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Combination of Profile Matching and SAW Methods for College KIP Admission

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Abstract

The KIP College program at Baturaja University has been running since 2020. The large number of people interested in this program has made the university that runs this program have difficulty making decisions about recipients of the KIP college program. The data is on interested participants in the KIP program studying at Baturaja University (UNBARA). The gap between the quota determined by the Ministry of Education, Culture, Research, and Technology and the number of registrants triggers difficulties for management in making decisions. This research aims to analyze the KIP Kuliah program selection results using the combination of Profile Matching and SAW methods. From the analysis of determining criteria and rankings using the Combination Method of Profile Matching and SAW, the results show the names of students who will occupy the UNBARA KIP program quota. The result of data calculations already obtained a value of 1,96667 with alternative data A208 in the name of Randi. Alternative A208 can be recommended as the recipient of the College KIP because it has the profile most appropriate to the specified criteria. So, it can be concluded that SPK, using the combination of Profile Matching and SAW methods, can be applied as a form of recommendation in decision-making in determining UNBARA KIP college program recipients.

Keywords: DSS; KIP; Profile Matching; Simple Additive Weighting

Abstract

Program KIP Kuliah di Universitas Baturaja sudah berjalan dari tahun 2020. Banyaknya peminat pada program ini membuat pihak universitas yang menjalankan program ini mengalami kesulitan dalam mengambil keputusan tentang penerima program KIP kuliah. Data yang diambil adalah data peminat peserta program KIP kuliah di Universitas Baturaja (UNBARA). Adanya Gap antara kuota yang ditentukan oleh pihak Kementrian Pendidikan, Kebudayaan, Riset dan Teknologi dan jumlah pendaftar menjadi pemicu kesulitan pihak manjemen untuk menentukan keputusan. Tujuan dari penelian ini adalah menganalisis hasil seleksi program KIP Kuliah menggunakan metode Kombinasi Profile Matching dan SAW. Dari analisa penentuan kriteria dan perangkingan pada Metode Kombinasi Profile Matching dan SAW ini memperlihatkan hasil nama-nama siswa yang akan menempati kuota program KIP kuliah UNBARA. Hasil akhir dari perhitungan data yang telah dilakukan didapatkan nilai sebesar 1,96667 dengan data Alternatif A208 atas nama Randi. Alternatif A208 dapat direkomendasikan sebagai penerima KIP kuliah karena memiliki profil yang paling sesuai dengan kriteria yang ditetapkan. Sehingga dapat disimpulkan SPK dengan metode Kombinasi Profile Matching dan SAW dapat diaplikasikan sebagai salah satu bentuk rekomendasi dalam pengambilan keputusan pada penentuan penerima program KIP kuliah UNBARA.

Keywords: KIP; Profile Matching; SPK; Simple Additive Weighting

INTRODUCTION

The KIP program is one of the Ministry of Education, Culture, Research and Technology (Kuliah, 2021). The KIP College program is also one of the achievement efforts in educating the nation's life. This program helps high school or vocational students who excel academically and non-academically but are economically disadvantaged to continue their education to the college or university level. One of the universities that runs the College KIP Program is Baturaja University.

The KIP Study Program at Baturaja University has been running since 2020. Every year, the interest in this college KIP program always increases. Meanwhile, the quota for KIP College recipients is determined by the Ministry. The difference between the number of applicants and

the quota in the KIP program makes the campus management carry out a selection system by assessing prospective students by predetermined criteria. With various measures, it can be difficult for decision-makers to determine which prospective students can receive scholarships. There is a need for a system that can support the number of applicants and the criteria needed in the assessment process, making it easier for decision-makers to select prospective scholarship recipients.

A decision support system supports managerial decision-makers in semi-structured decision-making. Decision support systems are meant to be a tool, but not to replace a manager's judgment (Subagio, Abdullah, & Jaenudin, 2017). Decision support systems have adaptive and flexible characteristics that can be effectively applied in various systems (Iswanto, Siregar, 'Uyun, & Nuruzzaman, 2021). The methods used in solving decision support systems vary, such as the AHP, ELECTRE, TOPSIS, ENTROPY, SAW, and Profile Matching methods.

The AHP method solves broad and unstructured problems in a flexible and easy-to-understand approach (Saputra, 2020)(Munthafa & Mubarok, 2017). The ELECTRE method is multi-criteria decision-making by comparing pairs of existing alternatives according to the expected criteria (Suyibah & Kuzairi, 2022). This method can eliminate poor alternatives so that the dominating Alternative can be selected as suitable (Maskhur & Hadikurniawati, 2022). The TOPSIS method has the concept that the best Alternative has the shortest distance from the positive idea solution and the longest from the negative idea solution (Aldisa, 2023). The ENTROPY method is specifically able to adapt to a set of plural attribute data that has various variations between each criterion and has a subjective and objective approach to obtaining criteria based on data characteristics (Harahap, Tulus Tulus, & Budhiarti, 2017; Nisa, Fitrahuda, & Rayhan, 2022). The SAW method is carried out by normalizing the matrix to a scale that can be considered with the data that has been collected and then making assessment criteria based on these data (Kuswanto, Kodri, Devana, Pebriantika, & Ningsih, 2023; Putri & Fahlevi, 2021)

Research related to decision support systems has been widely applied in various fields, such as Decision Support Systems for Selection of Medicinal Plants Using Methods of *Analytical Hierarchy Process-Weighted Product* by Wati (Wati, Maulana, & Widians, 2020), Application of the MOORA Method in Digital Wallet Application Selection Decision Support System by Agustina (Agustina & Sutinah, 2022), Application of the Method *Simple Additive Weighting* For Lecturer Performance Assessment by Kuswanto (Kuswanto, Dapiokta, Yunarti, & Adesti, 2022), Application of the SMART Method in the New Employee Recruitment Decision Support System by Hasugian (Hasugian, Hamdani, & ..., 2023). Application Profile Matching in New Employee Recruitment (Kuswanto, 2020). Application of the combination method *Profile Matching* and SAW to produce recommendations for appropriate rice varieties based on agricultural land approved by four out of five respondents from the DIY Agriculture Office (Parjito, 2017). Applying the Combination of the SAW and TOPSIS Methods recommends the best stocks based on financial ratios (Paksi, Utami, & Henderi, 2017). The AHP and PM methods provide the best recommendations for selecting prospective employees (Soleman, 2019). Implement THK-ANEKA and SAW at SMK IT Bali (Divayana, Ariawan, & Adiarta, 2020). Simple Additive Weighting (SAW) is used in analyzing communities that are entitled to receive Non-Cash Food Assistance (BPNT) at the Jambi City Social Office (Riyansuni & Devitra, 2020). Applying AHP and TOPSIS methods for determining the best lecturers (Wibowo & Nisaa, 2020). Applying Profile Matching and SAW methods in admitting new students and majors (Lestari, Sunardi, & Fadlil, 2022). Using the combination of Profile Matching and SAW methods for the recommendation system for new student interest in the K-13 curriculum before students start learning in grade X (Iswanto et al., 2021).

Based on previous research, it is explained that decision support systems are built not to replace the role of decision-makers but only to help provide choice recommendations in effective and efficient decision-making (Kuswanto, 2023). This explains that the Decision Support System (DSS) method, a combination of Profile Matching and Simple Additive Weighting (SAW), can also be applied to the selection of scholarship recipients for the Kip Kuliah program, which is influenced by the criteria and profiles of each Alternative.

This study aims to analyze the decision-making process for the recipients of the KIP Kuliah scholarship at Baturaja University using a combination of Profile Matching and Simple Additive Weighting (SAW) methods. Applying the combination of Profile Matching and SAW methods is expected to assist and facilitate the campus management and KIP scholarship program administrators in making decisions quickly and accurately.

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RESEARCH METHODS

Stages of Research

The steps carried out in this study are as follows:

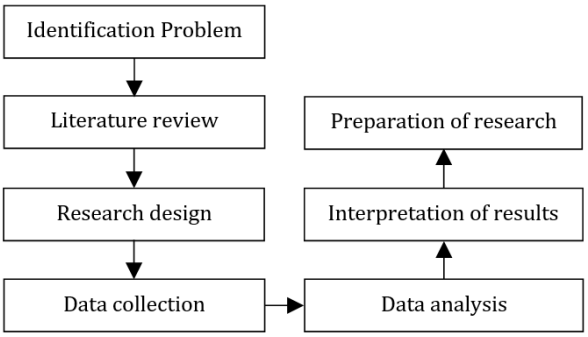

Figure 1. Stages of Research

1. Identification problem: The first stage is to identify the problem or research question to be answered. The research problem must be clear, relevant, and measurable.
2. Literature review: This step involves searching and reviewing literature relevant to the research problem that has been identified. The purpose of a literature review is to understand previous research that has been done and see if any knowledge gaps can be filled with new research.
3. Research design: This stage involves detailed planning of how the research will be conducted. This includes selecting research methods, selection of populations and samples, and data collection to be carried out.
4. Data collection: At this stage, researchers collect data according to a predetermined research design. At the scene of collecting data in this study, the data taken is the data of KIP Lecture registrants, which is carried out online through the KIP Kuliah page, namely kip-kuliah.kemdikbud.go.id.
5. Data analysis: The data analysis phase begins once the data is collected. The analysis method will depend on the data collected and the research question you want answered. Standard analysis methods include statistical, qualitative, or a combination of both.
6. Interpretation of results: After the data analysis, the researcher interprets the research results according to the research question. The results of the study are then linked to the relevant theory.
7. Preparation of research report: The last stage is the preparation of a research report containing a complete description of the research, methods, findings, and conclusions

Profile Matching and SAW Combination Method

The combination method of *Simple Additive Weighting* (SAW) and *Profile Matching* is the approach used in this study. This combination method is carried out to produce a more comprehensive and accurate solution. The steps in applying the Combination of *Profile Matching* and SAW methods can be seen in Figure 2 below.

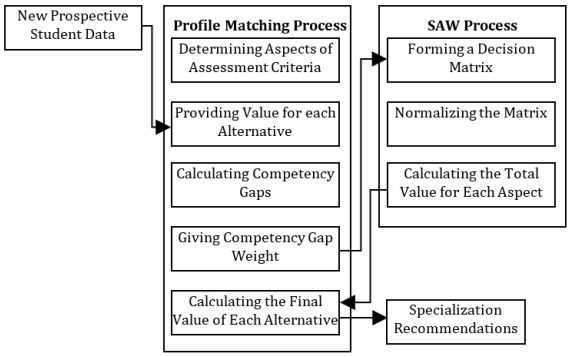

Figure 2. Flow of combination of Profile Matching and SAW methods.

1. Defining Criteria
   K1: Achievements
   K2: Family Economy
2. Give grades and grade scales from each sub-criterion with a rating scale of 1-5.

Each of the grading scales can seen in Table 1.

Table 1. Sub Criteria

Sub Criteria	Value	Value Scale
Class Rank	1 to 3	5
	4 to 6	4
	7 to 10	3
	11 to 20	2
	20 to 40	1
UN Average Score	>85	5
	>80	4
	>75	3
	>70	2
	70	1
Academic Achievement	National	5
	Province	4
	Regency	3
	School /Class	2
	None	1
Non-Academic Achievement	National	5
	Province	4
	Regency	3
	School /Class	2
	none	1
orphans/orphans/parents are still alive	Orphaned	5
	orphan	4

Sub Criteria	Value	Value Scale
	Ortu is still alive	3
Ortu Income	> IDR 2,500,000	1
	> IDR 2,000,000	2
	> IDR 1,500,000	3
	> IDR 1,000,000	4
	0 - IDR 1,000,000	5
Number of dependents	> 4	5
	4	4
	3	3
	2	2
	1	1
Homeownership	Hitchhike	5
	Rent	4
	Own	3
Beneficiaries	Status DTKS	5
	KIP Receiver	4
	PSC Recipients	3
	PKH Recipients	2
	None	1

Table 1 above is sub-criteria data sourced from the KIP Guidelines for Baturaja University Lectures, where each sub-criterion will be given an assessment range, and each value range is assigned a scale from 1-5.

3. Calculate Competency GAP from predetermined criteria.

Table 2. Criterion

Criterion	Sub Criteria	Code	Target
achievement	Class Rating	CF 1	5
	Average UN score	CF 2	5
	Academic Achievement	SF 1	5
	Non-academic achievements	Sf 2	3
Economy	orphans/orphans/ are still alive	CF 3	5
	Ortu Income	CF 4	5
	Number of dependents	Cf 5	5
	Homeownership	SF 3	5
	Beneficiaries	SF 4	3

Table 2 above calculates the Competency GAP from the criteria and sub-criteria made. Here, which sub-criteria are included in the Core Factor and Secondary Factor categories are determined. Then, it is also determined what is the minimum target value of each sub-criterion.

4. Calculating GAP Weights from the Conversions table

Table 3. GAP Value Weight Conversion

GAP	Conversion
0	5
1	4,5
-1	4
2	3,5
-2	3
3	2,5
-3	2
4	1,5
-4	1
5	0,5
-5	0

Table 3 above explains the conversion of GAP value weights from the calculation results between the sub-criteria values of prospective scholarship recipients minus the target of each sub-criteria that has been determined.

5. Forming a decision matrix of order 291X 9
6. Normalizing with CF and SF Calculations (Max & Min)
7. Calculate the total value of a Criterion.
8. Calculating Alternate Endings

In the steps above, the Profile Matching method describes target or ideal preferences in preference profiles. In contrast, the SAW method calculates aggregate values and performs alternative rankings based on predetermined preferences. Combining these two methods can provide more comprehensive information and help in better decision-making (Nasution, Fadlil, & Sunardi, 2020).

RESULTS AND DISCUSSION

1. Criteria Establishment

In this study, the selection of recipients of the KIP Lecture of Baturaja University was used to measure or evaluate the variables or objects studied. These criteria help researchers to make objective and consistent decisions in collecting and analyzing data. The criteria can be seen in Table 1, and the scale table of criteria values can be seen in Table 4 below.

Table 4. Criterion Value Scale

Criterion	Sub Criteria	Value Scale	Kind
Achievement	Class Rating	1-5	cf
	Average UN score	1-5	cf
	Academic Achievement	1-5	Sf
	Non-academic achievements	1-5	Sf
	orphans/orphans/parents are still alive	1-5	cf
Economy	Ortu Income	1-5	cf
	Number of dependents	1-5	cf
	Homeownership	1-5	Sf
	Beneficiaries	1-5	Sf

2. Rate each Alternative.

Provide values for alternatives in this study using a scale of values implemented for sub-criteria that become core and second factors. Table 5 below shows the criteria values of each Alternative.

Table 5. Value Alternative Criteria

No	Student Name	achievement		Economy						
		CF1	CF2	SF1	SF2	SF4	CF4	CF3	CF5	SF3
1	Rifky D H	5	5	5	4	1	5	3	1	3
2	Kholis Abdul Bari	4	4	1	3	1	4	2	1	3
3	Syahran PS	4	4	1	2	1	2	2	1	3
4	Anggi Gem S	4	4	1	1	3	1	2	2	1
5	Weni A	4	4	1	5	1	4	4	2	4
6	Karin D R	4	4	1	1	1	3	2	2	4
5	Kiki I S	4	4	1	1	3	1	2	1	1
8	Krisna Aditya	4	4	1	4	3	1	2	1	1
9	Mutia Ariska	4	4	1	1	3	1	2	1	1
10	Yonesti Oktavia	4	4	1	1	1	3	2	3	3
....	...	.....	....	....	....	....	....	....	....	....
....	...	.....	....	....	....	....	....	....	....	....
291	Violita H B	5	5	1	1	1	3	5	1	4

Next Alternative with codes A1, A2, A3,... A291

3. Calculate the Competency GAP of a specified target.

After obtaining the criterion value from the Alternative, further calculate the GAP Value or the difference from the fixed target value. Table 6 below shows the results of calculating the GAP Value.

Table 6. GAP value

No	Alternative	CF 1	CF 2	SF 1	SF 2	SF 4	CF 5	CF 3	CF 4	SF 3
1	A1	0	0	0	-2	2	-2	-2	-4	-2
2	A2	-1	-1	-4	-2	1	-3	-3	-4	-2
3	A3	-1	-1	-4	-2	-1	-3	-3	-4	-2
4	A4	-1	-1	-4	0	-2	-3	-3	-3	-4
5	A5	-1	-1	-4	-2	1	-1	-1	-3	-1
6	A6	-1	-1	-4	-2	0	-3	-3	-3	-1
7	A7	-1	-1	-4	0	-2	-3	-3	-4	-4
8	A8	-1	-1	-4	0	-2	-3	-3	-4	-4
9	A9	-1	-1	-4	0	-2	-3	-3	-4	-4
10	A10	-1	-1	-4	-2	0	-3	-3	-2	-2
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
291	A291	0	0	-4	-2	0	0	0	-4	-1

In Table 6, several alternative values reach a value of 0, which means that the Alternative is by the specified target value.

4. Calculating Weight Value

Each Alternative is converted From the GAP results to find the weight value of each Alternative. The weight value is calculated based on the conversion table. The results of the calculation of the weight value can be seen in Table 7.

Table 7. Weight Value

No	Alternative	CF 1	CF 2	SF 1	SF 2	SF 4	CF 4	CF 3	CF 5	SF 3
1	A1	5	5	5	3	3,5	3	3	1	3
2	A2	4	4	1	3	4,5	2	2	1	3
3	A3	4	4	1	3	4	2	2	1	3
4	A4	4	4	1	5	3	2	2	2	1
5	A5	4	4	1	3	4,5	4	4	2	4
6	A6	4	4	1	3	5	2	2	2	4
7	A7	4	4	1	5	3	2	2	1	1
8	A8	4	4	1	5	3	2	2	1	1
9	A9	4	4	1	5	3	2	2	1	1
10	A10	4	4	1	3	5	2	2	3	3
....	...	...	...	...	....	...	.....	....	...	....
....	...	...	...	...	....	...	.....	....	...	....
291	A291	5	5	1	3	5	5	5	1	4

Conversion weight data describes the weight or value given to several alternatives (A1 to A291) in several Core Factor and Second Factor criteria (CF 1, CF 2, SF 1, SF 2, SF 4, CF 4, CF 3, CF 5, SF 3). This data refers to the results of alternative assessments or rankings based on these criteria.

5. Forming a Decision Matrix

Forming a decision matrix is an essential step in structured decision-making. The decision matrix helps in comparing different alternatives based on predefined criteria. Forms a matrix of order 291 x 9. The matrix of orders can be seen in Table 8.

Table 8. Order Matrix

No	Alternative	Max-min				Max-Min				
		CF 1	CF 2	SF 1	SF 2	SF 4	Cf 4	CF 3	CF 5	SF 3
1	A1	5	5	5	3	3,5	3	3	1	3
2	A2	4	4	1	3	4,5	2	2	1	3
3	A3	4	4	1	3	4	2	2	1	3
4	A4	4	4	1	5	3	2	2	2	1
5	A5	4	4	1	3	4,5	4	4	2	4
6	A6	4	4	1	3	5	2	2	2	4
7	A7	4	4	1	5	3	2	2	1	1
8	A8	4	4	1	5	3	2	2	1	1
9	A9	4	4	1	5	3	2	2	1	1
10	A10	4	4	1	3	5	2	2	3	3
...	...	....	....	....	....	....	....	....	....	....
...	...	....	....	....	....	....	....	....	....	....
291	A291	5	5	1	3	5	5	5	1	4

Essentially, this matrix provides a ranking of alternatives based on a "Max-min" approach, which can be used to identify options with the highest or lowest performance in various specified criteria.

6. Normalized Matrix

After getting the weight value, then further normalize each Alternative using the following formula:

$$CF = \frac{nCF}{nMaxCF} \quad \text{..... (1)}$$

$$SF = \frac{nMinSF}{nSF} \quad \text{..... (2)}$$

The results of the normalized matrix can be seen in the following table 9.

Table 9. Normalized matrix

No	Alternative	CF 1	CF 2	SF 1	SF 2	SF 4	CF 4	CF 3	CF 5	SF3
1	A1	1	1	0,2	1	0,2	0,6	0,6	0,2	0,3
2	A2	0,8	0,8	1	1	0,2	0,4	0,4	0,2	0,3
3	A3	0,8	0,8	1	1	0,2	0,4	0,4	0,2	0,3
4	A4	0,8	0,8	1	0,6	0,3	0,4	0,4	0,4	1
5	A5	0,8	0,8	1	1	0,2	0,8	0,8	0,4	0,2
6	A6	0,8	0,8	1	1	0,2	0,4	0,4	0,4	0,2
7	A7	0,8	0,8	1	0,6	0,3	0,4	0,4	0,2	1
8	A8	0,8	0,8	1	0,6	0,3	0,4	0,4	0,2	1
9	A9	0,8	0,8	1	0,6	0,3	0,4	0,4	0,2	1
10	A10	0,8	0,8	1	1	0,2	0,4	0,4	0,6	0,3
...	...	.....	.....	....	....	.....	....	....	.....	.....
...	...	.....	.....	....	....	.....	....	....	.....	.....
291	A291	1	1	1	1	0,2	1	1	0,2	0,25

The normalized matrix contains weights or assessments for several alternatives (A1 to A291) in various criteria (CF 1, CF 2, SF 1, SF 2, SF 4, CF 4, CF 3, CF 5, SF 3). Normalization is converting original values into a uniform or comparable scale. In this case, the matrix has been normalized so that each value in the criteria has a scale from 0 to 1.

This data can be used to make decisions or evaluate alternatives based on relevant criteria. This matrix helps a deeper analysis can be carried out depending on the more specific analysis objectives.

This data provides information about the relative performance of each Alternative in two specified criteria (K1 and K2). These values can be used to make decisions or compare alternatives in various relevant contexts or decision-making.

7. Calculating the total value of the criteria

After obtaining the normalized matrix, in the next stage, calculate the total value of each Criterion of each Alternative using the formula:

K = 60% CF+40%SF

The calculation results can be seen in Table 10 below:

Table 10. Total Value of Criteria

No	Alternative	K 1	K 2
1	A1	1,68	1,087619048
2	A2	1,76	0,822222222
3	A3	1,76	0,833333333
4	A4	1,6	1,253333333
5	A5	1,76	1,388888889
6	A6	1,76	0,900000000
7	A7	1,60	1,133333333
8	A8	1,60	1,133333333
9	A9	1,60	1,133333333
10	A10	1,76	1,053333333
...	.....	.....	.....
...	.....	.....	.....
291	A291	2	1,5

1. Calculating Alternate Final Values

The next step calculates the alternative final value obtained from the average of the criteria weights. The results of the alternative absolute values can be seen in Table 11 below:

Table 11. Alternative Final Value

No	Alternative	K 1	K 2	Final Grades
1	A1	1,68	1,087619048	1,38381
2	A2	1,76	0,822222222	1,291111
3	A3	1,76	0,833333333	1,296667
4	A4	1,60	1,253333333	1,426667
5	A5	1,76	1,388888889	1,574444
6	A6	1,76	0,900000000	1,330000
7	A7	1,60	1,133333333	1,366667
8	A8	1,60	1,133333333	1,366667
9	A9	1,60	1,133333333	1,366667
10	A10	1,76	1,053333333	1,406667
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
291	A291	2	1,5	1,75

The alternative final value data contains each Alternative's calculation or assessment results (A1 to A291) in two criteria (K1 and K2).

Alternative with the Highest Value (K1): The Alternative with the highest value in Criterion 1 (K1) is A291, with a value of 2. This indicates that A291 is considered to have the highest performance in K1 compared to other alternatives. There are variations in the value of K1 between alternatives. K1 values range from 1.6 to 2, with alternatives A1, A2, A3, A5, A6, A10, and A291 having higher K1 values than the others. The Alternative with the highest value in Criterion 2 (K2) is A5, with a value of 1.388888889. This shows that A5 is considered to have the highest performance in K2 compared to other alternatives in the matrix. There are variations in the value of K2 between the alternatives. K2 values range from 0.822222222 to 1.5, with some alternatives such as A5, A1, A3, and others having higher K2 values than others.

This data provides information about the relative performance of each Alternative in two specified criteria (K1 and K2). These values can be used to make decisions or compare alternatives in various relevant contexts or decision-making.

2. Recommended Ranking Results

After getting the final score of each Alternative, a recommendation of results is obtained by ranking the absolute value of each Alternative. These results can be seen in Table 12 below:

Table 12. Recommended Ranking Results

Ranking	Student Name	K 1	K 2	Final Grades
1	Randi	1,6	2,3	1,9
2	Nabila A Wi	1,7	1,9	1,8
3	Sulis Juhesti	1,6	1,9	1,7
4	Fathia Miranda	1,6	1,9	1,7
5	Violita H B	2	1,5	1,7
6	Astrina Utami	1,6	1,8	1,7
7	Cintika Destiara	1,7	1,5	1,6
8	Pebi Aryani	1,6	1,7	1,6
9	Anisa D R	1,6	1,7	1,6
10	Muhtar Romi	1,6	1,7	1,6
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
116	Nopriadi	1,56	1,2	1,42

In Table 12, alternative A208 in Randi's name is the Alternative with the highest score, followed by other alternatives to rank 116th in Nopriadi, so it can be decided that alternative A208 in Randi's name is the best Alternative in the selection of KIP recipients for Baturaja University Lectures.

CONCLUSIONS

The analysis of determining criteria and ranking using the combination of Profile Matching and SAW methods shows that the KIP program at Baturaja University has a quota to accommodate 116 prospective students from 291 prospective students. Through this method, the best Alternative that stands out among the names of students who register can be found. One is Alternative A208, represented by Randi, with a total achievement and family economic value of 1.96667. This shows that Randi has the profile that best fits the specified criteria. On the other hand, in the final order of KIP recipients at Baturaja University, Alternative A281 was found, represented by Nopriadi, with a total score for each criterion of 1.426667. Even though Nopriadi was in last place, it can be concluded that the Decision Support System (SPK) using the combination of Profile Matching and SAW methods can be applied as a form of effective recommendation in making decisions regarding determining recipients of the KIP college program. This method helps simplify selecting prospective students by considering relevant criteria and ranking each candidate based on their profile.

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