Journal of Artificial Intelligence and Engineering Applications

Website: https://ioinformatic.org/

15th October 2023. Vol. 3. No. 1; e-ISSN : 2808-4519

Application Of The Profile Matching Method In The Selection Of New Students For Batak Karo Bridal Makeup Skills In The PKK Program

Suma Dia Syahwani[1], Yani Maulita[2], Mili Alfhi Syari[3]

[1,2,3]Information System, STMIK Kaputama

sumasyahwani01@gmail.com[1]; yanimaulita26@gmail.com[2]; milli.fhisya@gmail.com[3]*

Abstract

Makeup is the art of using makeup materials to change the natural face shape into an artistic face. Work Skills Education (PKK) itself is an education and training service program oriented towards the development of work skills provided to students in order to have competence in certain skills that are in accordance with job opportunities. Profile matching is the process of comparing the actual data value of a profile to be assessed with the expected profile value so that it can be known the difference in competence or the distance between one value and another. This research aims to facilitate the selection of new prospective students in the PKK program at the Pelawi Salon Binjai Course and Training Institute (LKP) and optimize admin work time in the process of selecting new students. By applying this method, it aims to see the eligibility of prospective students according to predetermined criteria so that the opportunity to take part in the PKK program can be received by the right person. There are 5 sample data with 6 criteria in this research, the final result in this study is 3.5 being the highest value and 2.99 being the lowest value.

Keywords: Decision Making System , Make-up, New Students, PKK Program, Profile Matching.

1. Introduction

Makeup is the art of using make-up materials to change the shape of a natural face into an artistic one[1], the development of cosmetology itself has become very rapid today, cosmetology is no longer just a toy for girls, but has grown beyond that, as can be seen by the many beauty influencers that have sprung up nowadays both from women and men, this proves that cosmetology should be considered as the main profession with a lot of income. This is reinforced by the presence of several universities in Indonesia that provide special makeup majors, both in studying bridal makeup, daily makeup look, and character makeup. In this case it seems that the state government also sees a great opportunity for cosmetology by making cosmetology one of the areas of learning in the PKK program which is under the auspices of the Ministry of Education and Culture, Directorate General of Vocational Education, Directorate of Courses and Training. companies, manufacturing industry, service industry, home industry or home industry and others [2].

*Profile matching*is a method used in decision making by assuming that there is an ideal level of predictor variables that must be met by the subject under study, this method uses value conversion at an early stage before calculations are carried out, in outline profile matching is a process of comparing actual data values from an profile that will be assessed with the expected profile value so that you can know the difference in competence or the distance between one value and another, the smaller the resulting distance, the greater the weight of the value, which means it has a greater chance of being selected [3]. Profile matching is also a very important process in human resource management where the required competencies are first determined[4].

Based on the description above, this research uses the profile matching method to facilitate the selection of prospective new students in the PKK program at the Pelawi Salon Binjai Course and Training Institute (LKP), the use of this method also aims to shorten working time and optimize admin working time in the selection process new students, in addition to helping optimize working time in the selection of new students, by applying this method aims to see the eligibility of prospective students according to predetermined criteria so that the opportunity to take part in the PKK program can be received by the right people.

2. Research Methods

There are several stages in the research method used in this study, namely research preparation, problem formulation and objectives, data collection, data analysis, testing and implementation, and conclusions. This research was conducted to implement the profile matching method in order to find the best prospective students who are eligible to take part in the PKK program.

2.1. Decision Support System

Decision support system (DSS) is a computer-based system consisting of three groups. SPK is a computer system that is capable of producing both problem-solving abilities and interaction skills for semi-structured and unstructured problems [5].

2.2. Profile Matching Method

The profile matching method is a mechanism in the decision-making process by assuming that there is an ideal predictor variable level that must be owned by individuals, not a minimum level that must be met or passed. The profile matching method is very suitable for use in HR (Human Resources) management efforts, because in the process of the profile matching method in general it is a process of comparing individual abilities to competencies that must be achieved in a position/position. From this comparison it can be seen the difference in competence, so that a good alternative will be obtained[6]. The profile matching method is a simple method in a decision support system by comparing the GAP with alternative criteria values. There are several things that are known about GAP analysis, one of which is the table of GAP weight values. In addition, this GAP analysis must also have the concept of priority scale for each criterion [7]. Decision support systems are adaptive to time, so decision makers must be reactive and able to deal with changing conditions quickly and change the decision support system to be flexible so that users can add, delete, combine, change and rearrange the basic elements [8].
Stages of ranking calculations on the profile matching method:

a. Determination of the weight of the GAP value
b. Calculation and grouping of core factors and secondary factors. The formula used to calculate the core factor:
   - NCI = ∑NC / ∑IC

   Information:
   NCI: The average value of the core competency factor
   NC : Sum of core factor values
   IC : Number of core factor items
   Secondary factor(supporting factors) are items other than aspects that are on the core factor using the formula:
   - NSI = ∑NS / ∑IS

   Information:
   NSI : The average value of the secondary factor of competence
   NS : The total number of secondary factor competency scores
   IS : Number of secondary factor items
c. The calculation of the total score for each competency criterion from the calculation of the core factor and secondary factor for each competency is calculated for the total value of each aspect which is estimated to affect the performance of each profile. To calculate the total value of each competency, the formula is used:
   - N = 60% NC + 40% NS

   Information:
   N : The total value of each criterion aspect
   NC : Core factor value
   NS : Secondary factor value
d. Rank calculation The end result of the profile matching process is the ranking of candidates proposed to fill a certain position/position. Ranking refers to the calculation results shown in the formula:
   - Rank = (x)% NK + (x)% NK

   Information:
   (x)% : The percent value entered
   NK : Total Competency score for each aspect

2.3. Profile Matching Method Stage

1. Determination of the weight of the gap value
2. Calculation and grouping of core factors and secondary factors
3. Calculation of the total value of each competency criterion from the core factor and secondary factor of each competency is calculated the total value of each aspect which is estimated to affect the performance of each profile
4. Rank calculation The end result of the profile matching process is the ranking of candidates proposed to fill a certain position/position.

3. Results and Discussion

3.1. Completion of the Profile Matching Method

This study aims to see whether the profile matching method is effectively used in ranking with case studies on the selection of prospective new students at LKP Pelawi Salon Binjai. Calculations using the profile matching method will be explained starting from the initial determination of the weight values and criteria up to the calculation of the ranking values that will be used for decision making. The following are the calculation steps using the profile matching method:

Table 1: Criteria Data Sample

No	Criteria Name	Presentage	Weight Value Sub Criteria	Type	Value %
1	Main Requirements	70%			
	Age		5	core	60%
	Last Education		5	core	
	Income		4	secondary	40%
	Domicili Distance		4	secondary	
2	Supporting Requirements	30%			
	Basic Skills Test		5	core	60%
	Interview		4	secondary	40%

3.2. Determines the weight value

The following is a table of weight values for the profile matching algorithm used in determining prospective new students

Table 2: Weight Value

NO	Category	Value
1	Not Considered	1
2	Considered	2
3	Enough Important	3
4	Important	4
5	Very Important	5

`

3.3. Evaluation

The following is a profile matching algorithm assessment table in determining prospective new students

Table 3: Assessment

No	Name of Prospective Student	THE MAIN REQUIREMENT				SUPPORTING TERMS	
		Age	Last education	Income	Domicile Distance	Basic Proficiency Test	Interview
1	A1	5	2	5	5	5	4
2	A2	5	2	5	5	4	4

3.4. Determine the Gap Value

The next step is to determine the gap value, the following is the formula for determining the gap value:

Gap = Input Value – Predetermined Value

Table 4: Criteria After Gap Calculation Is Done

No	Name of Prospective Student	THE MAIN REQUIREMENT				SUPPORTING TERMS	
		Age	Last education	Income	Domicile Distance	Basic Proficiency Test	Interview
1	A1	0	-3	1	1	0	0
2	A2	0	-3	1	1	-1	0

Age:

A1= 5 - 5 = 0

A2= 5 - 5 = 0

Last education:

A1= 2 – 5 = -3

A2= 2 – 5 = -3

Income:

A1= 5 – 4 = 1

A2= 5 – 4 = 1
Domicile Distance:
A1= 5 – 4 = 1
A2= 5 – 4 = 1
Basic Proficiency Test:
A1= 5 - 5 = 0
A2= 4 - 5 = -1
Interview:
A1= 4 - 4 = 0
A2= 4 - 4 = 0

3.5. Weight Value

The following is a table of weight values for the profile matching algorithm in determining prospective new students

Table 5: Weight Value in the Profile Matching Method

No	Difference	Value Weight	Information
1	0	5	Competence as required
2	1	4.5	Excess 1 level / level of individual competence
3	-1	4	Lack of 2 levels / individual competency levels
4	2	3.5	Excess 2 levels / levels of individual competence
5	-2	3	Lack of 2 levels / levels of individual competence
6	3	2.5	Excess 3 levels / levels of individual competence
7	-3	2	Lack of 3 levels / levels of individual competence
8	4	1.5	Excess 4 levels / levels of individual competence
9	-4	1	Lacks 4 levels / levels of individual competence

3.6. Determination of Weight Value

The following is a table for determining the weight of the criteria for the profile matching algorithm in determining prospective new students

Table 6: Criteria after Changed Weight Value

No	Name of Prospective Student	THE MAIN REQUIREMENT				SUPPORTING TERMS	
		Age	Last education	Income	Domicile Distance	Basic Proficiency Test	Interview
1	A1	5	2	4.5	4.5	5	5
2	A2	5	2	4.5	4.5	4	5

3.7. Calculation of core factor and secondary factor

The following is a step to calculate the core factor and secondary factor of the profile matching algorithm in determining prospective new students

- NCI = ∑NC / ∑IC
- NSI = ∑NS / ∑IS

A1
NCF = (5 + 2) / 2 = 3.5
NSF = (4.5 + 4.5) / 2 = 4.5
A2
NCF = (5 + 2) / 2 = 3.5
NSF = (4.5 + 4.5) / 2 = 4.5

Table 7: CF and SF for Main Requirement Criteria

NO	NAME OF PROSPECTIVE STUDENTS	CF	SF
1	A1	3.5	4.5
2	A2	3.5	4.5

Table 8: CF and SF for Supporting Requirements Criteria

NO	NAME OF PROSPECTIVE STUDENTS	CF	SF
1	A1	2.5	2.5
2	A2	2	2.5

3.8. Calculation of Total Value

The following is a step to calculate the Total Value of the profile matching algorithm to determine prospective new students

- N = 60% NC + 40% NS

a. Main Requirement Criteria

A1 = (60% * 3.5) + (40% * 4 .5) = 3.9
A2 = (60% * 3.5) + (40% * 4 .5) = 3.9

b. Criteria for Supporting Terms

A1 = (60% * 2.5) + (40% * 2.5) = 2.5
A2 = (60% * 2) + (40% * 2.5) = 2.2

Table 9: Total Scores for Main Requirement Criteria

NO	NAME OF PROSPECTIVE STUDENTS	TOTAL VALUE
1	A1	3.9
2	A2	3.9

Table 10: Total Score for Supporting Requirements Criteria

NO	NAME OF PROSPECTIVE STUDENTS	TOTAL VALUE
1	A1	2.5
2	A2	2.2

3.9. Calculation of Final Value

The following is the Calculation of the Final Value of the profile matching algorithm to determine prospective new students

- Rank = (x)% NK + (x)% NK

Devi Mardalia = (70% * 3.9) + (30% * 2.5) = 3.48
Nurul Febriana = (70% * 3.9) + (30% * 2.2) = 3.39

Table 11: Final Value

NO	NAME OF PROSPECTIVE STUDENTS	NT (SU)	NT (SP)	THE FINAL RESULT	Ranking
1	A1	3.9	2.5	3.48	2
2	A2	3.9	2.2	3.39	3
3	A3	4.1	2.1	3.5	1
4	A4	3.8	2.4	3.38	4
5	A5	3.5	1.8	2.99	5

4. Conclusion

As for some conclusions that the author can give from writing this thesis research, among others, are as follows.

1. The profile matching algorithm method can be used in determining prospective students who are entitled to take part in the PKK program based on the ranking obtained in accordance with predetermined weight values and criteria.
2. From the results of the calculations carried out, it can be concluded that A3 has the greatest chance of becoming a new student with a final score of 3.5 while A5 has the lowest chance of becoming a new student with a final score of 2.99.
3. The calculations carried out can provide information to the leadership as material for consideration in the process of accepting prospective new students

References

[1] M. Noviana and Y. T. Susiati, "Hubungan Pengetahuan Rias Wajah Sehari-Hari Dengan Penggunaan Kosmetik," vol. 1, no. 2, pp. 122–129, 2015.
[2] A. Wicaksana and T. Rachman, "**済無**No Title No Title No Title," *Angew. Chemie Int. Ed. 6(11), 951–952.*, vol. 3, no. 1, pp. 10–27, 2018, [Online]. Available: https://medium.com/@arifwicaksanaa/pengertian-use-case-a7e576e1b6bf
[3] A. Verdian and A. Wantoro, "Komparasi Metode Profile Matching Dengan Fuzzy Profile Matching Pada Pemilihan Wakil Kepala Sekolah," *J. Ilm. Media Sisfo*, vol. 13, no. 2, pp. 97–105, 2019.
[4] M. Badrul, "Penerapan Metode Profile Matching Untuk Menunjang Keputusan Seleksi Pegawai Baru," *PROSISKO J. Pengemb. Ris. dan Obs. Sist.*

Komput., vol. 8, no. 1, pp. 75–82, 2021.
[5] T. A. Sundara, I. Stephane, and M. Fadli, "SPK Penilihan Guru Terbaik Dengan Metode WP Pada MAN 1 Pariaman," *J. Inform.*, vol. 6, no. 2, pp. 310–321, 2019.
[6] F. D. S. Atmanagara, "Implementasi Metode Profile Matching Untuk Seleksi Penerimaan Anggota Asisten Praktikum (Studi Kasus: Laboratorium Pembelajaran Kelompok Praktikum Basis Data Filkom)." Universitas Brawijaya, 2017.
[7] S. Khoiriyah, Y. Yunita, and A. Junaidi, "Sistem Pendukung Keputusan Pemilihan Crew Store Terbaik Menggunakan Metode Profile Matching di PT Sumber Alfaria Trijaya," *J. Teknol. dan Ilmu Komput. Prima*, vol. 2, no. 2, p. 27, 2019, doi: 10.34012/jutikomp.v2i2.668.
[8] H. Pratiwi, "Tujuan dan Karakteristik SPK," *Res. Gate, no. May*, pp. 6–8, 2020.