human resource training and development program depends on selecting the right program to recruit the right people in the right conditions. The training implementation program encompasses several components:

- The preparation stage, which consists of determining and preparing training materials;
- The grouping stage, which consists of identifying training targets, selecting or developing criteria, and conducting pre-tests for training instructors;
- The implementation stage, which includes conducting and monitoring the training;
- The evaluation and development stage, which includes evaluation, needs assessment, and training resource assessment and development.

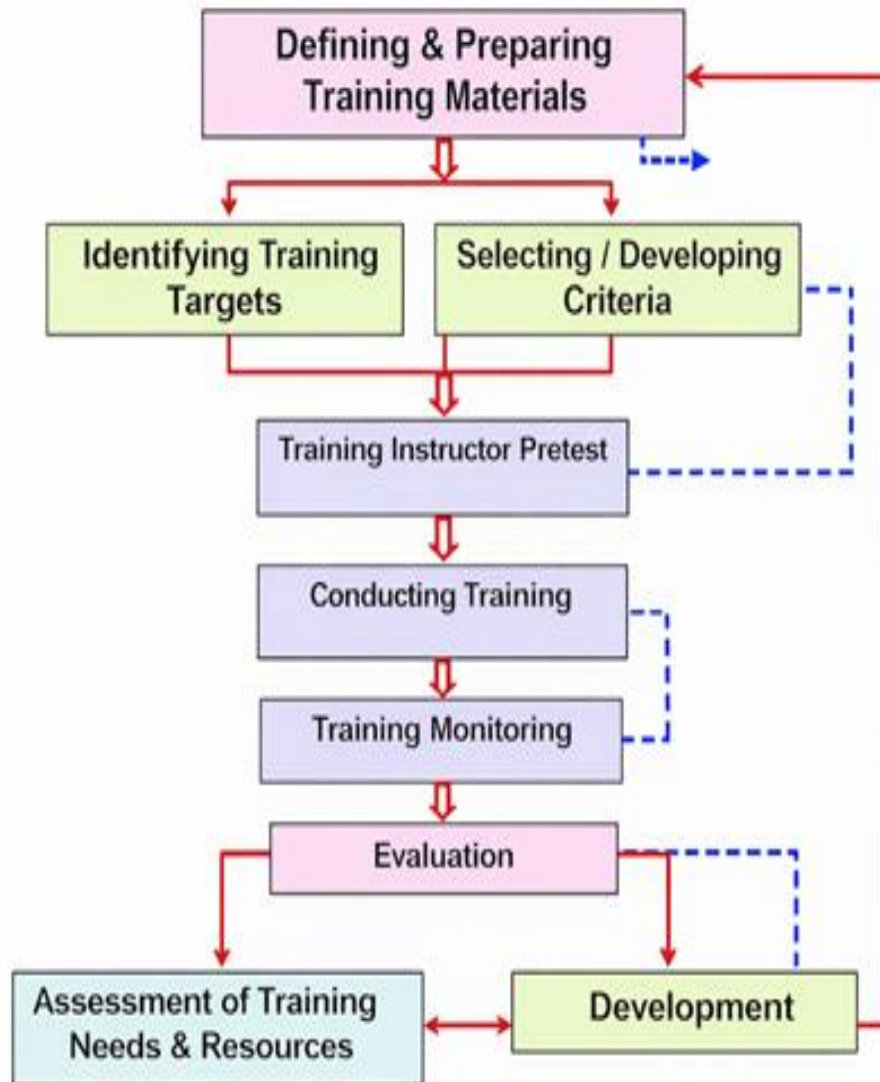


Figure 1: Training Model at the Tomohon City Manpower Office

The government currently deems it necessary to synergize training activity models, provide recognition (certification), and position the workforce in a structured and systematically coordinated activity to achieve the vision and mission of a permanent workforce capable of competing in their respective fields.

The Tomohon City Department of Manpower, through the Employment Expansion Sub-Division, has a primary role and responsibility for implementing non-formal education activities in the form of informal sector training. The goal is to produce trainees with an entrepreneurial spirit, independence, and reliability in the skills field, thereby increasing the economic value of the informal sector. The training model presented above supports the existence of non-formal educational institutions run by the government and the private

sector, which are not yet capable of preparing a workforce that meets the needs of the workforce.

During the study, researchers found that educational and training institutions, especially private ones, have not been able to adapt curricula to meet the needs of the labor market.

It is therefore not surprising that many job opportunities remain unfilled due to lack of knowledge and mismatch. Therefore, the efforts of the Tomohon City government through the Manpower Office continue to improve the quality of work, especially for young people, which involves optimizing the role of the Vocational Training Center as a government and private job training institution.

Figure 2 illustrates the series of processes explaining the SAW approach used in this study, resulting in the results as described in this chapter.

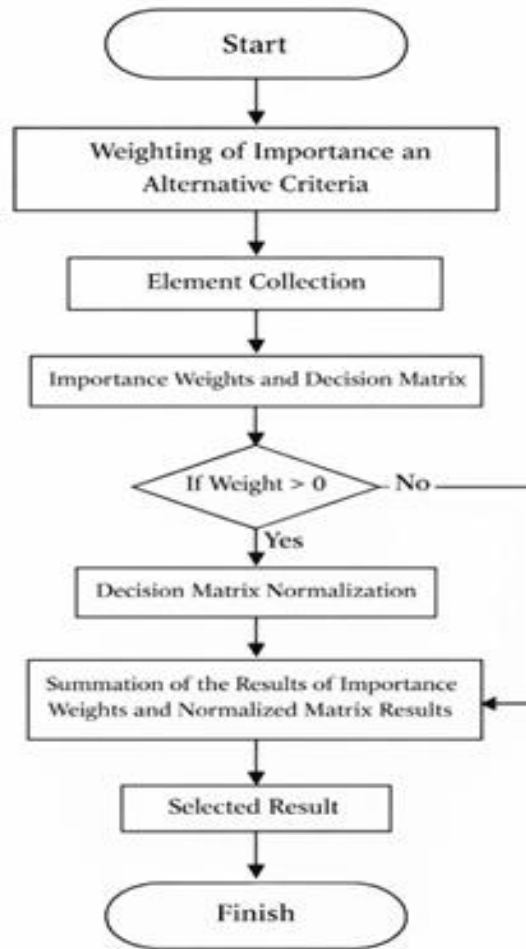


Figure 2: Process Flowchart Explanation of the SAW Approach

3.1 Application of Simple Additive Weighting (SAW)

Before carrying out weighting and addition using the SAW method, a classification is needed to determine the benefit criteria and cost criteria of the data obtained from prospective workers (A) who participated in the training during the research, where the training was the manufacture of virgin

3.1.1. Provisions for each criterion.

coconut oil organized by the Tomohon City Manpower Office in Taratara Village. In terms of classifying training participants, the initial step taken is to group the training participants and then carry out the calculation process (analysis) to obtain the best alternative results using the SAW method as follows:

Table 1: Code (Benefit) and Cost Criteria

Code (benefit)	Criteria (cost)
C1	Education Level
C2	Age
C3	Marital Status
C4	Attendance Absence
C5	Behavior

To determine the weighted alternative criteria for each participant, criteria data is required, resulting in five categories of criteria. First, C1 is educational level with the highest score from 1 to 5. This criterion is valued or weighted at 5. Second, C2 is age, with a score of 4. Third, C3 is marital status, with a score of 3. Fourth, C4 is the participant's attendance record, with a score of 2. Finally, C5 is

good behaviour, with a score of 1.

3.1.2. Assign a weighted value to each criterion.

At this stage, the weighted value of an alternative with the benefit criterion (C) outlined for prospective workers (A) is calculated.

a. Educational Level (C1)

No diploma = 1

Elementary School = 2 High School = 4
 Junior High School = 3 Diploma 1 = 5

Table 2: Educational Level

Prospective Workers (A)	Education Level (C1)
A1	5
A2	4
A3	5
A4	3
A5	1

b. Age (C2)
 17 - 20 years = 1 24 - 26 years = 3
 21 - 23 years = 2 25 - 27 years = 4
 28 - 30 years = 5

Table 3: Age

Prospective Workers (A)	Age (C2)
A1	2
A2	5
A3	4
A4	5
A5	2

c. Marital Status (C3)
 Separated not divorced = 1 Unmarried = 3
 Divorced = 2 Married = 4
 Widow/widower = 5

Table 4: Marital Status

Prospective Workers (A)	Marital Status (C3)
A1	5
A2	1
A3	5
A4	3
A5	5

d. Attendance Absence (C4)
 Rarely present and goes home early = 1 Attends but goes home due to sick leave = 3
 Rarely present = 2 Attends but is inactive = 4
 Consistently present and active = 5

Table 5: Attendance Absence

Prospective Workers (A)	Attendance Absence (C4)
A1	4
A2	2
A3	1
A4	1
A5	1

e. Behavior (C5)
 Poor = 1 Fair = 3
 Not good = 2 Good = 4
 Very good = 5

Table 6: Behavior

Prospective Workers (A)	Behavior (C5)
A1	5
A2	3
A3	3
A4	3
A5	5

This research is based on data analysis of prospective workers. The data analysed included training at Taratara sub-district, the production of Virgin Coconut Oil, and data on the training participants' educational level or final education, age, marital status, attendance, and behaviour. The basic concept of the SAW method is to find the

weighted sum of the performance ratings for each alternative across all attributes (Mesran et al., 2019; Wardana et al., 2020).

The performance ratings using Simple Additive Weighting requires the following steps (Fergina et al., 2025; Armando & Oetama, 2023):

1. Determine the criteria to be used as a reference

- in decision-making, namely CI.
- 2. Determine the suitability rating for each alternative for each criterion.
- 3. Create a decision matrix based on the criteria (Ci), then normalize the matrix based on the equation adjusted to the type of attribute (profit attribute or cost attribute) to obtain the normalized matrix R.
- 4. Obtain the final results from the ranking process, namely the sum of the multiplication of the normalized matrix R with the weight vector to obtain the largest value which is selected as the best alternative (Ai) as a solution.

3.2. Simple Additive Weighting Set Evaluation

Evaluate the criteria weights and the degree of suitability of each alternative with its criteria; Aggregate the criteria weights and the degree of suitability of each alternative with its criteria. This stage identifies the set of alternatives and the set of criteria. There are three (3) activities carried out to identify these alternatives and criteria: selecting a rating set, evaluating, and aggregating. The set evaluation process involves selecting a rating set for

the criterion weights and their criteria. The rating set for the criterion weights is also called the importance rating set, while the rating set for the degree of suitability is also called the suitability rating set. The rating set equates the values of each criterion into a single set. Therefore, this rating set is divided into two:

1. The importance rating set is a set of ratings consisting of values used as assessment measures or rankings of criteria during training.
2. The suitability rating set is a set of ratings consisting of values used as assessment measures for alternatives using decision criteria. The suitability rating set is described by the following value

Next, the weighted scores of each training participant were be assessed, calculated, and summed to obtain the maximum score by converting these scores into a matrix for addition using the SAW method, with the supporting formula applied in the matrix normalization calculation: $r_{ij} = X_{ij} / (\text{Max } X_{ij})$. Max X_{ij} is the maximum value of each existing value.

Table 7: Importance Rating Set and Suitability Rating Set

Description	Score
Very Low	1
Low	2
Neutral	3
High	4
Very high	5

Note that r_{ij} is the unnormalized performance rating value; therefore, to obtain the alternative normalization matrix from A1, but previously, to determine R_{ij} , it became R_{11} because the decision matrix Z was explained, where $Z = [X_{i1}, X_{i2}, \dots]$. Then obtained R_{11} or normalization of A1 $X_{ij}/(\text{Max } X_{ij})$ or $5/(5, 4, 5, 3, 1)$ x_{ij} or 5 is the attribute value of the criteria in this case the first criterion (C1) of the first participant (A1) and 5, 4, 5, 3, 1 is the maximum number of each criterion in the row and column of the matrix normalization table. The details are 5 is the first criterion C1 or the educational level of the first participant or A1 and 5, 4, 5, 3, 1 is the highest value or maximum value among the criteria of each participant and what is obtained from A1 is the value 1 for the results of the matrix normalization. The addition regarding the normalization of the A1 matrix is the same as up to

the fifth participant or A5. Not only up to the addition of matrix normalization, continue to the addition of the total integral value (V_i) with the formula $V_i = W \times R$, (Ortiz-Barios et al, 2022). V_i is the total integral value of V1 or the total integral value of A1, W is all the criteria of A1 and R is all the normalized values of A1 obtained from the previous addition. From the addition of these total integral values, the maximum score is obtained for each participant from A1 to A5. A1 obtained a score of 20, A2 with a score of 11, A3 with a score of 15, A4 with a score of 11 and A5 with a score of 11. Thus, the highest-ranking value of the training participants or the maximum score is obtained by the first participant or A1 with a score of 20.

The following are the alternative weight values for each criterion for prospective workers (trainees).

Table 8: Alternative Criteria Weight Values

Prospective Workers (A)	Criteria				
	C1	C2	C3	C4	C5
A1	5	2	5	4	5
A2	4	5	1	2	3
A3	5	4	5	1	3
A4	3	5	3	1	3

A5	1	2	5	1	5
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Then, the alternative weight values of each criterion of prospective workers were transformed into a matrix form to sum up using the SAW method.

$$\begin{pmatrix} 5 & 2 & 5 & 4 & 5 \\ 4 & 5 & 1 & 2 & 3 \\ 5 & 4 & 5 & 1 & 3 \\ 3 & 5 & 3 & 1 & 3 \\ 1 & 2 & 5 & 1 & 5 \end{pmatrix}$$

1. Matrix normalization. We find the maximum value to get the best value from prospective workers.

$$rij = \frac{Xij}{Max Xij} \quad \text{if J is the benefit attribute}$$

1) Normalize the alternative matrix A1

$$R_{11} = \frac{5}{Max(5,4,5,3,1)} = 1$$

$$R_{12} = \frac{2}{Max(2,5,4,5,2)} = 0.4$$

$$R_{13} = \frac{5}{Max(5,1,5,3,5)} = 1$$

$$R_{14} = \frac{4}{Max(4,2,1,1,1)} = 1$$

$$R_{15} = \frac{5}{Max(5,3,3,3,5)} = 1$$

2) Normalize the alternative matrix A2

$$R_{21} = \frac{4}{Max(5,4,5,3,1)} = 0.8$$

$$R_{22} = \frac{5}{Max(2,5,4,5,2)} = 1$$

$$R_{23} = \frac{1}{Max(5,1,5,3,5)} = 0.2$$

$$R_{24} = \frac{2}{Max(4,2,1,1,1)} = 0.5$$

$$R_{25} = \frac{3}{Max(5,3,3,3,5)} = 0.6$$

The results of matrix normalization (R) obtained the following values:

$$\begin{pmatrix} A1 = & 1 & 0.4 & 1 & 1 & 1 \\ A2 = & 0.8 & 1 & 0.2 & 0.5 & 0.6 \\ A3 = & 1 & 0.8 & 1 & 0.25 & 0.6 \\ A4 = & 0.6 & 1 & 0.6 & 0.25 & 0.6 \\ A5 = & 0.2 & 0.4 & 1 & 0.25 & 1 \end{pmatrix}$$

1. Calculating the Total Integral Value (Vi)

To calculate the total integral value or the best value for each alternative:

Using the formula $Vi = W \times R$,

Optimal Alternative = Max V

3) Normalize the alternative matrix A3

$$R_{31} = \frac{5}{Max(5,4,5,3,1)} = 1$$

$$R_{32} = \frac{4}{Max(2,5,4,5,2)} = 0.8$$

$$R_{33} = \frac{5}{Max(5,1,5,3,5)} = 1$$

$$R_{34} = \frac{1}{Max(4,2,1,1,1)} = 0.25$$

$$R_{35} = \frac{3}{Max(5,3,3,3,5)} = 0.6$$

4) Normalize the alternative matrix A4

$$R_{41} = \frac{3}{Max(5,4,5,3,1)} = 0.6$$

$$R_{42} = \frac{5}{Max(2,5,4,5,2)} = 1$$

$$R_{43} = \frac{3}{Max(5,1,5,3,5)} = 0.6$$

$$R_{44} = \frac{1}{Max(4,2,1,1,1)} = 0.25$$

$$R_{45} = \frac{3}{Max(5,3,3,3,5)} = 0.6$$

5) Normalize the alternative matrix A5

$$R_{51} = \frac{1}{Max(5,4,5,3,1)} = 0.2$$

$$R_{52} = \frac{2}{Max(2,5,4,5,2)} = 0.4$$

$$R_{53} = \frac{5}{Max(5,1,5,3,5)} = 1$$

$$R_{54} = \frac{1}{Max(4,2,1,1,1)} = 0.25$$

$$R_{55} = \frac{5}{Max(5,3,3,3,5)} = 1$$

Total integral value A1

$$V1 = (5) \times (1) + (2) \times (0.4) + (5) \times (1) + (4) \times (1) + (5) \times (1)$$

$$V1 = 5 + 1 + 5 + 4 + 5 = 20$$

Total integral value A2

$$V2 = (4) \times (0.8) + (5) \times (1) + (1) \times (0.2) + (2) \times (0.5) + (3) \times (0.6)$$

$$V2 = 3 + 5 + 0 + 1 + 2 = 11$$

Total integral value A3

$$V3 = (5) \times (1) + (4) \times (0.8) + (5) \times (1) + (1) \times (0.25) + (3) \times (0.6)$$

$$V3 = 5 + 3 + 5 + 0 + 2 = 15$$

Total integral value A4

$$V4 = (3) \times (0.6) + (5) \times (1) + (3) \times (0.6) + (1) \times (0.25) + (3) \times (0.6)$$

$$V4 = 2 + 5 + 2 + 0 + 2 = 11$$

Total integral value A5
 $V5 = (1) \times (0,2) + (2) \times (0,4) + (5) \times (1) + (1) \times (0,25) + (5) \times (1)$
 $V5 = 0 + 1 + 5 + 0 + 5 = 11$

The total integral values obtained are as follows:
 Total integral value A1 = 20
 Total integral value A2 = 11

Total integral value A3 = 15
 Total integral value A4 = 11
 Total integral value A5 = 11

From the calculations above, the highest weighted value for prospective employees can be determined by taking the total integral score of A1-A5. The ranking results are sorted in the following table:

Table 4: Ranking/Weighting Results

No	Prospective Workers (A)	Ranking Results/ Score Weighting
1	A1	20
2	A3	15
3	A2	11
4	A4	11
5	A5	11

From the analysis process above, the alternative with the highest value is A1 = 20. This value is the benchmark for the best decision for prospective workforce participants in training at the Tomohon City Manpower Office.

3.3 Training Model Description

A model must present a clear and easily understood picture for training participants, and the training program must be structured in such a way that its implementation is easily understood. Therefore, a training model is systematically and structured. There are several stages involved in the training model drawing, as a result of the design which is adapted to the training needs at the Tomohon City Manpower Office, namely:

3.3.1. Preparation Stage

The preparation stage involves determining and preparing training materials and preparing the training location. Coincidentally, at the time of the research, the training that was to be and had been implemented was the production of pure virgin coconut oil in Taratara Village, South Tomohon District.

3.3.2. Grouping Stage

The grouping stage involves identifying training targets and selecting or compiling criteria for training participants. The training targets are workers who meet the requirements, based on the specified criteria, including their final education or educational level, age, marital status, and previously provided personal data. Training participants will be directed by officials at the Manpower Office to take a pre-test, who will act as training instructors. The pre-test will consist of an interview between the instructor and the training participants.

3.3.3. Implementation Stage

In this implementation stage, training participants who have met and completed the requirements and the pre-test will undertake the training activities, namely the production of pure virgin coconut oil, which will last three days. The training will consist of an opening or introduction and the presentation of materials, monitoring, direct supervision by Tomohon City Manpower Office staff, and the provision of materials by the training instructor, tools and materials, and refreshments for the training participants. The training program conducted by the Tomohon City Manpower Office provides material on Virgin Coconut Oil, including what it is, the manufacturing process, and how to produce Virgin Coconut Oil to improve the economy and meet the participants' needs.

3.3.4. Evaluation Phase

This evaluation phase involves observing and analyzing the training participants who participated in the seven-day program, assessing their attendance, behavior, skills, and competency. This evaluation will identify the top trainees. Five top trainees will be selected for a weighted ranking using the SAW method. Following the evaluation, the training needs and resources generated by the trainees will be assessed. This will determine whether the training will positively impact the trainees through their work development, specifically, continuing to produce virgin coconut oil for sale to meet their living needs, using the workforce resources provided by the Tomohon City Manpower Office. Of the five trainees assessed using the SAW method, the one with the highest ranking score will receive special recognition from the Tomohon City Manpower Office. The training program, which runs from 9:00 a.m. to 5:00 p.m., was attended by 40 trainees.

The training participants were given special funds by the Tomohon City Government, in this case the Tomohon City Manpower Office, to be used

as capital for new businesses or further development of the production of pure Virgin Coconut Oil in the amount of IDR 200,000 for each training participant.

Based on the results of the training model design at the Tomohon City Manpower Office and the technical description of its implementation, the designed model is an Inductive model because the target of its use is to group the types of learning needs that are incidental needs and are directly felt by the participants in the training. Thus, the information felt directly about the learning needs of the training participants makes it easier for instructors to determine training materials effectively and tailored to their needs. (Deep et al, 2024, Estaji, 2024, Rustiyana et al, 2022), this training model is a training process in analysing training needs related to the components of the training needs analysis in the basic concept, making it easier for training participants (targets) to learn the learning materials, in addition to the abilities they already have will be capital to understand new learning materials.

3.4. Simple Additive Weighting

SAW is an approach that is based on mathematical analysis associated with the addition process. The principle of the SAW method is to calculate the highest number of performance scales for each option by observing all the points or attributes that are being sought (calculated). That in the context of implementing the development program and expanding employment opportunities of the Tomohon City Manpower Office, with the help of the SAW method accompanied by the results of the training model design, making decisions on the highest value of each training participant's performance will be very easy.

This study models the problem of providing recommendations to training participants using the fuzzy multiple attribute decision-making (FMADM) algorithm and the simple additive weighting method. The FMADM algorithm used in this study constructs a decision matrix and assigns relative importance weights. The SAW method is used to solve the FMADM model, including normalizing the decision matrix and ranking it. Based on the research data analysis, the best alternatives are identified from the available data and used as recommendations for the best training participant criteria.

4. CONCLUSION AND RECOMMENDATION

4.1. Conclusion

This study has developed a training model using the Simple Additive Weighting (SAW) approach. The model is expected to support the initiatives of the regional government in Tomohon City, Indonesia to address unemployment cases by providing a standardized training model for the prospective workers. The program for implementing the workforce training model at the Tomohon City Manpower Office includes the following stages: 1) Preparation: determining and preparing training materials; 2) Grouping: identifying training targets, selecting or following criteria, and conducting pre-tests for training instructors; 3) Implementation: conducting and monitoring the training; 4) Evaluation and development: evaluating, assessing training needs and resources, and developing training programs.

The systematic classification and assessment of training participants based on education level, age, marital status, attendance, and behavior involves several steps: 1) Grouping and calculating training needs; 2) Selection and identification of training participants; 3) Formulating training objectives and selecting trained instructors; 4) Designing a training curriculum based on a well-defined training framework; 5) Implementing the training program on time and on target. 6) Evaluate and follow up on training program development, from the initial to the final stages of the training process. .

The analysis process using the SAW approach revealed that the alternative with the highest score was $A1 = 20$. This score serves as the benchmark for the best decision for prospective workers by the Tomohon City Manpower Office in a Virgin Coconut Oil training program.

4.2. Recommendation

From this study, the researchers can provide recommendations for consideration by the Tomohon City Manpower Office, Indonesia, and other job training providers that the classification of training participants should be based on stages, so that it can be known with certainty the various identities and statuses of participants according to the strata or positions and tasks carried out by each participant, such as educational level, age, marital status, attendance, and behavior. Furthermore, the workforce in Tomohon City should be given broad employment opportunities, especially those who meet the requirements. Services to the workforce need to be improved and provided with timely information on the labor market and job exchanges to reduce obstacles felt by the world of education and training institutions. Thus, they have the ability to answer the demands of the need for a complete

and skilled workforce because they apply a curriculum that is in accordance with the needs of the labor market.

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