Netiquette concept at the assessment of college student social competence with TOPSIS method

Rianto[1], Sri Mulyani[2,*]

[1]Department of Informatics, Universitas PGRI Yogyakarta, Daerah Istimewa Yogyakarta, Indonesia
[2] Aerospace Engineering, Adisutjipto Institute of Aerospace Technology, Daerah Istimewa Yogyakarta, Indonesia

Article Info

ABSTRACT

Social competence for college students is important during the process of implementing the practicum. From social competence, we can find out the students' capable in several ways such as the ability to collaborate, speak in forums, reduce social conflicts in the environment, make a network and much more. In this study, it provides a solution model for assessing social competence in college students when carrying out practicum. The purpose of the study was to develop an assessment model by measuring students' social competence during the implementation of the practicum. The number of correspondents in the study was 78 students taken from the number of practicum students in Aerospace Engineering study program. The data analysis technique uses the TOPSIS method, where the results of this study will obtain the best rank of 78 practicum students who have the highest social competence value. The model of the assessment can be used by lecturers in Aerospace Engineering study program, Adisutjipto Institute of Aerospace Technology during the practicum process or after it. By having this assessment model, the advantages got for Adisutjipto Institute of Aerospace Technology is the campus can synergize in creating graduates with a global and humanistic character.

Corresponding Author:

Sri Mulyani,
Aerospace Engineering,
Adisutjipto Institute of Aerospace Technology,
Jl. Janti, Blok-R, Lanud Adisutjipto Yogyakarta, Daerah Istimewa Yogyakarta, Indonesia.
Email: *srimulyani042@gmail.com

1. INTRODUCTION

The beginning of 2020 was the beginning of a difficult year, it was due to the Covid-19 virus that entered Indonesia. First time, the case of covid appeared in China and was later referred to as the coronavirus disease COVID-19 [1]. There are many bad effects caused by this virus, one of them is education field. COVID-19 virus has greatly impacted most of the students' life outside the classroom[2], many students have to study at home during the COVID-19 pandemic[3]. Not only education, COVID-19 affects many aspects of human life in all aspects like business, research, health, economy, sports, transportation, worship, social interaction, politics, government, and entertainment[4]. This pandemic has directly affected higher education and the student experience[5]. There are many ways to deal with the spread of Covid-19 virus, one of them is the existence of Large-Scale Social Restrictions or *PSBB*[6]. In the field of education, new learning models must be applied to overcome these problems, one of them is the online learning model. The presence of the internet has encouraged developers to give new innovations and we now live in a world that is increasingly dependent on the use of internet information technology[7]. Various applications were created to meet the needs of human socialization[8]. Knowledge of ethics in cyberspace (netiquette) must be owned by people who spend a lot of time in cyberspace[9]. It creates a new problem for students and lecturers, where ethics in communication becomes a problem during the online learning process. Thus, the concept of netiquette becomes important in online learning during the pandemic[10].

Lack of knowledge in ethics which is not written in the internet for the use of email, chat, and mailing lists can bring its users to an unhealthy situation if the users do not understand the culture on the Internet[11]. In that case, the application is one of the most commonly used applications[12], [13]. Therefore, it is important to implement the concept of netiquette to the students in communicating and conducting social interactions. In Indonesia, netiquette is known as internet etiquette by internet users (netters). Politeness and communication that must be owned by students. So that they are able to support the development of social competencies owned by the students.

There are 9 assessment criteria used which are related to the concept of Netiquette. When decision makers are faced with a problem, there are several predetermined alternatives such as the MADM method with the context of selecting the problem, sorting the problem, ranking and describing the problem. TOPSIS is very suitable for the problem[14]. In practical decision problems, TOPSIS is very suitable for the problem[14] because TOPSIS offers a set of tools and it provides an assessment of the student's social competence. This method was chosen because it is able to choose the best alternative from several existing alternatives based on specified criteria [15]–[17]. Using this method, you will be able to rank from a number of alternative choices[18]. The results of this study may change, according to the weighting of the criteria. It is because users have different assessments of interest in the criteria used. There are many studies that discuss netiquette, but this study can provide an assessment of the priority scale of the weights against the criteria used and perform a rank to conduct a screening of students' soft skills for the needs of the world of work.
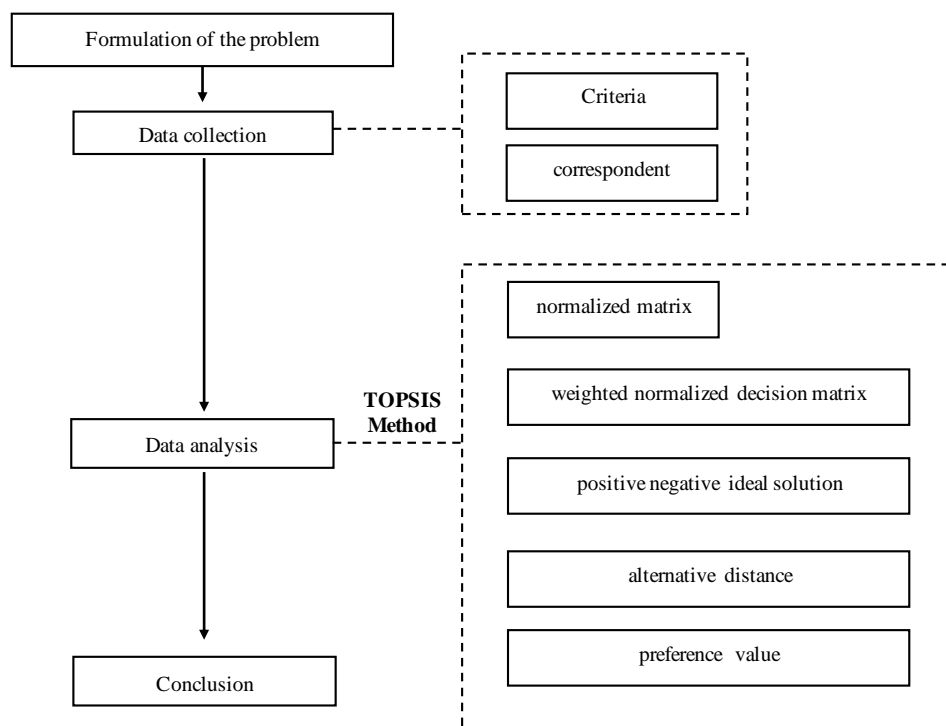
2.   RESEARCH METHOD

Figure 1. Research flow

This stage begins from formulation of the problem and then data collection, which is obtained from literature studies and field studies. Literature studies were taken from the journal literature and field studies. In literature, TOPSIS method is very suitable in making decisions that involve criteria to get quick and objective results. While field studies were carried out with discussions from the participants [18]. The data obtained were grouped based on needs and data analysis was carried out to obtain an appropriate model for this research that will be used for the social competence of practicum students. In this assessment of social competence using the TOPSIS method, the TOPSIS method used the principle that the chosen alternative must have the shortest distance from the positive ideal solution and the farthest from the negative ideal solution. It was used to determine the relative proximity of an alternative[19].

Using the TOPSIS method, there were several steps that must be done. First is normalized decision matrix. Normalized matrix was obtained by dividing each value of the criteria divided by the number of matrixes in each column. The normalized matrix can be done using the following equation:

$$rj = \frac{x_{ij}}{\sqrt{\sum_{i=1}^{m} x_{ij}}} \tag{1}$$

Weighted normalized determined the weighted normalized decision matrix. It was obtained by multiplying the weight with the value of each attribute calculated by the following equation:

$$\begin{bmatrix} W_1 r_{11} & W_2 r_{12} & W_n r_n \\ W_1 r_{21} & \dots & \dots \\ W_j r_{1m} & W_j r_{2m} & W_j r_{mm} \end{bmatrix} \tag{2}$$

Next is determine the value of the positive ideal solution and the negative ideal solution. The ideal solution is called A+, while the negative ideal solution is called A-. To find the value of the positive ideal solution and the value of the negative ideal solution can be seen in the following equation:

$$A+ = \{max(h_{ij} \mid i \in I^*), min(h_{ij} \mid i \in I^*), j = 1, 2, \dots, m \} = \{h_1^+, h_2^+, \dots h_m^+\} \tag{3}$$

$$A- = \{min (h_{ij} \mid i \in I^*), max(h_{ij} \mid i \in I^*), j = 1, 2, \dots, m \} = \{h_1^-, h_2^-, \dots h_m^-\} \tag{4}$$

Next is calculate the value of the separation measure. It was done by measuring the distance from the alternative to the positive ideal solution and the negative ideal solution. The measurement of the alternative distance of the positive ideal solution is symbolized by D+ and the distance of the alternative negative ideal solution is symbolized by D-, the equation to find the value is as follows:

$$D+ = \sqrt{\sum_{j-=1}^{m} W_j^2 \left(h_{ij} - h_j^+\right)}, i = 1, 2, \dots \tag{5}$$

$$D- = \sqrt{\sum_{j-=1}^{m} W_j^2 \left(h_{ij} - h_j^-\right)}, i = 1, 2, \dots \tag{6}$$

Next is determine the preference value for each alternative where the preference value is the proximity of the alternative to the ideal solution. The value of the preference for the alternative is symbolized by Ci, which can be calculated by the following equation:

$$C_i = \frac{D_i^-}{D_i + D_i^-} 0 \le C_i \le 1, 1 = 1, 2, \dots m \tag{7}$$

From the value obtained from the preference value, a rank is obtained for each student.

This assessment uses nine criteria which can be seen in table 1. The use of criteria is based on the concept of netiquette when communicating in cyberspace[20].

Table 1. Netiquette Concept Assessment Criteria

	Criterion	Benefit/Cost	weight of criterion
K1	Ability to collaborate for the benefit of learning during the practicum process	Benefit	0,74
K2	Able to resolve social conflicts in practicum group units	Benefit	0,96
K3	Able to interact well with all colleagues in the practicum environment	Benefit	1,22
K4	Selfless and respect other people's talk	Benefit	1,09
K5	Dare to give advice without going beyond the boundaries of politeness	Benefit	1,25
K6	Care about the conditions in the surrounding environment during the practicum	Benefit	1,45
K7	Speak at will, without paying attention to others	Cost	1,23
K8	Communicate properly and correctly	Benefit	0,89
K9	Always respect and respect the interlocutor	Benefit	1,17

Using the criteria showed in table 1, the scores was obtained from the distribution of questionnaires to students at the practicum, which were distributed by peers. The results showed that with a range of $1 - 5$,

the criteria "very" = 5; "often done" = 4; "sometimes done" = 3; "rarely done" = 2; "never done" = 1. The weighting of the criteria values was given by the practicum supervisor by paying attention to the concept of netiquette when carrying out the weighing process.

3. RESULTS AND ANALYSIS

TOPSIS is an efficient MCDM methodology, it was first introduced by Hwang and Yoon[17] to determine the best option based on the best solution. The next stage is the selection of alternatives by choosing the right alternative using the TOPSIS algorithm[21]. The first stage of using the TOPSIS method was to create a pairwise comparison matrix. At this stage, the value of each user's criteria was compared with other users, then added up the column values of each criterion.

Table 2. Pairwise Comparison Matrix

Students	K1	K2	K3	K4	K5	K6	K7	K8	K9
M01	4	4	5	5	5	5	3	4	4
M02	3	4	3	4	1	4	2	4	4
M03	4	4	4	4	4	4	2	4	4
M04	5	5	5	5	5	5	2	4	5
M05	4	5	5	4	4	4	2	5	5
M06	4	4	5	5	5	4	2	5	5
M07	3	4	5	5	4	5	4	4	5
M08	4	4	4	4	4	4	1	5	4
M09	1	2	4	3	3	3	3	3	3
M10	4	4	4	4	5	5	1	4	4
….	….	….	….	….	….	….	….	….	….
M70	4	5	5	4	5	5	2	5	5
M71	4	5	3	4	4	4	2	3	4
M72	5	5	5	5	5	5	5	5	5
M73	3	4	4	4	4	4	3	4	5
M74	2	3	3	3	3	3	3	3	3
M75	3	3	4	3	3	4	2	4	3
M76	3	5	5	4	5	4	3	4	5
M77	3	5	5	4	5	4	3	4	5
M78	4	3	4	5	4	4	2	4	5
	268	320	321	319	301	310	156	321	324

Table 2 is a pairwise comparison matrix, where the value was obtained from the value of each criterion for each alternative choice. By adding up each column of the matrix, the total value of each column of criteria was obtained where the value will be used for the matrix normalization stage. At the matrix normalization stage, it can use equation (1), where the results of the matrix normalization can be seen in table 3.

Table 3. Matrix Normalization

Students	K1	K2	K3	K4	K5	K6	K7	K8	K9
M01	0,0149	0,0125	0,0156	0,0157	0,0166	0,0161	0,0192	0,0125	0,0123
M02	0,0112	0,0125	0,0093	0,0125	0,0033	0,0129	0,0128	0,0125	0,0123
M03	0,0149	0,0125	0,0125	0,0125	0,0133	0,0129	0,0128	0,0125	0,0123
M04	0,0187	0,0156	0,0156	0,0157	0,0166	0,0161	0,0128	0,0125	0,0154
M05	0,0149	0,0156	0,0156	0,0125	0,0133	0,0129	0,0128	0,0156	0,0154
M06	0,0149	0,0125	0,0156	0,0157	0,0166	0,0129	0,0128	0,0156	0,0154
M07	0,0112	0,0125	0,0156	0,0157	0,0133	0,0161	0,0256	0,0125	0,0154
M08	0,0149	0,0125	0,0125	0,0125	0,0133	0,0129	0,0064	0,0156	0,0123
M09	0,0037	0,0063	0,0125	0,0094	0,0100	0,0097	0,0192	0,0093	0,0093
M10	0,0149	0,0125	0,0125	0,0125	0,0166	0,0161	0,0064	0,0125	0,0123
….	….	….	….	….	….	….	….	….	….
M70	0,0149	0,0156	0,0156	0,0125	0,0166	0,0161	0,0128	0,0156	0,0154
M71	0,0149	0,0156	0,0093	0,0125	0,0133	0,0129	0,0128	0,0093	0,0123
M72	0,0187	0,0156	0,0156	0,0157	0,0166	0,0161	0,0321	0,0156	0,0154
M73	0,0112	0,0125	0,0125	0,0125	0,0133	0,0129	0,0192	0,0125	0,0154
M74	0,0075	0,0094	0,0093	0,0094	0,0100	0,0097	0,0192	0,0093	0,0093
M75	0,0112	0,0094	0,0125	0,0094	0,0100	0,0129	0,0128	0,0125	0,0093
M76	0,0112	0,0156	0,0156	0,0125	0,0166	0,0129	0,0192	0,0125	0,0154
M77	0,0112	0,0156	0,0156	0,0125	0,0166	0,0129	0,0192	0,0125	0,0154
M78	0,0149	0,0094	0,0125	0,0157	0,0133	0,0129	0,0128	0,0125	0,0154

The results of the normalization of the matrix in table 3 can be calculated from the value of the weight of the normalized decision matrix using equation (2). The weighted normalization matrix was calculated by multiplying the weight of each criterion by the value of each column of the normalized matrix. The results of the calculation of the weighted normalization matrix can be seen in table 4.

Table 4. Weighted Matrix Normalization

Students	K1	K2	K3	K4	K5	K6	K7	K8	K9
	0,74	0,96	1,22	1,09	1,25	1,45	1,23	0,89	1,17
M01	0,0110	0,0120	0,0190	0,0171	0,0208	0,0234	0,0237	0,0111	0,0144
M02	0,0083	0,0120	0,0114	0,0137	0,0042	0,0187	0,0158	0,0111	0,0144
M03	0,0110	0,0120	0,0152	0,0137	0,0166	0,0187	0,0158	0,0111	0,0144
M04	0,0138	0,0150	0,0190	0,0171	0,0208	0,0234	0,0158	0,0111	0,0181
M05	0,0110	0,0150	0,0190	0,0137	0,0166	0,0187	0,0158	0,0139	0,0181
M06	0,0110	0,0120	0,0190	0,0171	0,0208	0,0187	0,0158	0,0139	0,0181
M07	0,0083	0,0120	0,0190	0,0171	0,0166	0,0234	0,0315	0,0111	0,0181
M08	0,0110	0,0120	0,0152	0,0137	0,0166	0,0187	0,0079	0,0139	0,0144
M09	0,0028	0,0060	0,0152	0,0103	0,0125	0,0140	0,0237	0,0083	0,0108
M10	0,0110	0,0120	0,0152	0,0137	0,0208	0,0234	0,0079	0,0111	0,0144
….	….	….	….	….	….	….	….	….	….
M70	0,0110	0,0150	0,0190	0,0137	0,0208	0,0234	0,0158	0,0139	0,0181
M71	0,0110	0,0150	0,0114	0,0137	0,0166	0,0187	0,0158	0,0083	0,0144
M72	0,0138	0,0150	0,0190	0,0171	0,0208	0,0234	0,0394	0,0139	0,0181
M73	0,0083	0,0120	0,0152	0,0137	0,0166	0,0187	0,0237	0,0111	0,0181
M74	0,0055	0,0090	0,0114	0,0103	0,0125	0,0140	0,0237	0,0083	0,0108
M75	0,0083	0,0090	0,0152	0,0103	0,0125	0,0187	0,0158	0,0111	0,0108
M76	0,0083	0,0150	0,0190	0,0137	0,0208	0,0187	0,0237	0,0111	0,0181
M77	0,0083	0,0150	0,0190	0,0137	0,0208	0,0187	0,0237	0,0111	0,0181
M78	0,0110	0,0090	0,0152	0,0171	0,0166	0,0187	0,0158	0,0111	0,0181

Based on the values obtained in table 4, the next step was to find the value of the positive ideal solution and the negative ideal solution. The value of the positive ideal solution was taken from the largest value from each column of alternative choices if the criteria were benefit and the smallest value was taken from each column of alternative choices if the criteria were cost. While the value of the negative ideal solution was taken from the smallest value of each alternative column of choice if the criteria were benefit and the largest value was taken from each column of alternative choices if the criteria were cost. The results of the values of positive ideal solutions and negative ideal solutions can be seen in table 5.

Table 5. Positive and Negative Ideal Solutions

A+	0,01381	0,01500	0,01900	0,01708	0,02076	0,02339	0,00788	0,01386	0,01806
A-	0,00276	0,00300	0,00380	0,00342	0,00415	0,00468	0,03942	0,00277	0,00361

After obtaining the value of the positive ideal solution and the negative ideal solution, the next step was to calculate the value of the separation measure. The separation measure was the distance from an alternative to a positive ideal solution and a negative ideal solution. Calculations to find the value of the separation measure can use equations (5) and (6). The results of the calculation of the value of the separation measure can be seen in table 6.

Table 6. Separation Measure

Students	D+	D-
M01	0,05280	0,05280
M02	0,03843	0,03843
M03	0,04348	0,04348
M04	0,05239	0,05239
M05	0,04783	0,04783
M06	0,04967	0,04967
M07	0,05597	0,05597
M08	0,04211	0,04211
M09	0,03844	0,03844
M10	0,04534	0,04534
…	…	…
M70	0,05138	0,05138
M71	0,04262	0,04262
M72	0,06418	0,06418

M73	0,04759	0,04759
M74	0,03801	0,03801
M75	0,03847	0,03847
M76	0,05130	0,05130
M77	0,05130	0,05130
M78	0,04527	0,04527

After the separation measure value was known, the next step was to find the preference value which was the alternative closeness to the ideal solution. To calculate the value of the relative coefficient can use equation (7). After the value of the relative coefficient was obtained, the next step was to determine the best rank of students who had an assessment of social competence. The overall value of the above calculations can be seen in table 7.

Table 7. The Choice Alternative Ranking

Students	Coefficient	Rank	Students	Coefficient	Rank	Students	Coefficient	Rank
M01	0,7047	48	M27	0,7500	36	M53	0,7351	41
M02	0,6119	59	M28	0,8106	24	M54	0,9065	5
M03	0,7500	34	M29	0,7350	43	M55	0,9087	4
M04	0,8472	14	M30	0,7128	45	M56	0,5891	61
M05	0,7940	30	M31	0,8561	9	M57	0,7947	29
M06	0,8141	21	M32	0,7971	26	M58	0,6930	51
M07	0,5975	60	M33	0,7108	47	M59	0,8586	8
M08	0,8201	19	M34	0,5874	63	M60	0,6462	58
M09	0,4862	75	M35	0,4377	78	M61	0,7564	32
M10	0,8546	11	M36	0,9485	1	M62	0,4420	77
M11	0,6976	50	M37	0,5405	70	M63	0,5818	64
M12	0,9006	6	M38	0,5809	65	M64	0,7351	42
M13	0,7351	39	M39	0,7351	40	M65	0,6551	55
M14	0,7947	27	M40	0,7591	31	M66	0,5496	69
M15	0,7114	46	M41	0,7414	38	M67	0,8122	23
M16	0,8557	10	M42	0,4533	76	M68	0,9485	2
M17	0,7500	35	M43	0,5512	68	M69	0,5306	72
M18	0,8510	12	M44	0,8699	7	M70	0,8343	16
M19	0,5616	67	M45	0,8214	18	M71	0,7177	44
M20	0,5874	62	M46	0,6911	52	M72	0,5623	66
M21	0,9235	3	M47	0,8451	15	M73	0,6481	57
M22	0,5000	73	M48	0,8177	20	M74	0,4886	74
M23	0,7947	28	M49	0,8122	22	M75	0,6515	56
M24	0,5385	71	M50	0,7475	37	M76	0,6846	53
M25	0,7010	49	M51	0,8005	25	M77	0,6846	54
M26	0,8473	13	M52	0,8242	17	M78	0,7564	33

Table 7 was an alternative choice of 78 students who did the practicum. In the table, the highest score is 0.9485 by M36 practicum students, while the lowest score is 0.4377 by M35 students. Based on table 7, the practicum supervisor can assess the personality of each student regarding the student's social competence, by taking the value from the best. Based on this rank, it shows that students have the potential to realize the Adisutjipto Institute of Aerospace Technology in graduating alumni with global and humanistic characters. It is because, except the hard skills, soft skills are a supporting factor.

4. CONCLUSION

This study can provide an assessment of the social competence of practicum students. In addition to hard skills, students must also have soft skills that come from social competence. It is because they are indirectly used in everyday life, especially in the world of work. Determination of criteria and weighting of criteria are very important in the use of this method, because it will affect the results to be obtained. The use of this method has shortcomings in the validation process in assigning weighting criteria. In addition, the measurement of the real results cannot be known in the short term about the accuracy of the results from the use of this method. Therefore, complementary methods are needed, which can support further research.

REFERENCES

[1]   W. Tan *et al.*, "A Novel Coronavirus Genome Identified in a Cluster of Pneumonia Cases - Wuhan, China 2019-2020.," *China CDC Wkly.*, vol. 2, no. 4, pp. 61–62, 2020.

[2]   S. Van de Velde *et al.*, "Depressive symptoms in higher education students during the first wave of the COVID-19 pandemic. An examination of the association with various social risk factors across multiple high- and middle-income countries," *SSM - Popul. Heal.*, vol. 16, no. June, p. 100936, 2021.

[3]   T. Hale, A. Noam, K. Beatriz, A. Petherick, T. Phillips, and S. Webster, "Variations in government responses to COVID-19 Version 7.0," *Blavatnik Sch. Gov. Work. Pap.*, vol. 31, pp. 2011–2020, 2020.

[4]   S. N. Orfan and A. H. Elmyar, "Public Knowledge, Practices and Attitudes Towards Covid-19 in Afghanistan," *Public Heal. Indones.*, vol. 6, no. 4, pp. 104–115, 2020.

[5]   D. Mali and H. Lim, "How do students perceive face-to-face/blended learning as a result of the Covid-19 pandemic?," *Int. J. Manag. Educ.*, vol. 19, no. 3, p. 100552, 2021.

[6]   N. Mona, "Konsep Isolasi Dalam Jaringan Sosial Untuk Meminimalisasi Efek Contagious (Kasus Penyebaran Virus Corona Di Indonesia)," *J. Sos. Hum. Terap.*, vol. 2, no. 2, pp. 117–125, 2020.

[7]   R. Khani and R. Darabi, "Flouting the Netiquette Rules in the Academic Correspondence in Iran," *Procedia - Soc. Behav. Sci.*, vol. 98, pp. 898–907, 2014.

[8]   Y. Fahrimal, "Netiquette: Etika Jejaring Sosial Generasi Milenial Dalam Media Sosial," *J. Penelit. Pers dan Komun. Pembang.*, vol. 22, no. 1, pp. 69–78, 2018.

[9]   Y. S. Sitepu, "Persepsi Mahasiswa Fisip Universitas Sumatera Utara Mengenai Netiket Di Dunia Maya," *Sociae Polites*, vol. 15, no. 1, pp. 85–104, 2017.

[10]   E. Moradi and F. Amirpoursaeed, "Netiquette and its application in virtual learning: a vital necessity in medical universities during the COVID-19," *J. Med. Educ. Dev.*, vol. 16, no. 2, 2021.

[11]   Y. Fahrimal, "Etika Berkomunikasi di Dunia Maya dengan Netiquette," *Semin. Nas. Mat. dan Pendidik. Mat.*, vol. 22, no. 1, pp. 69–78, 2006.

[12]   V. Ho, "Constructing identities through request e-mail discourse," *J. Pragmat.*, vol. 42, no. 8, pp. 2253–2261, 2010.

[13]   J. M. Lightfoot, "A comparative analysis of e-mail and face-to-face communication in an educational environment," *Internet High. Educ.*, vol. 9, no. 3, pp. 217–227, 2006.

[14]   B. Roy, "The Optimisation Problem Formulation: Criticism and Overstepping," *J. Oper. Res. Soc.*, vol. 32, no. 6, pp. 427–436, 1981.

[15]   A. Borawska, "Multiple-Criteria Decision Analysis Using Topsis Method For Interval Data In Research Into The Level Of Information Society Development," *Folia Oeconomica Stetin.*, vol. 13, 2014.

[16]   G. Kabir and A. A. Hasin, "COMPARATIVE ANALYSIS OF TOPSIS AND FUZZY TOPSIS FOR THE EVALUATION OF TRAVEL WEBSITE SERVICE QUALITY," 2012.

[17]   S. H. Zanakis, A. Solomon, N. A. Wishart, and S. Dublish, "Multi-attribute decision making: A simulation comparison of select methods," *Eur. J. Oper. Res.*, vol. 107, pp. 507–529, 1998.

[18]   R. Rahim *et al.*, "TOPSIS Method Application for Decision Support System in Internal Control for Selecting Best Employees," *J. Phys. Conf. Ser.*, vol. 1028, no. 1, pp. 1–8, 2018.

[19]   A. M. Yaakob and A. Gegov, "Interactive TOPSIS Based Group Decision Making Methodology Using Z-Numbers," *Int. J. Comput. Intell. Syst.*, vol. 9, no. 2, pp. 311–324, 2016.

[20]   R. Soler-Costa, P. Lafarga-Ostáriz, M. Mauri-Medrano, and A. J. Moreno-Guerrero, "Netiquette: Ethic, education, and behavior on internet—a systematic literature review," *Int. J. Environ. Res. Public Health*, vol. 18, no. 3, pp. 1–15, 2021.

[21]   B. Singaravel and T. Selvaraj, "Optimizacija parametara obrade u postupcima tokarenja primjenom kombinacije TOPSIS i AHP metode," *Teh. Vjesn.*, vol. 22, no. 6, pp. 1475–1480, 2015.