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Implementation of Technique for Order Preference by Similarity to Ideal Solution Method in the Selection of Integrated Islamic Elementary School

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Abstract
The process of selecting IIES is not a simple thing, parents must choose wisely and precisely which IIES will be a place for their children to get knowledge given that the learning routines and interactions carried out by children in the school will take place in no short time. At present, almost all parents who will choose a school, especially IIES for their children, must-visit IIES one by one to get information and compare each IIES, which of course will take a lot of time and money. Therefore, it is necessary to implement a method, the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method, which is able to help parents in choosing IIES according to their wishes. The results of this study are to provide the best alternative recommendations that have been determined based on the ranking of the TOPSIS calculation which consists of 8 criteria, namely accreditation criteria, entrance fee, school fee/month, facilities, parking yard, extracurricular, location and distance.

Keywords: *Integrated Islamic Elementary School (IIES), Integrated Islamic School (IIS), Technique for Order Preference by Similarity to Ideal Solution (TOPSIS)*

Introduction

The process of selecting an elementary school for children is not a simple thing, parents must choose wisely and precisely which school will be a place for their children to gain knowledge. Currently, there are many types of elementary schools that can be used as a choice for parents who will send their children to school starting from quality public elementary schools, natural schools, international elementary schools, religious-based elementary schools and so forth. One type of elementary school is the Integrated Islamic Elementary School (IIES) which is essentially a school that implements the concept of Islamic education based on the Qur'an and As-Sunnah [5].

Based on the official website of reference data from the Ministry of Education and Culture [8], it is known there are 20 elementary schools in Palembang that offers the concept of Integrated Islamic Elementary School (IIES) are scattered in various districts in the city of Palembang. Of the 20th Integrated Islamic Elementary School (IIES) is not yet known in detail the qualifications of each - each school. As a result of the lack of information that can be difficult for parents who want to include their children to Islamic Integrated Elementary School (IIES).

In this study, there are eight criteria that serve as the selection parameter is the school's accreditation, admission fees, tuition fees each month, the facilities available, the choice of extracurricular, courtyard parking, location and distance Integrated Islamic Elementary School (IIES) is. It - is needed to be considered for choosing the Integrated Islamic Elementary School (IIES) is appropriate for the child is a challenge for any parent in an attempt to print the generation that succeeded both academically and religiously, in addition to remember that learning routines and interaction of the child to the school will take place in a short time.

Based on these problems the researchers implement a method that can help parents who send their children to Integrated Islamic Elementary School (IIES) in selecting Integrated Islamic Elementary School (IIES) is appropriate. In this study, the method used is the method Technique For Order Preference By Similarity to Ideal Solution (TOPSIS) for TOPSIS has advantages, where alternatives are not only considered based on the best attributes but also by negative attributes simultaneously logically, represent human choice other than it has the simplicity in the presentation and calculation [1].

Theoretical Basis

Integrated Islamic School (IIS)

Integrated Islamic schools are schools enriched with Islamic moral education and additional religious subjects but still adhere to the national curriculum. Religious, general and extracurricular activities are systematically integrated with Islamic values and ethical codes. The IIS developed by young Islamists who are bound by the Muslim Brotherhood-inspired by the Tarbiyah Movement

has strengthened the trend towards the modernization of Islamic education and remains within the framework of the national education system [4].

Integrated Islamic School Network (IISN)

Integrated Islamic School prospered under some umbrella organization, the largest is IISN, Network Integrated Islamic School which was established in 2003 to coordinate the establishment and e operating integrated schools. IISN also supported by the da'wah activist Tarbiyah movement that wants to unite the people, especially given the fragmentation caused by a fierce political rivalry that has occurred among Muslims [4]. IISN formed by a number of practitioners and observers of Islamic education to maintain the quality of Integrated Islamic School. Based on Syarifudin (2009), IISN is an institution that allows for empowering schools - Islamic schools. The primary mission is to become an Islamic IISN, effective and quality [5].

Technique for order preference by similarity to ideal solution (TOPSIS)

Yoon and Hwang were the first to introduce the TOPSIS method, which is one of multiple criteria for the decision-making method. The principle of TOPSIS itself is that the alternative chosen must have the shortest distance from the positive ideal solution and the farthest from the negative ideal solution from a geometric point using the Euclidean distance to determine the relative distance from the alternative to the optimal solution. The positive ideal solution is the sum of all the best values that can be achieved for each attribute, while the negative ideal solution consists of all the worst values achieved for each attribute. This method has several advantages namely its simple concept, efficient calculation, easy to understand and has the ability to measure the relative performance of alternative decisions so that this method is widely used or chosen in completing a decision making [2].

Strengths and Weaknesses of TOPSIS Method

Here is an excess of TOPSIS method of [6]:

- Sound logic that represents the reason of man.
- A scalar value that is responsible for the best and the worst simultaneously.
- Simple calculation process that can be easily programmed into the spreadsheet.
- Alternative measures of performance all the attributes can be visualized on a polyhedron, at least for every two dimensions.

While the weakness of the TOPSIS method that is not the availability of weight, and checking the consistency of assessment [6] [7].

Methodology TOPSIS

The ideal alternative is the alternative which has the shortest distance from the positive ideal solution and the farthest from the negative ideal solution is the basic concept or idea of TOPSIS. This method offers a faster solution because the number of attributes will not affect the number of steps performed. TOPSIS itself in the last few years has been proven to be applicable in the decision making process in various fields such as manufacturing engineering, human resources, water management, policy development, engineering and transport planning. In the field of chemical engineering, to identify the best option this technique is combined with optimization procedures by considering economic and environmental factors [1].
Step in calculating the TOPSIS method [2][3][9] :
Step 1: Create a normalized decision matrix.

$$r_{ij} = \frac{x_{ij}}{\sqrt{\sum_{i=1}^{n} {x_{ij}}^2}} \quad \text{j=1,2,3,…,J,i=1,2,3,…,n (1)}$$

Where : rij = the normalized matrix [i] [j]
xij = the decision matrix [i] [j]

Step 2: Create a normalized weighted decision matrix.
$v_{ij} = w_j \text{ x } r_{ij}$ j=1,2,3,…,J,i =1,2,3,…,n (2)
Where : w_j = attribute weight j_{th}
$\sum_{i=1}^{J} w_j = 1$
Step 3: Determine the ideal solution matrix of positive and negative ideal solution matrix.
$A^+ = \{ {v_I}^+ ,\ldots, {v_J}^+ \} = \{(\max(\text{or } \min) v_{ij} \mid \text{j} \quad \text{J})\}$
j=1,2,3,…,J,i =1,2,3,…,n (3)
$A^- = \{ {v_I}^- ,\ldots, {v_J}^- \} = \{(\min(\text{or } \min) v_{ij} \mid \text{j} \quad \text{J})\}$
j=1,2,3,…,J,i =1,2,3,…,n (4)
Where : vj + = max vij, if j is an attribute profits
min vij, if j is an attribute charge
vj- = min vij, if j is an attribute profits
max vij, if j is an attribute charge

Step 4: Determine the distance between the value of each alternative with a matrix of a positive ideal solution and a negative ideal solution matrix.

$$D_i^+ = \sqrt{\sum_{j=1}^{J} \left(v_{ij} - v_j^+\right)^2} \quad \text{j=1,2,3,…,J (5)}$$

$$D_i^- = \sqrt{\sum_{j=1}^{J} \left(v_{ij} - v_j^-\right)^2} \quad \text{j=1,2,3,…,J (6)}$$

Where : Di + = alternative distance Ai with a positive ideal solution
Di- = distance of alternative Ai with negative ideal solution
vi + = positive ideal solution [i]
vi- = negative ideal solution [i]
vij = weighted normalization matrix [i] [j]
Step 5: Determine the preference value for each alternative.

$$C_i^+ = \frac{D_i^-}{D_i^+ + D_i^-} \quad \text{i = 1,2,3,…n (7)}$$

Where : Vi = proximity of each alternative to the ideal solution
At + = alternative distance Ai with a positive ideal solution
Di- = distance of alternative Ai with a negative ideal solution
A greater value of Vi indicates that alternative Ai is preferred.
Step 6: Sort order of preference based on the order of C_i^+.

RESULTS AND DISCUSSION

Simulation calculation of election cases Integrated Islamic Elementary School (IIES) in Palembang:
Step 1: Create a normalized decision matrix.

Table 1. Criteria For Selection of Integrated Islamic Elementary Scholl (IIES) In Palembang

No.	Criteria	Initials	Weight	Information
1.	Accreditation	C1	5	Benefit
2.	Entry fee	C2	4	Cost
3.	School Fees / Months	C3	4	Cost
4.	Facilities	C4	4	Benefit
5.	Extracurricular	C5	3	Benefit
6.	Locations	C6	5	Benefit
7.	Distance	C7	4	Cost
8.	Parking Yard	C8	3	Benefit

Table 2. Criteria For Accreditation

No.	Range	Information	Weights (W)
1.	A	Very Good	5
2.	B	Well	5
3.	C	Pretty good	3
4.	Accredited yet	Very bad	1

Table 3. Criteria For Entry Fee

No.	Range	Information	Weights (W)
1.	Rp. 500.000,00 - Rp. 4,222,000.00	Very Cheap	5
2.	Rp. 4,222,000.10 - Rp. 7,944,000.10	Cheap	4
3.	Rp. 7,944,000.20 - Rp. 11,666,000.20	Cheap Enough	3
4.	Rp. 11,666,000.30 - Rp. 15,388,000.30	Expensive	2
5.	Rp. 15,388,000.40 - Rp. 19,110,000.40	Very Expensive	1

Table 4. Criteria For School Fees / Months

No.	Range	Information	Weights (W)
1.	Rp. 185,000.00 – Rp. 418,000.00	Very Cheap	5
2.	Rp. 418,000.10 - Rp. 651,000.10	Cheap	4
3.	Rp. 651,000.20 - Rp. 884,000.20	Cheap Enough	3
4.	Rp. 884,000.30 – Rp. 1,117,000.30	Expensive	2
5.	Rp. 1,117,000.40 - Rp. 1,350,000.40	Very Expensive	1

Table 5. Criteria For Facilities

No.	Facilities	Weights (W)
1.	Auditorium, Swimming Pool, Consulting Psychology & Accident Insurance	5
2.	Wifi, CCTV, catering, Shuttle Children & Health services	4
3.	Computer Lab, Science Lab, Multimedia Lab, Math Lab & Classroom with Air conditioned	3
4.	Cooperative, Mosque / Mosque, Halls & Diner	2
5.	SHU, Library, Sports Field & Playground	1

Table 6. Criteria For Extracurricular

No.	Extracurricular	Weights (W)
1.	Dance, Karate, Scout, Tahfidz Al - Quran & English Club	5
No.	**Extracurricular**	**Weights (W)**
2.	Pencak Silat, Robotic, Archery, Futsal, Arabic Club, Group of Islamic Art & Taekwondo	4
3.	Marching Band, Swimming, Painting, Tahsin Al -Quran, Computer, Music Arts & Mathematics	3
4.	Quran recitations, Young Da'i, Public Speaking Training, Theater & Science Club	2
5.	Multimedia Club, Table Tennis, Coloring, Chess, Paskibra and Red Cross Youth (RCY)	1

Table 7. Criteria For Location

No.	Locations	Weights (W)
1.	On the Side of a Medium Road	5
2.	Residents of Housing Area	4
3.	Shopping District	3
4.	On the edge of the highway	2
5.	Office Area	1

Table 8. Criteria For Distance

No.	Range	Information	Weights (W)
1.	< 2 Km	Very close	5
2.	2.1 Km – 4 Km	Close	4
3.	4.1 Km – 8 Km	Far enough	3
4.	8.1 Km – 10 Km	Far	2
5.	> 10 Km	Very far	1

Table 9. Criteria For Parking Yard

No.	Parking Yard	Weights (W)
1.	Very wide	5
2.	Large	4
3.	Broad enough	3
4.	Not Broad	2
5.	Very Not Broad	1

Table 10. Data Suitability Of Any Alternative To Criteria

Alternative	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
A1	3	4	5	2	5	4	5	2
A2	5	1	2	5	5	3	2	4
A3	5	2	3	4	5	3	3	4
A4	3	1	1	4	5	3	3	4
A5	3	2	3	5	5	5	3	3
A6	3	4	5	3	5	4	4	4
A7	4	5	5	3	5	5	3	3
A8	5	5	5	2	5	5	3	2
A9	4	3	5	4	5	4	4	5
A10	5	4	5	4	5	4	4	5
A11	4	2	4	5	5	5	3	3
A12	4	3	5	2	5	4	4	4
A13	4	2	4	4	5	5	3	3
A14	4	4	4	4	5	4	4	5
Alternative	**Criteria**							
	C1	C2	C3	C4	C5	C6	C7	C8
A15	5	1	3	4	5	5	3	4
A16	4	3	5	4	5	3	3	4
A17	4	5	5	2	5	4	4	5
A18	4	4	4	3	5	4	5	4
A19	5	1	3	4	5	5	3	3
A20	4	3	4	5	5	5	3	5

The formula to find the normalized decision matrix can be seen in the formula (1). Then obtained :

$$R=\begin{pmatrix}
0{,}16128 & 0{,}27537 & 0{,}2688 & 0{,}11806 & 0{,}224 & 0{,}2097 & 0{,}3169 & 0{,}11433\\
0{,}2688 & 0{,}06884 & 0{,}1075 & 0{,}29514 & 0{,}224 & 0{,}1572 & 0{,}1267 & 0{,}22866\\
0{,}2688 & 0{,}13769 & 0{,}1613 & 0{,}23611 & 0{,}224 & 0{,}1572 & 0{,}1901 & 0{,}22866\\
0{,}16128 & 0{,}06884 & 0{,}0538 & 0{,}23611 & 0{,}224 & 0{,}1572 & 0{,}1901 & 0{,}22866\\
0{,}16128 & 0{,}13769 & 0{,}1613 & 0{,}29514 & 0{,}224 & 0{,}2621 & 0{,}1901 & 0{,}1715\\
0{,}16128 & 0{,}27537 & 0{,}2688 & 0{,}17708 & 0{,}224 & 0{,}2097 & 0{,}2535 & 0{,}22866\\
0{,}21504 & 0{,}34421 & 0{,}2688 & 0{,}17708 & 0{,}224 & 0{,}2621 & 0{,}1901 & 0{,}1715\\
0{,}2688 & 0{,}34421 & 0{,}2688 & 0{,}11806 & 0{,}224 & 0{,}2621 & 0{,}1901 & 0{,}11433\\
0{,}21504 & 0{,}20653 & 0{,}2688 & 0{,}23611 & 0{,}224 & 0{,}2097 & 0{,}2535 & 0{,}28583\\
0{,}2688 & 0{,}27537 & 0{,}2688 & 0{,}23611 & 0{,}224 & 0{,}2097 & 0{,}2535 & 0{,}28583\\
0{,}21504 & 0{,}13769 & 0{,}215 & 0{,}29514 & 0{,}224 & 0{,}2621 & 0{,}1901 & 0{,}1715\\
0{,}21504 & 0{,}20653 & 0{,}2688 & 0{,}11806 & 0{,}224 & 0{,}2097 & 0{,}2535 & 0{,}22866\\
0{,}21504 & 0{,}13769 & 0{,}215 & 0{,}23611 & 0{,}224 & 0{,}2621 & 0{,}1901 & 0{,}1715\\
0{,}21504 & 0{,}27537 & 0{,}215 & 0{,}23611 & 0{,}224 & 0{,}2097 & 0{,}2535 & 0{,}28583\\
0{,}2688 & 0{,}06884 & 0{,}1613 & 0{,}23611 & 0{,}224 & 0{,}2621 & 0{,}1901 & 0{,}22866\\
0{,}21504 & 0{,}20653 & 0{,}2688 & 0{,}23611 & 0{,}224 & 0{,}1572 & 0{,}1901 & 0{,}22866\\
0{,}21504 & 0{,}34421 & 0{,}2688 & 0{,}11806 & 0{,}224 & 0{,}2097 & 0{,}2535 & 0{,}28583\\
0{,}21504 & 0{,}27537 & 0{,}215 & 0{,}17708 & 0{,}224 & 0{,}2097 & 0{,}3169 & 0{,}22866\\
0{,}2688 & 0{,}06884 & 0{,}1613 & 0{,}23611 & 0{,}224 & 0{,}2621 & 0{,}1901 & 0{,}1715\\
0{,}21504 & 0{,}20653 & 0{,}215 & 0{,}29514 & 0{,}224 & 0{,}2621 & 0{,}1901 & 0{,}28583
\end{pmatrix}$$

Step 2: Create a normalized weighted decision matrix.
To determine the weighted decision matrix normalization using the formula (2).
Then obtained :

$$V=\begin{pmatrix}
0{,}8064 & 1{,}10149 & 1{,}07521 & 0{,}47223 & 0{,}67082 & 1{,}04828 & 1{,}26745 & 0{,}343\\
1{,}34401 & 0{,}27537 & 0{,}43008 & 1{,}18056 & 0{,}67082 & 0{,}78621 & 0{,}50698 & 0{,}68599\\
1{,}34401 & 0{,}55074 & 0{,}64512 & 0{,}94445 & 0{,}67082 & 0{,}78621 & 0{,}76047 & 0{,}68599\\
0{,}8064 & 0{,}27537 & 0{,}21504 & 0{,}94445 & 0{,}67082 & 0{,}78621 & 0{,}76047 & 0{,}68599\\
0{,}8064 & 0{,}55074 & 0{,}64512 & 0{,}70834 & 0{,}67082 & 1{,}31036 & 0{,}76047 & 0{,}5145\\
0{,}8064 & 1{,}10149 & 1{,}07521 & 0{,}70834 & 0{,}67082 & 1{,}04828 & 1{,}01396 & 0{,}68599\\
1{,}07521 & 1{,}37686 & 1{,}07521 & 0{,}47223 & 0{,}67082 & 1{,}31036 & 0{,}76047 & 0{,}5145\\
1{,}34401 & 1{,}37686 & 1{,}07521 & 0{,}94445 & 0{,}67082 & 1{,}31036 & 0{,}76047 & 0{,}343\\
1{,}07521 & 0{,}82611 & 1{,}07521 & 0{,}94445 & 0{,}67082 & 1{,}04828 & 1{,}01396 & 0{,}85749\\
1{,}34401 & 1{,}10149 & 1{,}07521 & 1{,}18056 & 0{,}67082 & 1{,}04828 & 1{,}01396 & 0{,}85749\\
1{,}07521 & 0{,}55074 & 0{,}86017 & 0{,}47223 & 0{,}67082 & 1{,}31036 & 0{,}76047 & 0{,}5145\\
1{,}07521 & 0{,}82611 & 1{,}07521 & 0{,}94445 & 0{,}67082 & 1{,}04828 & 1{,}01396 & 0{,}68599\\
1{,}07521 & 0{,}55074 & 0{,}86017 & 0{,}94445 & 0{,}67082 & 1{,}31036 & 0{,}76047 & 0{,}5145\\
1{,}07521 & 1{,}10149 & 0{,}86017 & 0{,}94445 & 0{,}67082 & 1{,}04828 & 1{,}01396 & 0{,}85749\\
1{,}34401 & 0{,}27537 & 0{,}64512 & 0{,}94445 & 0{,}67082 & 1{,}31036 & 0{,}76047 & 0{,}68599\\
1{,}07521 & 0{,}82611 & 1{,}07521 & 0{,}94445 & 0{,}67082 & 0{,}78621 & 0{,}76047 & 0{,}68599\\
1{,}07521 & 1{,}37686 & 1{,}07521 & 0{,}47223 & 0{,}67082 & 1{,}04828 & 1{,}01396 & 0{,}85749\\
1{,}07521 & 1{,}10149 & 0{,}86017 & 0{,}70834 & 0{,}67082 & 1{,}04828 & 1{,}26745 & 0{,}68599\\
1{,}34401 & 0{,}27537 & 0{,}64512 & 0{,}94445 & 0{,}67082 & 1{,}31036 & 0{,}76047 & 0{,}5145\\
1{,}07521 & 0{,}82611 & 0{,}86017 & 1{,}18056 & 0{,}67082 & 1{,}31036 & 0{,}76047 & 0{,}85749
\end{pmatrix}$$

Step 3: Determine the ideal solution matrix of positive and negative ideal solution matrix.
Calculating the positive ideal solution matrix (A^+) is determined by the highest value obtained from each criterion in the weighted normalized table and for the cost criteria makes positive ideal solution (A^+) is the lowest value and vice versa negative ideal solution matrix (A^-) is determined by the lowest value obtained from each criterion in the normalized table is weighted and for the criterion the cost of the negative ideal solution (A^-) is the highest value.

$V8^{+}$ = 0,85749 $V8^{-}$ = 0,343

$V1^{+}$ = {(maxVi)} **Vi^{-} = {(minVi)}**

Then obtained:
$V1^{+}$ = 1,34401
$V2^{+}$ = 0,27537
$V3^{+}$ = 0,215
$V4^{+}$ = 1,18056
$V5^{+}$ = 0,671
$V6^{+}$ = 1,3104
$V7^{+}$ = 0,507

Then obtained:
$V1^{-}$ = 0,8064
$V2^{-}$ = 1,37686
$V3^{-}$ = 1,0752
$V4^{-}$ = 0,47223
$V5^{-}$ = 0,671
$V6^{-}$ = 0,7862
$V7^{-}$ = 1,2674

Step 4: Determine the distance between the value of each alternative with a matrix of a positive ideal solution and negative ideal solution matrix. The formula to calculate the distance positive ideal solution alternatives can be seen in the formula (5). The formula to calculate the distance the negative ideal solution alternatives can be seen in the formula (6).
Then obtained the results as the table below:

Table 11. Positive Alternative Solution Ideal Distance ($\mathbf{A^{+}}$) and Negative ($\mathbf{A^{-}}$)

$\mathbf{D^{+}}$		$\mathbf{D^{-}}$	
$\mathbf{D1^{+}}$	1.76771	$\mathbf{D1^{-}}$	.3801
$\mathbf{D2^{+}}$	0.59193	$\mathbf{D2^{-}}$	1.7653
$\mathbf{D3^{+}}$	0.82761	$\mathbf{D3^{-}}$	1.3244
$\mathbf{D4^{+}}$	0.84449	$\mathbf{D4^{-}}$	1.5971
$\mathbf{D5^{+}}$	0.85541	$\mathbf{D5^{-}}$	1.3894
$\mathbf{D6^{+}}$	1.5131	$\mathbf{D6^{-}}$	.6182
$\mathbf{D7^{+}}$	1.55894	$\mathbf{D7^{-}}$	.8302
$\mathbf{D8^{+}}$	1.66849	$\mathbf{D8^{-}}$	0,906
$\mathbf{D9^{+}}$	1.22348	$\mathbf{D9^{-}}$	.9981
$\mathbf{D10^{+}}$	1.34306	$\mathbf{D10^{-}}$	0.9927
$\mathbf{D11^{+}}$	0.86381	$\mathbf{D11^{-}}$	1.3652
$\mathbf{D12^{+}}$	1.40439	$\mathbf{D12^{-}}$	.7913
$\mathbf{D13^{+}}$	.8955	$\mathbf{D13^{-}}$	1.259
$\mathbf{D14^{+}}$	1.24594	$\mathbf{D14^{-}}$	.9028
$\mathbf{D15^{+}}$	0.57826	$\mathbf{D15^{-}}$	1.5999
$\mathbf{D16^{+}}$	1.24081	$\mathbf{D16^{-}}$	0.9865
$\mathbf{D17^{+}}$	1.68904	$\mathbf{D17^{-}}$	.6855
$\mathbf{D18^{+}}$	1.43886	$\mathbf{D18^{-}}$	.6606
$\mathbf{D19^{+}}$	.6501	$\mathbf{D19^{-}}$	1.5721
$\mathbf{D20^{+}}$	0.92521	$\mathbf{D20^{-}}$	1.3115

Step 5: Determine the preference value for each alternative. After that, to determine the value of a preference for the ideal solution to be taken by using the formula (7).

Then obtained the following results :

Table 12. Result of Preference Will Value Calculation

A	D	*Rank*
A1	0.17699	20
A2	0.74888	1
A3	0.61543	6
A4	0.65413	4
A5	0.61893	5
A6	0.29006	18
A7	0.34748	16
A8	0.35191	15
A9	0.44928	10
A10	0.42501	12
A11	0.61247	7
A12	0.36039	14
A13	0.58436	9
A14	0.42014	13
A15	0.73452	2
A16	0.44292	11
A17	0.28868	19
A18	0.31466	17
A19	0.70745	3
A20	0.58635	8

Step 6: Sort order of preference based on the order of C_i^+
Then obtained the following results :

Table 13. Ranking of Alternative Integrated Islamic Elementary School (IIES)

Rank	Alternative
1	IIES Al - Furqon Palembang
2	IIES Auladi Palembang
3	IIES Harapan Mulia Palembang
4	IIES Izzuddin Palembang
5	IIES Insan Mandiri Palembang Scholar
6	IIES Bina Ilmi Cab. Lemabang
7	IIES Fathona Cab. Lemabang
8	IIES Prima Insani Palembang
9	IIES Azzam pearl Palembang
10	IIES Azizah Palembang
11	IIES Ar Ridho Palembang
12	IIES Palembang Darussalam
13	IIES Ulil Albab Palembang
14	IIES Kamiliyah Palembang
15	IIES Nurul Iman Palembang
16	IIES Alhanan Palembang
17	IIES Salsabila Palembang
18	IIES Tarbawi Palembang
19	IIES Permata Hati Palembang
20	IIES Mushab bin Umair Palembang

From the table above, it is known that alternative 2 is recommended based on the weight of each criterion. Alternative 2 is the Integrated Islamic Elementary School (IIES) Al-Furqon Palembang and it can be seen that the last alternative is alternative 1 which is the Integrated Islamic Elementary School (IIES) Mushab bin Umair Palembang.

CONCLUSION

There are various methods that can be used to assist in the selection under conditions of multi-criteria problems. In this study, the authors chose to use methods TOPSIS of the many methods exist, because the alternative rankings based on the relative similarity with the ideal solution, which has an index of similarity avoid situations similar to the ideal and negative ideal solution is ideal. TOPSIS method is a practical and useful technique to rank and choose an alternative. This study used eight criteria used for consideration in the selection process of the Islamic Integrated Elementary School and consists of 20 attributes or options. Based on the calculation process using the TOPSIS method is known that IIES Al - Furqon Palembang was ranked first by value preferences will of0.74888 and in the last position occupied by IIES Mus'ab bin 'Umair with preferences will value of 0.17699.

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