

Application for Employee Performance Assessment Using Profile Matching Method

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Abstract—Human resources an important role for the agency. Good employee performance can provide a good image for the company. Many companies give rewards or rewards to their employees for their work performance. The assessment is done in addition to giving or appreciation as well as motivation for employees to work better. Problems that often occur in the employee appraisal process are the large number of employees and the criteria assessed and data processing are still in conventional process so that takes a long time and the results of the assessment are still not objective. To overcome, application was built could simplify the employee performance appraisal process. The method used is Profile Matching to assess and determine employees who excel. Factors or criteria used in the form of performance, discipline, honesty, years of service, cooperation. Profile matching is broadly the process of comparing the actual data value of a profile to be assessed with the expected profile value. Application is built based on web with PHP programming and MYSQL. To help the process of employee performance appraisal at Universitas Prima Indonesia. Collecting data in research using literature studies, observations, interviews, and sampling. Result the research is Profile Matching Method can be use for Decision Support System in determining employee achievement, with the highest calculation results in the sample data obtained by A3 and the lowest position obtained by A1. In academic, research can be an enrichment of teaching materials especially in subject of Decision Support Systems and information systems in general.

Keywords—Employees; System; Profile Matching

I. INTRODUCTION

Human Resources (HR) is one important factor of the course of an organization / company. Good management of these employees will greatly affect aspects of work success, if employees can be well organized, it is expected that the organization / company can run all the process activities properly as well. The issue of subjectivity in evaluating employee performance is almost unavoidable. Quantitative assessment is often considered disappointing because of the difficulty of measuring existing parameters. On the other hand management and employees need a routine and rapid performance appraisal process so that they can provide quick feedback and

improvements in the work environment. Transparency in the assessment process can usually have a positive effect on the company.

Universitas Prima Indonesia (Unpri) is one of the events in the academic field. Unpri currently has 4 campuses spread across several regions in the city of Medan with quite a large number of employees. As an academic institution, unpri HR can certainly provide good services from any aspect both to students and to the public who come to visit campus. Good service can reflect a good image for the company. Not only in providing services, good quality work must also be done so that campus management becomes more qualified. It is not

uncommon that Unpri has often given awards for work achievements possessed by employees in any form for the work achievements that have been made by employees so far. Besides giving rewards or rewards for employee work performance is also done as a motivation so that employees can work better. The problem that arises today is a complicated evaluation process, meaning that what often happens now is that generally employees who get a reward are only seen in one aspect, but the employee is not necessarily superior to several other criteria. In the employee performance appraisal process carried out conventionally, so that employee performance appraisal tends to be subjective.

Referring to the above problems, a Decision Support System (SPK) application program can be designed in a way that is expected to help the employee performance appraisal process. This system can later reduce the forms of mistakes that are generally often made by humans so that the work process will be better (Dyah Pratiwi, 2014). One suitable method for this purpose is profile matching. In the profile matching process, it is broadly a process of comparing the actual data value of a profile to be assessed with the expected profile value, so that competency differences can be known. With the concept that can determine the value of the weight of each existing criteria, so that later it will proceed to the ranking process that can make a selection of alternatives (Risa, 2016).

II. LITERATURE REVIEW

Decision Support System (SPK) is an interactive system that supports decisions in the decision making process through alternatives obtained from the results of data processing, information and design models (Yoga, 2014). DSS are usually built to support solutions to a problem or to evaluate an opportunity. SPK application is used in decision making. Decision Support System applications use CBIS (Computer Based Information Systems) that are flexible, interactive, and adaptable, developed to support solutions to specific management problems that are not structured. Decision Support System (SPK) or often called Decision Support System (DSS), is an interactive system that supports decision making through alternatives that are obtained from data processing, information and model design. DSS is a model-based system that consists of procedures in processing data and its considerations, to help managers make decisions (Haryani, 2019). In order to achieve its objectives, the system must be made simple, robust, easy to control, easy to adapt to important things, and easy to communicate. A

computer-based support system can be used as an additional problem solving tool.

Profile matching method is a method that is often used as a mechanism in decision making by assuming that there is an ideal level of variables that must be met by the subjects studied, rather than the minimum level that must be met or skipped. In the process of profile matching in broad outline is the process of comparing the actual data value of a profile to be assessed with the expected profile value, so that the competency differences (also called gaps) can be known, the smaller the gap produced, the greater the value weights (Mervin, 2018). The profile matching process is done by assuming that there is an ideal value for a variable (Budi, 2018). The stages of the profile matching process are as follows:

1. Determination of the gap value
2. Calculation of gap profile mapping
3. Calculation and grouping of core and secondary core values
4. Calculation of total value $N = (x\% * NCF) + (x\% * NSF)$
5. Ranking

III. PROPOSED METHOD

Broadly speaking, the overall stages of the study can be seen as follows:

1. Preliminary Study explains several design stages which are also literature studies and interviews conducted, namely:
 - Determine the location of research
 - Determine data requirements
2. Research Data
 - Observation
 - Collecting data by direct observation to the field
 - Sampling
 - Taking data / archives / forms / documents related to research
 - InterviewConduct interviews with related parties.
3. Data processing
4. Application of profile matching method
5. Software engineering.

The technique used in profile matching is to first determine the competencies (abilities) needed by a position. In the Profile Matching process, it is broadly a process of comparing individual competencies into position competencies so that different competencies can be identified which are called gaps. In the

assessment of outstanding employees using the profile matching method, criteria and weight are needed to perform calculations so that the best solution in determining employee achievement will be obtained. To support the determination of outstanding employees, it is explained in the table 1. This research only use 3 sample for testing Profile Matching method for this case.

In a study an analysis of the data to be processed needs to be done, this is because it can affect the stages of the research conducted, both the data requirements and system requirements. From several studies that have been done before with several methods, profile matching is chosen as a companion in the problems in this study. This is because profile matching not only has a core factor but also has a secondary factor as a comparative value in the workmanship concept. This research was conducted at the University of Prima Indonesia, for alternative variable data used in this study only used sample data to test the systems and methods used. As for the fixed weight value based on the provisions set by the agency. For the data processing stage using the profile matching method in this study was carried out as follows:

Table 1. Criteria variable

C1	The performance	Core factor
C2	Honesty	Core factor
C3	Discipline	Core factor
C4	Cooperation	Secondary factor
C5	Years of service	Secondary factor

In table 1 is a table of criteria used to assess employee performance, which consists of performance criteria, honesty, discipline, cooperation, and years of service. In each criterion has a very good rating aspect weighting with a value of 4, good value 3, good enough is 2, and not good is 1.

Table 2. Value alternative

	C1	C2	C3	C4	C5
A0001	4	3	4	4	2
A0002	2	4	3	4	4
A0003	4	4	3	3	4

the process of this method after getting the weight value for each alternative is to do a gap mapping, Weight gap mapping is done random.

Table 3. Mapping Gap

	C1	C2	C3	C4	C5
A0001	4	3	4	4	2
A0002	2	4	3	4	4
A0003	4	4	3	3	4
GAP	3	3	3	3	3
A0001	1	0	1	1	-1
A0002	-1	1	0	1	1
A0003	1	1	0	0	1

Table 5. Result Gap

	C1	C2	C3	C4	C5
A0001	4,5	5	4,5	4,5	4
A0002	4	4,5	5	4,5	4,5
A0003	4,5	4,5	5	5	4,5

After we obtain the value of the gap mapping, then the next thing to do is calculate the core factor and secondary factor and than calculate total value.

Table 6. Result CF and SF

A0001	NCF=	$\frac{4.5+5+4.5}{3}$	NSF=	$\frac{4.5+4}{2}$
		4.66		4.25
A0002	NCF=	4.5	NSF=	4.5
A0003	NCF=	4.66	NSF=	4.75

The percentage weight for the core factor is 60% while the secondary factor is 40%.

$$N = (x\% * NCF) + (x\% * NSF)$$

$$A0001 = (60\% * 4.66) + (40\% * 4.25)$$

$$A0001 = 2.79 + 1.7$$

$$A0001 = 4.49$$

$$A0002 = 2.7 + 1.84$$

$$A0002 = 4.54$$

$$A0003 = 2.79 + 1.9$$

$$A0003 = 4.69$$

IV. RESULT AND DISCUSSION

After the calculation process is carried out using sample data using Profile Matching, it is known that the results show the highest score in the A0003 sample while the lowest is in A0001.

This research also applies an application that is used as a profile matching container. this system will be used as a support for decision making in evaluating employee performance. Here are some of the appearance of the application design that will be applied.

Figure 1. Form login

The login system form is a user validation security system used in using this application like profile matching.

Figure 2. Site map form

On this initial page the admin can manage web header data, user data, alternative data and calculations or the results of the profile matching method.

No.	Kode Alternatif	Nama Alternatif	Pilihan
1	A0001	AKI	<input checked="" type="checkbox"/>
2	A0002	BUKTI	<input checked="" type="checkbox"/>
3	A0003	SITI	<input checked="" type="checkbox"/>

Figure 3. Alternative form

Kode Header	Nama Header	Alamat	Tipe	Foto	Logo	Pilihan
H0001	UIN Ponorogo	J. 101	011 000 00	011 000 00	000001.jpg	<input checked="" type="checkbox"/>

Figure 4. Header form

Form header is part of the system display that functions as a data processing container by using the method applied.

No.	Alternatif	Kinerja	Kejujuran	Disiplin	Kerja Sama	Masa Kerja	Status	Pilihan
1	A0001	4	3	4	4	2	aktif	<input checked="" type="checkbox"/>
2	A0002	2	4	3	4	4	aktif	<input checked="" type="checkbox"/>
3	A0003	4	4	3	3	4	aktif	<input checked="" type="checkbox"/>

Figure 5. Result form

Kode User	Nama Lengkap	Username	Level Akses	Status	Pilihan
UC001	Administrator	admin123	Admin	aktif	<input checked="" type="checkbox"/>
UC007	Data POB Ver 1.0.0	aaa	Super	aktif	<input checked="" type="checkbox"/>

Figure 6. User form

The result form displays data that has been processed using the profile matching method. while the user form functions to store and display data related to the user or operator.

V. CONCLUSION AND SUGGESTION

After the calculation process is carried out using sample data using Profile Matching, it is known that the results show the highest score in the A3 sample while the lowest is in A1. Based on the calculation,

the best employee with the best achievements and the right to receive rewards is A0003

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