16% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography

Exclusions

- 9 Excluded Matches

Match Groups

52 Not Cited or Quoted 14%
Matches with neither in-text citation nor quotation marks

8 Missing Quotations 2%
Matches that are still very similar to source material

0 Missing Citation 0%
Matches that have quotation marks, but no in-text citation

0 Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

13% Internet sources
10% Publications
10% Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

Jurnal Revi Gusriva.docx

Yayasan Vitka

Document Details

Submission ID

trn:oid:::7704:151116821

Submission Date

Sep 9, 2026, 4:59 PM GMT+7

Download Date

Sep 9, 2026, 5:03 PM GMT+7

File Name

Jurnal Revi Gusriva.docx

File Size

281.4 KB

11 Pages

3,892 Words

23,162 Characters

Match Groups

- **52** Not Cited or Quoted 14%
  Matches with neither in-text citation nor quotation marks
- **8** Missing Quotations 2%
  Matches that are still very similar to source material
- **0** Missing Citation 0%
  Matches that have quotation marks, but no in-text citation
- **0** Cited and Quoted 0%
  Matches with in-text citation present, but no quotation marks

Top Sources

13% Internet sources
10% Publications
10% Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Internet	journal.sah.co.id	<1%
2	Internet	mdpi-res.com	<1%
3	Publication	Aditiya Hermawan, Evan -. "Hotel Recommendation System Using SAW (Simple Ad...	<1%
4	Submitted works	Ho Chi Minh University of Technology and Education on 2023-05-24	<1%
5	Internet	journals.upi-yai.ac.id	<1%
6	Internet	e-journal.upm.ac.id	<1%
7	Internet	journal-isi.org	<1%
8	Internet	conference.untag-sby.ac.id	<1%
9	Internet	dinastipub.org	<1%
10	Submitted works	Universitas Sembilanbelas November Kolaka on 2022-04-18	<1%

11	Internet	
gyanganga.ai		<1%
12	Internet	
jurnal.amikom.ac.id		<1%
13	Submitted works	
Universitas Islam Bandung on 2026-01-20		<1%
14	Internet	
jurnal.murnisadar.ac.id		<1%
15	Submitted works	
Universitas Islam Bandung on 2026-04-29		<1%
16	Submitted works	
Singapore Management University on 2017-11-15		<1%
17	Internet	
www.coursehero.com		<1%
18	Internet	
www.ijcai.org		<1%
19	Internet	
ijahp.org		<1%
20	Internet	
ijisrt.com		<1%
21	Submitted works	
School of Business and Management ITB on 2025-02-26		<1%
22	Publication	
Zhou Hong. "A multi-attribute group decision-making method approaching to gr...		<1%
23	Internet	
globaltree.in		<1%
24	Publication	
Maya Asmita, Henny, Gandung Triyono. "Pendukung Keputusan dalam Penentua...		<1%

25 Internet

dokumen.pub <1%

26 Submitted works

FAM on 2026-08-20 <1%

27 Publication

Fatih Ecer, Ejder Aycin. "Novel Comprehensive MEREC Weighting-Based Score Agg... <1%

28 Publication

Fatma Betül Yeni, Gökhan Özçelik. "Interval-Valued Atanassov Intuitionistic Fuzzy... <1%

29 Publication

Güvenç, Erdinç. "Customer Oriented Multi Criteria Decision Making Approach Un... <1%

30 Publication

Rajesh S. Prabhu Gaonkar. "Multi-Attribute Decision-Making - Theory, Emerging ... <1%

31 Submitted works

Teaching and Learning with Technology on 2026-03-15 <1%

32 Submitted works

Universidad Carlos III de Madrid - EUR on 2026-09-06 <1%

33 Internet

ejournal.abcollab.id <1%

34 Internet

jes-tm.org <1%

35 Internet

jurnal.harianregional.com <1%

36 Internet

public-pages-files-2025.frontiersin.org <1%

37 Internet

www.growingscience.com <1%

38 Submitted works

King Fahd University for Petroleum & Minerals on 2026-05-03 <1%

39 Submitted works

The University of Manchester on 2012-09-03 <1%

40 Submitted works

University of Greenwich on 2026-05-19 <1%

41 Publication

Cemile Angay, Eda Çinaroğlu. "Chapter 4 Analysis of COVID-19 Pandemic Perform... <1%

JOCSTEC
Journal of Computer Science and Technology
Volume X ; Nomor X ; Bulan Tahun ; Page 00-00
DOI : https://doi.org/10.59435/jocstec.xxxx.x
https://jurnal.padangtekno.com/index.php/jocstec
E-ISSN : 2985-4318
P-ISSN : 2985-5772

MULTI-CRITERIA EVALUATION OF STUDENT CAREER READINESS USING AN INTELLIGENT TOPSIS-BASED DECISION SUPPORT SYSTEM

Revi Gusriva[1*]

[1]Informatics Engineering, Universitas Putra Indonesia YPTK Padang

[1*] revirvg31@gmail.com

ABSTRACT

The assessment of student career readiness requires a systematic approach that considers multiple competencies and experiences relevant to workplace demands. This study develops an intelligent
14 decision support system based on the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) to evaluate and map student career readiness. The study uses 20 student samples and five assessment criteria: field-specific competence (C1), internship experience (C2), communication
25 skills (C3), digital literacy (C4), and English language proficiency (C5). Each criterion is assigned a
5 weight according to its importance. The TOPSIS method involves decision matrix construction, normalization, weighted normalization, determination of positive and negative ideal solutions, distance calculation, and preference value calculation. The results show that Y11 achieved the highest preference value (0.8296), followed by Y6 (0.7951), Y19 (0.7274), Y5 (0.7116), and Y2 (0.6999), while Y9 obtained the lowest value (0.3112). These findings demonstrate that TOPSIS can effectively rank and map student career readiness based on multiple criteria. The proposed system can support educational institutions in identifying students' readiness levels and developing more objective career development strategies.

Keyword : Career Readiness-1, Decision Support System-2, Students, Multi-Criteria-3, TOPSIS-4, Career Assessment-5

INTRODUCTION

The increasingly dynamic nature of the professional world demands that students possess career readiness supported not only by academic ability but also by competencies and the capacity to adapt to professional environments. Nuriani et al. Indicate that student career readiness requires further strengthening, particularly regarding adaptability and career planning [1]. Internship experiences also contribute to students' job readiness, communication skills, collaboration abilities, and digital competencies [2]. Furthermore, digital literacy and adaptability are becoming increasingly important in enhancing students' employability competencies [3]. Career readiness is a multidimensional concept encompassing soft skills, hard skills, communication, digital literacy, adaptability, and practical experience; therefore, an approach capable of simultaneously considering various criteria is
4 required. TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) is a Multi-Criteria Decision Making (MCDM) method that can be used to evaluate alternatives based on their proximity to an ideal solution. Research by Arman et al. Applied TOPSIS to recommend career alternatives for students based on competencies, achieving a testing accuracy of 96% [4]. The application of TOPSIS also demonstrates its capability in addressing student decision-making problems involving multiple
6 criteria. Ishak et al. [5] utilized TOPSIS to identify top-performing students based on proximity to the ideal solution, while [6] Developed a TOPSIS-based Decision Support System (DSS) incorporating both academic and non-academic criteria to generate more objective decisions.

E-ISSN : 2985-4318
P-ISSN : 2985-5772

A Decision Support System (DSS) is used to assist in decision-making based on predetermined criteria. Decision-making involves a systematic approach to a problem, encompassing the process of transforming data into information and incorporating factors that must be considered during the decision-making process [7]. Decision-making is the process of selecting an alternative course of action to achieve specific goals or objectives [8]. DSS methods are problem-solving techniques suitable for implementation within a system, enabling the system to facilitate decisions regarding high-performing employees in a hospital setting [9]. The characteristics of a Decision Support System are as follows [9]: 1. There are multiple choices or alternatives. 2. There are constraints involved in the decision-making process. 3. There is a pattern or model used to determine the best course of action amidst constraints. 4. There are multiple criteria or variables serving as references for the decision. 5. There are risk factors involved, requiring speed, precision, and accuracy in the decision outcomes [10].

TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) is a Multi-Criteria Decision Making (MCDM) method that identifies the best alternative based on its proximity to the positive ideal solution and its distance from the negative ideal solution [11]. This method allows for the integration of various criteria with differing characteristics, thereby systematically ranking alternatives [12]. Its implementation involves several stages: constructing the decision matrix, normalization, weighting, determining positive and negative ideal solutions, calculating the distance of each alternative, and determining preference values [13]. TOPSIS is capable of handling both benefit and cost criteria, making it applicable to a wide range of decision-making problems [14]. Utilizing TOPSIS within a decision support system can enhance objectivity and transparency, as the evaluation process relies on structured mathematical procedures [15]. In the field of education, the TOPSIS method has been applied to rank students based on various indicators [6]. Furthermore, TOPSIS can be combined with weighting methods—such as Entropy Weighting—to derive criterion weights more objectively [16]. Recent research has also advanced TOPSIS by incorporating more adaptive distance approaches to address inter-attribute correlations in complex decision-making scenarios [13]. Differences in weighting methods can influence criterion priorities and the stability of ranking results; consequently, determining weights is a crucial aspect of TOPSIS implementation [17].

METHODOLOGY

This study employs a quantitative approach using the Multi-Criteria Decision Making (MCDM) method—specifically the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS)—to evaluate and rank students' career readiness. The criteria utilized include disciplinary competence (C1), internship or project experience (C2), communication skills (C3), skills (C4), digital literacy (C5), and English proficiency. These six criteria serve as the assessment variables for measuring the students' level of career readiness. Data were gathered from academic and non-academic records as well as questionnaires, with each criterion weighted according to its level of importance. All criteria were categorized as "benefit" criteria, as higher values indicate a higher level of career readiness. The data were then processed through the TOPSIS stages: normalization, weighting, determination of positive and negative ideal solutions, distance calculation, and the derivation of preference values. The final results were used to determine the rankings and career readiness categories for the students: highly ready, ready, moderately ready, and not yet ready.

Journal of Computer Science and Technology
E-ISSN : 2985-4318
P-ISSN : 2985-5772

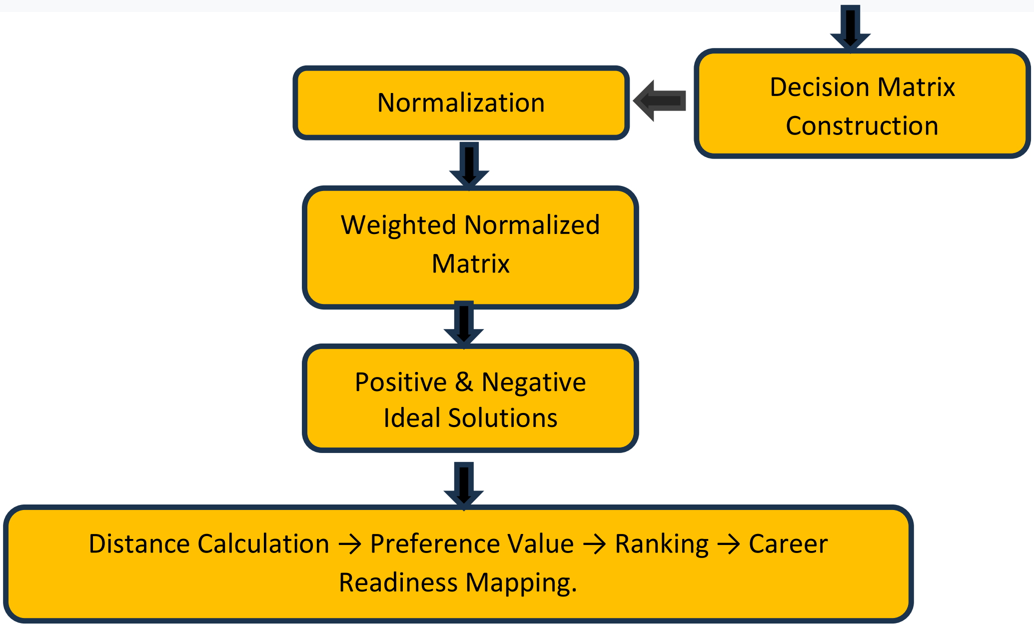

Figure 1. Research Methodology

The following are the steps of the TOPSIS method for determining the final result:

1. Construct a normalized decision matrix using the formula:

$$r_{ij} = \frac{x_{ij}}{\sqrt{\Sigma_{i=1}^{m} x^2{}_{ij}}} \qquad (1)$$

Where,
r = normalized decision matrix
x = alternative value

2. Calculate the weighted normalized value using the formula:

$$y_{ij} = w_i . r_{ij} \qquad (2)$$

Where,
y = weighted normalized decision matrix
w = weights
r = normalized decision matrix

3. Determining the negative ideal solution value using the formula:

$$A^+ = (y_1^+, y_2^+, \dots, y_n^+) \qquad (3)$$

Type equation here.

4. Determining the negative ideal solution value using the formula

$$:A^- = (y_1^-, y_2^-, \dots, y_n^-) \qquad (4)$$

5. Determine the distance of the weighted values from the positive and negative ideal solutions using the equation:

$$D_i^+ = \sqrt{\Sigma_j^n} = i\left(y_1^+ - y_{ij}\right)^2 \quad (5)$$

$$D_i^- = \sqrt{\Sigma_j^n} = i\left(y_{ij} - y_1^-\right)^2 \qquad (6)$$

6. determine the preference value for each alternative, using the equation:

$$V_1 = \frac{D_1^-}{D_1^- + D_1^+} \qquad (7)$$

The following are the steps of the TOPSIS method for determining the final result:

4. Construct a normalized decision matrix using the formula:

$$r_{ij} = \frac{x_{ij}}{\sqrt{\Sigma_{i=1}^{m} x^2{}_{ij}}} \qquad (1)$$

Journal of Computer Science and Technology
E-ISSN : 2985-4318
P-ISSN : 2985-5772

Where,
r = normalized decision matrix
x = alternative value

5. Calculate the weighted normalized value using the formula:
$y_{ij} = w_i . r_{ij}$ (2)
Where,
y = weighted normalized decision matrix
w = weights
r = normalized decision matrix
6. Determining the negative ideal solution value using the formula:
$A^+ = (y_1^+, y_2^+, \dots, y_n^+)$ (3)

7. Determine the distance of the weighted values from the positive and negative ideal solutions using the equation:
$D_i^+ = \sqrt{\Sigma_j^n = i\ (y_1^+ - y_{ij})^2}$ (5)
$D_i^- = \sqrt{\Sigma_j^n = i\ (y_{ij} - y_1^-)^2}$ (6)
8. determine the preference value for each alternative, using the equation:
$V_1 = \frac{D_1^-}{D_1^- + D_1^+}$ (7)

RESULTS AND DISCUSSION

This study used 20 student samples as alternatives to evaluate their career readiness. Each student was assessed based on five criteria: Academic Competence (C1), Internship Experience (C2), Communication Skills (C3), Digital Literacy (C4), and English Proficiency (C5). These five criteria were used to describe various aspects related to student readiness to enter the workforce. Each alternative was scored on a scale of 1 to 5, with higher scores indicating a higher level of ability or readiness.

1. Alternative Data

a. Criteria Table

Tabel 1. Criteria

Code	Criteria	Weight
C1	Field-Specific Competence	25%
C2	Internship/Project Experience	25%
C3	Communication Skills	20%
C4	Digital Literacy	15%
C5	English Language Proficiency	15%
	Total	**100%**

Table 1. presents the criteria and weights used to evaluate student career readiness. Five criteria were selected, namely Field-Specific Competence (C1), Internship/Project Experience (C2), Communication Skills (C3), Digital Literacy (C4), and English Language Proficiency (C5). C1 and C2 receive the highest weights of 25% each, indicating that disciplinary competence and practical experience are considered the most important factors in assessing career readiness. Communication Skills (C3) is assigned a weight of 20%, while Digital Literacy (C4) and English Language Proficiency (C5) each receive 15%. The total weight is 100%, and all criteria are treated as benefit criteria, meaning that higher scores indicate higher student career readiness.

Table 2. Student Sample Data for Career Readiness Evaluation

Kriteria	C1	C2	C3	C4	C5
Y1	5	3	5	3	3
Y2	4	2	5	4	5

Journal of Computer Science and Technology
E-ISSN : 2985-4318
P-ISSN : 2985-5772

Y3	3	3	4	3	4
Y4	4	4	4	4	3
Y5	3	3	5	5	4
Y6	4	4	5	4	5
Y7	5	5	4	3	3
Y8	2	4	4	4	2
Y9	2	3	3	3	3
Y10	2	4	3	4	4
Y11	3	4	4	5	5
Y12	4	5	5	4	2
Y13	3	5	4	5	3
Y14	4	3	3	3	4
Y15	3	3	4	3	4
Y16	4	3	5	2	4
Y17	5	4	4	2	5
Y18	4	4	3	3	5
Y19	3	2	4	5	5
Y20	4	2	4	4	3
Results	16,40121947	16,18641406	18,60107524	16,82260384	17,54992877

2. Determination of Criteria and Weight

This study establishes five main criteria as a basis for assessing students' level of career readiness, namely:

1. C1 Scientific Competence: Mastery of knowledge, application of knowledge, and ability to solve problems in the scientific field.
2. C2 Internship Experience: Length/frequency of internships, relevance of internships, and practical work experience.
3. C3 Communication Skills: Conveying ideas, presentations, and oral and written communication.
4. C4 Digital Literacy: Use of technology, digital applications, information retrieval, and data management.
23 5. C5 English Language Skills: Reading, writing, listening, and speaking in English.

Table 3. Criteria Weight Values

Criteria	Weight
17 Highly Ready	5
Ready	4
Moderately Ready	3
Less Ready	2
Not Ready	1

3. Decision Matrix

36 The next stage involves normalizing the decision matrix based on the values assigned to each criterion. This normalization process aims to transform the initial values of each alternative into a uniform scale, allowing comparisons across different criteria. The resulting normalized values are then used in the subsequent TOPSIS calculation, as presented in the following table. **Table 4. Decision Values Normalized**

Kriteria	C1	C2	C3	C4	C5
Y1	25	9	25	9	9
Y2	16	4	25	16	25
Y3	9	9	16	9	16
Y4	16	16	16	16	9
Y5	9	9	25	25	16
Y6	16	16	25	16	25
Y7	25	25	16	9	9

Journal of Computer Science and Technology
E-ISSN : 2985-4318
P-ISSN : 2985-5772

Y8	4	16	16	16	4
Y9	4	9	9	9	9
Y10	4	16	9	16	16
Y11	9	16	16	25	25
Y12	16	25	25	16	4
Y13	9	25	16	25	9
Y14	16	9	9	9	16
Y15	9	9	16	9	16
Y16	16	9	25	4	16
Y17	25	16	16	4	25
Y18	16	16	9	9	25
Y19	9	4	16	25	25
Y20	16	4	16	16	9

Table 4 presents the decision values for 20 student alternatives (Y1–Y20) across five evaluation criteria (C1–C5). The values represent the transformed decision scores obtained from the
6 initial assessment of each student, with scores ranging from 4 to 25. These values are used as the basis
5 for the subsequent TOPSIS calculation, including the normalization, weighting, determination of positive and negative ideal solutions, and ranking of student career readiness. The next stage involves
38 calculating the normalized decision matrix based on the values assigned to each criterion. This normalization process is an essential step in the TOPSIS method because the criteria may have different numerical values and levels of measurement. Therefore, normalization is performed to
2 transform the original decision values into a comparable scale while maintaining the relative performance of each alternative. The normalized values represent the contribution of each alternative to the corresponding criterion and provide a consistent basis for the subsequent calculation stages. After applying the normalization formula to all alternatives and criteria, the resulting values are presented in the following table.

Table 5. Normalized Data

Y1	0,30485538	0,185340619	0,268801665	0,178331489	0,170940865
Y2	0,243884304	0,123560413	0,268801665	0,237775319	0,284901441
Y3	0,182913228	0,185340619	0,215041332	0,178331489	0,227921153
Y4	0,243884304	0,247120825	0,215041332	0,237775319	0,170940865
Y5	0,182913228	0,185340619	0,268801665	0,297219149	0,227921153
Y6	0,243884304	0,247120825	0,268801665	0,237775319	0,284901441
Y7	0,30485538	0,308901032	0,215041332	0,178331489	0,170940865
Y8	0,121942152	0,247120825	0,215041332	0,237775319	0,113960576
Y9	0,121942152	0,185340619	0,161280999	0,178331489	0,170940865
Y10	0,121942152	0,247120825	0,161280999	0,237775319	0,227921153
Y11	0,182913228	0,247120825	0,215041332	0,297219149	0,284901441
Y12	0,243884304	0,308901032	0,268801665	0,237775319	0,113960576
Y13	0,182913228	0,308901032	0,215041332	0,297219149	0,170940865
Y14	0,243884304	0,185340619	0,161280999	0,178331489	0,227921153
Y15	0,182913228	0,185340619	0,215041332	0,178331489	0,227921153
Y16	0,243884304	0,185340619	0,268801665	0,11888766	0,227921153
Y17	0,30485538	0,247120825	0,215041332	0,11888766	0,284901441
Y18	0,243884304	0,247120825	0,161280999	0,178331489	0,284901441
Y19	0,182913228	0,123560413	0,215041332	0,297219149	0,284901441
Y20	0,243884304	0,123560413	0,215041332	0,237775319	0,170940865

2 Based on the normalization results, the maximum and minimum values for each criterion are
19 subsequently identified. This stage is carried out to determine the positive ideal solution and the
4 negative ideal solution required in the TOPSIS method. The maximum value of each benefit criterion
33 represents the best performance and is therefore used to construct the positive ideal solution, while the minimum value represents the lowest performance and is used to construct the negative ideal solution. Since all criteria used in this study are categorized as benefit criteria, higher values indicate
37 better student performance and a higher level of career readiness. The resulting maximum and
2 minimum values for each criterion are presented in the following table.

Table 6. Max and Min values of weighted normalization

Journal of Computer Science and Technology
E-ISSN : 2985-4318
P-ISSN : 2985-5772

Alternatif	Kriteria				
	C1	C2	C3	C4	C5
Y1	0,3048554	0,3706812	0,806405	0,713326	0,8547043
Y2	0,2438843	0,2471208	0,806405	0,9511013	1,4245072
Y3	0,1829132	0,3706812	0,645124	0,713326	1,1396058
Y4	0,2438843	0,4942417	0,645124	0,9511013	0,8547043
Y5	0,1829132	0,3706812	0,806405	1,1888766	1,1396058
Y6	0,2438843	0,4942417	0,806405	0,9511013	1,4245072
Y7	0,3048554	0,6178021	0,645124	0,713326	0,8547043
Y8	0,1219422	0,4942417	0,645124	0,9511013	0,5698029
Y9	0,1219422	0,3706812	0,483843	0,713326	0,8547043
Y10	0,1219422	0,4942417	0,483843	0,9511013	1,1396058
Y11	0,1829132	0,4942417	0,645124	1,1888766	1,4245072
Y12	0,2438843	0,6178021	0,806405	0,9511013	0,5698029
Y13	0,1829132	0,6178021	0,645124	1,1888766	0,8547043
Y14	0,2438843	0,3706812	0,483843	0,713326	1,1396058
Y15	0,1829132	0,3706812	0,645124	0,713326	1,1396058
Y16	0,2438843	0,3706812	0,806405	0,4755506	1,1396058
Y17	0,3048554	0,4942417	0,645124	0,4755506	1,4245072
Y18	0,2438843	0,4942417	0,483843	0,713326	1,4245072
Y19	0,1829132	0,2471208	0,645124	1,1888766	1,4245072
Y20	0,2438843	0,2471208	0,645124	0,9511013	0,8547043
MAX	0,3048554	0,6178021	0,806405	1,1888766	1,4245072
MIN	0,1219422	0,2471208	0,483843	0,4755506	0,5698029

The next step is to calculate the positive and negative ideal solution matrices by summing the values of each criterion obtained from the weighted normalization matrix. For positive ideal solutions, the maximum value of each criterion is used, while for negative ideal solutions, the minimum value is used. These weighted values are then raised to the power of two during the calculation to obtain the desired final result.

Table 7. Distance Negative Ideal Solutions

DY1+	0,782235538
DY2+	0,444588748
DY3+	0,639740098
DY4+	0,652846564
DY5+	0,396367786
DY6+	0,274812209
DY7+	0,759496738
DY8+	0,928327835
DY9+	0,865676573
DY10+	0,538958812
DY11+	0,23695701
DY12+	0,889254775
DY13+	0,604612912
DY14+	0,690035983
DY15+	0,639740098
DY16+	0,809190291
DY17+	0,741695799
DY18+	0,590913953
DY19+	0,422239303
DY20+	0,74050391

Table 8. Distance Negative Ideal Solutions

DY1-	0,538958812
DY2-	1,03710367
DY3-	0,652846564
DY4-	0,639740098
DY5-	0,9780287
DY6-	1,066139167
DY7-	0,578428322
DY8-	0,55966836

Journal of Computer Science and Technology
E-ISSN : 2985-4318
P-ISSN : 2985-5772

DY9-	0,391117769
DY10-	0,782235538
DY11-	1,153321784
DY12-	0,694599972
DY13-	0,870135832
DY14-	0,641365334
DY15-	0,652846564
DY16-	0,677391048
DY17-	0,922527502
DY18-	0,928975335
DY19-	1,12653559
DY20-	0,59008363

The final stage of the TOPSIS method is to calculate the preference value for each alternative using Equation (7). The preference value is obtained by dividing the distance of each alternative from the negative ideal solution by the sum of its distances from the negative and positive ideal solutions. This calculation produces a preference score ranging from 0 to 1, where a higher score indicates that an alternative is closer to the positive ideal solution and farther from the negative ideal solution. Therefore, alternatives with higher preference values are considered to have a higher level of career readiness. The resulting preference values are then used to rank the alternatives and identify the relative career readiness of each student. The results of the preference value calculation are presented in Table 9.

Table 9. Preference Values

TABEL HASIL NILAI Vi	
V1	0,407933028
V2	0,699945318
V3	0,50506986
V4	0,49493014
V5	0,711605937
V6	0,795061765
V7	0,432332377
V8	0,376122171
V9	0,311202681
V10	0,592066972
V11	0,829561516
V12	0,438550298
V13	0,590023104
V14	0,481722021
V15	0,50506986
V16	0,455670356
V17	0,554329159
V18	0,611212502
V19	0,727372063
V20	0,443475993

The table presents the preference values (Vi) for 20 students (V1–V20), calculated using the TOPSIS method. The Vi values range from 0.3112 to 0.8296, with values closer to 1 indicating a higher level of career readiness. The highest value (0.8296) was obtained by V11, while the lowest (0.3112) was obtained by V9. These Vi values were subsequently used to determine the ranking and career readiness category for each student.

Table 10. The final result

Ranking	Alternative	Vi Value	Career Readiness
1	V11	0,8296	Highly Ready
2	V6	0,7951	Ready
3	V19	0,7274	Ready
4	V5	0,7116	Ready
5	V2	0,6999	Ready
6	V18	0,6112	Ready
7	V10	0,5921	Moderately Ready

E-ISSN : 2985-4318
P-ISSN : 2985-5772

8	V13	0,5900	Moderately Ready
9	V17	0,5543	Moderately Ready
10	V3	0,5051	Moderately Ready
11	V15	0,5051	Moderately Ready
12	V4	0,4949	Moderately Ready
13	V14	0,4817	Moderately Ready
14	V16	0,4557	Moderately Ready
15	V20	0,4435	Moderately Ready
16	V12	0,4386	Moderately Ready
17	V7	0,4323	Moderately Ready
18	V1	0,4079	Moderately Ready
19	V8	0,3761	Not Ready
20	V9	0,3112	Not Ready

Table 10 presents the final ranking of 20 student alternatives based on the TOPSIS preference value (Vi). The results show that V11 ranks first with a Vi value of 0.8296 and is classified as Highly Ready, indicating the highest level of career readiness among the evaluated students. V6 ranks second with a value of 0.7951, followed by V19, V5, V2, and V18, which are classified as Ready. Meanwhile, 12 students are categorized as Moderately Ready, with Vi values ranging from 0.4079 to 0.5921. The lowest values are obtained by V8 (0.3761) and V9 (0.3112), both classified as Not Ready. Overall, the results demonstrate that the TOPSIS method can provide a systematic ranking and classification of students based on their level of career readiness.

Table 10. The final result Percentage

Category	Number of Students	Percentage
Highly Ready	1	5%
Ready	5	25%
Moderately Ready	12	60%
Not Ready	2	10%
Total	20	100%

The table presents the distribution of career readiness levels among 20 students based on the TOPSIS results. One student (5%) is classified as *Highly Ready*, while five students (25%) are categorized as *Ready*. The majority, 12 students (60%), fall into the *Moderately Ready* category, while two students (10%) are classified as *Not Ready*. These results indicate that most students have a basic level of career readiness but still require further competency development to improve their preparedness for entering the workforce. Overall, 90% of the students are classified at least as Moderately Ready, while 10% remain in the Not Ready category. This finding can provide a basis for higher education institutions to design targeted career development programs, particularly for students with lower levels of career readiness.

CONCLUSION

This study developed a TOPSIS-based intelligent decision support system to evaluate and rank student career readiness using multiple competency criteria, including field-specific competence, internship/project experience, communication skills, digital literacy, and English proficiency. The results from 20 students show that V11 achieved the highest preference value (0.8296) and was classified as Highly Ready, while V9 obtained the lowest value (0.3112) and was classified as Not Ready. Overall, 1 student (5%) was Highly Ready, 5 students (25%) Ready, 12 students (60%) Moderately Ready, and 2 students (10%) Not Ready. These findings indicate that most students have a basic level of career readiness but still require further competency development. The proposed system can support higher education institutions in systematically identifying, ranking, and mapping students' career readiness and in designing more targeted career development programs.

E-ISSN : 2985-4318
P-ISSN : 2985-5772

REFERENCE

[1] Agustin, D., Yoenanto, N. H., & Andriani, F. (2025). Determinants of work readiness among Indonesian university students: A systematic literature review in the era of Merdeka Belajar Kampus Merdeka. Pendas: Jurnal Ilmiah Pendidikan Dasar, 10(4), 290–305. https://doi.org/10.23969/jp.v10i04.36662

[2] Hidayat, R., & Amran, M. N. (2025). A mediating role of emotional intelligence between digital and employability skills among agricultural education students. SAGE Open, 15(4), 1–17. https://doi.org/10.1177/21582440251385479

[3] Imjai, N., Chansamran, S., Sungthong, S., Usman, B., & Aujirapongpan, S. (2025). Developing employability digital competencies of Thai Gen Z business students: The role and matter of digital learning environments and digital adaptation skills. The International Journal of Management Education, 23(3), 101219. https://doi.org/10.1016/j.ijme.2025.101219

[4] Musa, S., Nurhayati, S., & Boriboon, G. (2025). The effect of internships on graduates' employability, soft skills, and digital competence. Educational Process: International Journal, 17, e2025306. https://doi.org/10.22521/edupij.2025.17.306

[5] Nuriani, D., Syifahayati, N., Farida, V. N., Rahmawati, D., Widianto, A. R., Karyanti, & Solikin, A. (2025). Student career readiness from an industrial guidance and counseling perspective in higher education. Suluh: Jurnal Bimbingan dan Konseling, 11(Spesial-1), 16–22. https://doi.org/10.33084/suluh.v11iSpesial-1.12328

[6] Ishak, R., Suryaditya, R., Nur Khasanah, S., & Handayani, P. (2025). Penentuan mahasiswa terbaik dengan menggunakan metode TOPSIS (Teknik Urutan Preferensi Berdasarkan Kesamaan dengan Solusi Ideal). Infotek: Jurnal Informatika dan Teknologi, 8(2), 554–562. https://doi.org/10.29408/jit.v8i2.30601

[7] Rianto, W., Suherdi, D., S. Kom, M. Kom, & Gilang Suryanata, M. (n.d.). Sistem Pendukung Keputusan Menentukan Sekolah Menengah Atas (SMA) Terbaik pada Kabupaten Aceh Tenggara dengan Menggunakan Metode Weighted Product. J. CyberTech J. [Online]. Available: https://ojs.trigunadharma.ac.id/

[8] Irawan, M. D. (2017). Sistem Pendukung Keputusan Menentukan Matakuliah Pilihan pada Kurikulum Berbasis KKNI Menggunakan Metode Fuzzy Sugeno. J. Media Infotama, 13(1), 27–35. https://doi.org/10.37676/jmi.v13i1.435

[9] Rizki, S. N. (2018). Sistem Pendukung Keputusan Menentukan Tenaga. Jurnal Edik Informatika, 2.

[10] Yusran, R. R., et al. (2024). Strategi Pemasaran Produk untuk Meningkatkan Omset Perusahaan Menggunakan Sistem Pengambilan Keputusan, 7(6), 1946–1956.

[11] Fauziyah, F., Lestari, D., Rinayanti, M., & Zulkarnain, I. (2025). Multi-criteria decision analysis using TOPSIS method for scholarship recipients selection: A comprehensive implementation study. Jurnal SITECH: Sistem Informasi dan Teknologi, 8(1).

[12] Hts, D. I. G., Desi, E., Aliyah, S., Nasution, F. P., Indriani, U., & Edi, F. (2024). Decision support system using the TOPSIS method in new teacher selection. Sinkron: Jurnal dan Penelitian Teknik Informatika, 8(3), 1706–1714.

[13] Yudhistira, A., Wang, J., Rahmanto, Y., & Setiawansyah, S. (2024). Decision support system for optimizing supplier selection using TOPSIS and entropy weighting methods. Jurnal Pendidikan dan Teknologi Indonesia, 4(5), 175–185.

Journal of Computer Science and Technology
E-ISSN : 2985-4318
P-ISSN : 2985-5772

[14] Dharmawan, D. (2024). Application of TOPSIS method to design a decision support system in assessing teachers performance. Jurnal Informasi dan Teknologi, 6(1), 64–69.

[15] Irawati, Sugiarti, Hayati, L. N., Herman, Tawetubun, S. S., & Ahmad, N. A. S. S. (2026). Penerapan Decision Support System (DSS) menggunakan metode TOPSIS untuk seleksi mahasiswa berprestasi. Jurnal Algoritma, 23(1), 462–473.

[16] Meye, S. M., & Nguema, P. F. (2026). An improved TOPSIS model based on weighted generalized Mahalanobis distance for multi-attribute decision-making in water reservoir operations. Water Resources Management, 40.

[17] Wang, J., Setiawansyah, Palupiningsih, P., & Susanti, M. N. I. (2026). Comparative analysis of objective weighting methods and TOPSIS in multi-criteria decision making. JUSIFO (Jurnal Sistem Informasi), 12(1).

iThenticate Page 17 of 17 - Integrity Submission Submission ID trn:oid:::7704:151116821