Decision Support System For Scholarship Recipients WithPre-tasi Corporate Social Responbility(Csr) At Bina Insan University Usingn Methods (SMART)

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Abstract

Currently, UNIVERSITY BINA INSAN Lubuklinggau no longer offers online screening tools that allow students to apply for CORPORATE SOCIAL RESPONSIBILITY (CSR) scholarships publicly. The decision-making procedure for scholarship recipient students at BINA INSAN UNIVERSITY is online. rulers and documentaries about books related to the title. The effect of this research is the selection tool for the BINA INSAN UNIVERSITY Social Obligation (CSR) scholarship. This optional tutorial widget is transformed into a personal home page programming language that integrates with MYSQL as the preferred tutorial engine database and integrated business intelligence tool interface. web-based. It can be concluded that the selection of utility helpers is a fixed factor, a fixed factor, a practical additive that can connect and interact with each other to achieve the desired goal.

Keywords

Decision Support System, Simple Multi-Attribute Rating Technique(SMART), Scholarship CSR, Analysis

1. Introduction

The development of information technology is now too rapid, one of which is the internet in the field of technology in the world of education, the technological revolution has changed to facilitate information systems in the world. Technology networks make it easy to find and access information spread across the internet so that there are no limits to interacting with the global world. With the development of internet information technology, we have easy access to the global world. Information technology allows us to interact very easily in the era of globalization which means that integration is very useful in the world of education and technology. The idea of the development of information technology in the world of education has given birth to the idea of modernization in all areas of the needs of the global community.(UNIVBI).

University BINA INSAN Lubuklinggau currently does not have a decision support tool using the Simple Multi-Attribute Assessment (SMART) Method, which makes it easier for students to find information or expertise about scholarships. The process of information and making a decision for students who are eligible for scholarships at the University of Lubuklinggau has been carried out manually so that there are problems that arise, including scholarships that are not on target and data security is likely to be damaged and lost.

To improve the security of data storage, automatically the results of the calculation of the number of students who get scholarships, as well as the ease of providing information and making decisions to decide which students are eligible for scholarships with conditions that have been determined by the assisted universities, a Decision Support System for Outstanding Scholarship Recipients CORPORATE SOCIAL RESPONSBILITY (CSR) at the

University is needed. BINA INSAN Using the Method (SMART), so that students can get maximum service regarding information about scholarships and make it easier for universities to make choices for students who are eligible for outstanding scholarships quickly through internet media, So far the Corporate social responsibility (CSR) Process is still carried out manually by Bina Insan University through marketing, to get prospective students who are worthy of receiving CORPORATE SOCIAL RESPONSBILITY (CSR) marketing scholarships must come directly to schools, be it high schools (SMA), vocational universities (SMK) and state Madrasah Aliyah (MAN). and for prospective scholarship recipients must follow the scholarship acceptance selection process so that the provision of Corporate social responsibility (CSR) scholarships is right on target and objective, the CORPORATE SOCIAL RESPONSBILITY (CSR) Scholarship Program is not only accepting outstanding students but also for students who are experiencing economic difficulties and will see investment assistance for college children who excel and have the right instructional abilities, and marketing must come directly to school to carry out the process ofleximate prospective students who receive CORPORATE SOCIAL RESPONSBILITY (CSR) scholarships that meet the criteria.

1. Purpose

- a. Applying the Simple Multi Attribute Rating Technique (SMART) Method in the Selection Process for CSR Scholarship Recipients at human-assisted universities.
- b. Makeit easier for the campus to select and determine the worthy participants in the awarding of the CSR scholarship.
- c. Getting students who are right on target to excel so that the right CSR recipients to get scholarships.

2. Literature Review

Decision Support System is a system that supports decision making by completing information from data that has been processed in a relevant way, which is necessary to make faster and more accurate decisions about a problem.

Method (Simple Multi Attribute Rating Technique) is One of the decision support methods used to help decision makers choose between several alternatives, each decision maker must choose an alternative that is consistent with the goals that have been set.

3. Methods

Research Methods

In this study, the authors used descriptive research techniques, in particular the researcher used the actual residences and examples of the research subjects that the authors researched to collect notes, and described very well and meticulously the steps of solving the problem. Strong.

4. Data Collection

Data Collection Methods

In collecting the data needed as material for writing this report are:

1. Primary data

The methods used to collect primary data are as follows:

1.Observation Methods

The author conducts direct visits to the human development university bina insan and seeks to obtain important records by making direct observations to the human development UNIVERSITY BINA INSAN.

2.Interview Methods

Data collection is carried out by directly asking the scope of the human fostered university and conducting interviews with students who have passed the CSR Scholarship.

3.Documentation Methods

The author of facts both from the documents of the institution concerned and from relevant book books from various sources related to the topic of the problem, namely the calculation of the selection of admissions for participants in the CORPORATE SOCIAL RESPONSBILITY (CSR) scholarship using the SIMPLE MULTI ATTRIBUTE RATING TECHNIQUE (SMART) Method.

a. Data Sekunder

The process carried out by the author is to collect data from various existing sources (researchers as a second hand). Secondary data can be obtained from various sources such as books, reports, journals, and so on.

5. Results and Discussion SMART Calculation Analysis

SMART (*Simple Multi Attribute Rating Technique*) is a multi-attribute decision-making method developed by *Edward* in 1971 (Filho 2005). This approach was designed initially to provide an easy way to apply MAUT (*Multi-Attribute Utility Theory*) techniques. Over the years, failures in this method have been identified, and have been corrected (Edwards and Barron, 1994) that created the SMARTS and SMARTER methods, presenting two different forms tocorrect this deficiency.

The steps taken in the formulation of the SMART method in the case study of choosing a CSR scholarship are as follows an example of a case study:

A case study of the acceptance of the CSR scholarship at BINA INSAN UNIVERSITY which will be assessed based on suitable criteria as for the assessment criteria based on 5 important criteria and for the participants here with examples with the names of participants A, B, and C along with the results.

1. Determining criteria

Determine the criteria used in solving decision-making problems. To determine what criteria are used in this decision-making system, data from decision makers or authorized /competent parties on the problem to be resolved is needed. The following are the criteria obtained:

Criteria Name	
Value	
Academic achievement	
Non-Academic	
Achievements	
Parents' Income	
Parental Dependents	

2. Determining the Weight of criteria

Give each criterion weight by using an interval of 1-100 for each of the criteria with the most important priority. The following are the weight values of the criteria obtained:

No	Criteria Name	Weight Value
1	Value	0,4
2	Academic achievement	0,2
3	Non-Academic Achievements	0,15
4	Parents' Income	0,13
5	Parental Dependents	0,08

1. Table of respondents' assessment of participants

No	Respondent Assessment	Criteria value
1	Value	80
2	Academic Achievement	90

Participant table value A.

3	Non-Academic Achievements	60
4	Parents' Income	80
5	Parental Dependents	60

Participant table value B

No	Respondent Assessment	Criteria Value
1	Value	50
2	Academic Achievement	60
3	Non-Academic Achievements	70
4	Parents' Income	60
5	Parental Dependents	70

Participant table value C

No	Respondent Assessment	Criteria Value
1	Value	60
2	Academic Achievement	70
3	Non-Academic Achievements	50
4	Parents' Income	40
5	Parental Dependents	50

3. Determining the Value of Each Utility

Define *utility* values by converting the criteria values on each criterion into the criteria values of the default data. The value *of this utility* depends on the nature of the criteria themselves. The following is the utility value obtained from the results of the smart method:

1. Utility value of Participant A

-		Criteria	
No	Respondent Assessment	Value	Ui(ai)
1	Value	80	20
2	Academic Achievement	90	10
3	Non-Academic Achievements	60	40
4	Parents' Income	80	20
5	Parental Dependents	60	40

2. Utility value of participant b

		Criteria		
No	Respondent Assessment	Value	Ui(ai)	
1	Value	50	50	
2	Academic Achievement	60	40	
3	Non-Academic Achievements	70	30	

4	Parents' Income	60	40
5	Parental Dependents	70	30

3. Utility Value of participant c

		Value	
No	Respondent Assessment	Criteria	Ui(ai)
1	Value	60	40
2	Academic Achievement	70	30
3	Non-Academic Achievements	50	50
4	Parents' Income	40	60
5	Parental Dependents	50	50

4. Determines the Final Value of each participant's overall utilty.

Determine the final value of each by multiplying the value obtained from the normalization of the standard data criteria value by the normalized value of the weight of the criteria.

$$u(a_i) = \sum_{j=1}^{m} w_j u_i(a_i), \quad i = 1, 2, ...m$$

Table:Utility Value of Participant A

N0	Respondent assessment	Ui(ai)	wj	Ui(ai)
1	Value	20	0,4	8
2	Academic Achievement	10	0,2	2
3	Non-Academic Achievements	40	0,15	6
4	Parents' Income	20	0,13	2,6
5	Parental Dependents	40	0,08	3,2
Tota	al Utility Value of Participant A			21,8

Table:Utility Values Of Participant B

No	Respondent assessment	Ui(ai)	wj	Ui(ai)
1	Value	50	0,4	20
2	Academic Achievement	40	0,2	8
3	Non-Academic Achievements	30	0,15	4,5
4	Parents' Income	40	0,13	5,2
5	Parental Dependents	30	0,08	2,4
	Total Utility Value of Participant B			40,1

Table:Utility Values Of Participant C

No	Respondent assessment	Ui(ai)	wj	Ui(ai)
1	Value	40	0,4	16
2	Academic Achievement	30	0,2	6
3	Non-Academic Achievements	50	0,15	7,5
4	Parents' Income	60	0,13	7,8

_ 5	Parental Dependents	50	0,08	4
Total Value Utility of Participant C				41,3

5. The total score results of each participant A, B, and C.

Participant A = 21.8, Participant B = 40.1, Participant C = 41.3

So the suitable participants in the selection of the BINA INSAN UNIVERSITY CSR scholarship are C participants with a total score of 41.3 using the calculation of the SMART method decision support system.

6. Conclusion

Based on the existing discussion, conclusions can be drawn on the decision support system made, namely: Based on the results of the discussion, the decision support system will be built. Therefore, the author draws the conclusion that the decision support system for recipients of corporate social responsibility (CSR) of BINA INSAN UNIVERSITY uses a simple e Simple Multi-Attribute Assessment (SMART) method, can support BINA INSAN UNIVERSITY in the admission process for prospective students. will receive scholarships periodically. submenu of criteria scores that will be selected by the administrators and administrators, if elected by the administrator, the Supervisory board immediately checks the student's records to see if the student passed the selection no can upload a file showing that they have passed the scholarship selection.

References

At, P. T. Mayapada, and I. Bank, "ISSN 2303-1174 S.C. Naukoko., V. Ilat.," vol. 4, no. 1, pp. 1580–1587, 2016. G. B. Nayenggita, S. T. Raharjo, and R. Resnawaty, "THE PRACTICE OF COR P OR ATE SOCI AL R ESP ONSI

BI LI TY (CSR) IN INDONESIA," vol. 2, pp. 61–66, 2019. I.M.A. Santosa, Designing a Decision Support System for ECCE School Selection Using the SMART Method, National Conference on Systems & Informatics, 441-451, 2017.

E. Turban. & J.E. Aronson, Decision Support System and Intelligent System, 6th Edition, Prentice Hall Inc., New Jersey, 2001.

S.R. Andani & S. Wibowo, Decision Support System in Determining Scholarship Recipients With Fuzzy Sugeno, TECHSI: Vol. 10 No.1. 2018.

E. Yulianti, Car Selection Decision Support System With Simple Multy Attribute Rating (SMART) Method, Momentum Journal Vol. 17 No. 1, 2015.

Suryanto & M. Safrizal, Decision Support System for Selecting Exemplary Employees With SMART (Simple Multi Attribute Rating Technique) Method, CoreIT Journal Vol.1 No. 2, 2015.

Nurhasanah, Supporter of the Decision to Determine Scholarship Recipients Using the SMART (Simple Multi Attribute Rating Technique) Method, INTI Scientific Magazine Vol. XII No. 1, 2017.

D. Novianti, I. F. Astuti & D. M. Khiarina, Web-Based Decision Support System for Cafe Selection Using SMART (Simple Multi Attribute Rating Technique) Method, Proceedings of the FMIPA Unmul Science and Technology Seminar, 2016.

R. Yunitarini, Decision Support System for Selection of Best Radio Announcer, Scientific Journal of Microtech Vol. 1 No. 1, 2013.

P. Goodwin & G. Wright, Decision Analysis For Management, Judgment 3rd Edition, Newyork: John Wiley & Sons, 2004.

A. Kadir, Introduction to Information Technology, 2003.

H.D. Budiman, Decision Support System for Police Members against Candidates for Group Transfer Selection Using the SMART Method, http://repository.upi.edu/, 2013.

P. Wulandari, Decision Making Support System for Mobile Phone Selection Using SMART Method, http://digilib.ittelkom.ac.id/index.php?option=com_repository&Itemid=34&task=detail&nim=613041006, 2007. F.M. Kasie, Combining Simple Multiple Attribute Rating Technique and Analytical Hierarchy Process for Designing Multi-CriteriaPerformanceMeasurement Framework, Global Journal of Researches in Engineering Industrial Engineering Vol. 13 Issue 1 Version 1.0, Global Journal Inc, USA, 2013.