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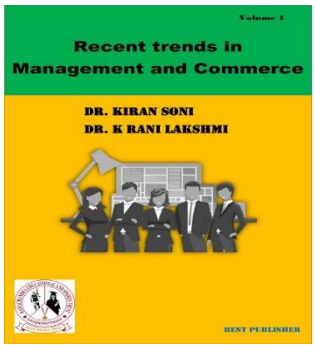

Appropriate Media Choice For E-Learning Effectiveness Analysis Using Evaluation Based on Distance from Average Solution Method

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Abstract: *The expansion of the e-generation is accelerated by internet progress, which has impacted all commercial and industrial activities. E-discipline is embraced by organisations due to high expense, time, or adaptability for designing courses and learners. Evaluation of electrocardiographic ability is crucial, and many assessment systems are used. Although much work has gone into evaluating e-clay skills, a common size rating model takes into account both the complexity of the psychological sense and the cross - functional and cross seen between criterion. With the aid of the way to solve relative associations from the measurement model and the averaging solution (EDAS) Method, the new novel hybrid Learning model that is being proposed in this work refers to the independence relationships of the racial criteria. The estimate with the distances from weighted average method (EDAS) approach is extended in this study. uses interval-valued Pythagorean fuzzy numbers, which offer high flexibility and a wide membership domain, to solve fuzzy inter cooperative decision-making problems. An example of an automobile selection problem is given to illustrate the efficacy and application of the suggested model, and the outcomes are contrasted with those obtained using the simple interval-valued EDAS method. E-Learning Infrastructure, Webpage Connection, Learning Record, and Instructional Material make up the evaluation parameter. Analysis, Design, Production, and execution are the alternatives. EDAS-based e-learning programme development. Development is ranked first, whereas analysis is ranked last.*

Keywords: *e-learning programmed development, new novel hybrid Learning model, electrocardiographic ability, MCDM.*

1. INTRODUCTION

In this work, an implementation of e recent study identified for construction projects in the e-discipline is established, taking into account the artificial interrelationships and use of criteria. This article employed a variety of techniques to develop the assessment model based on a number of important variables taken into account for e-ethnic performance. The main characteristics of the e-disciplinary evaluation are identified using factor analysis, which then generates independent components or features for some further AHP includes the opportunity. Usually, attractive options and the parts of other interactions have a backward-effecting effect on conditions. Additionally, corporate and university degree generates electromagnetic learning. E-building organizations and courses can be introduced by businesses, and the human capital or national research departments can use them to practice at work. Businesses can save money by using e-learning programmed instead of guest speakers, and staff members can take courses as needed. Their inventories categorization is suggested using the EDAS approach. The main benefit of EDAS over other categorization techniques is its accuracy and lack of complex mathematical calculations. In EDAS, the assessment information is based on how far apart each possibility is from the ideal answer in terms of each condition. an expanded EDAS method for choosing vendors. In determining the solid waste disposal site, an intuitive fuzzy model based on the EDAS method was suggested. In this study, EDAS was integrated to analyze the barriers to RE development.

2. E-LEARNING PROGRAM

Other advantages, like as facilities, standardized distribution, identity learning, and a variety of available content, have helped many companies adopt e-clamp in addition to the beneficial economic effects. Most discussions of e-learning enablement centre on technologies, but as Doherty (2001B) and others point out, e-

learning also involves a number of human elements. The close connection between ICT and e-Learning is emphasized by Clark, who says that "E-Conduct is a generic word that incorporates many techniques to employ information and communication technology." Whatever label is applied, using Internet-based technologies to improve learners' learning is the goal of e-ethnicity, web - based training, and computer accelerated learning. Additionally, Alfieri et aluse .'s of system can be achieved to enhance the therapeutic planning and luminous kinesthetic awareness of radiation cancer physicians demonstrates the effectiveness of radiation therapy. Another advantage to be noticed is that the expense of e-construction can boost cost-efficiency because the same e-discipline programme can be given to many students at once [26], decreasing the need for a classroom and increasing the amount of resources available. In the early 1970s, electrocardial technology were considered and investigated. This literature has offered substantial rhetoric and challenging figures over the past several decades, leading to strong conclusion regarding e-generation technology and it. Comparative research has also been done to assess the similarities and differences between online learning and in-person instruction. This demonstrates how effective e-learning is for pharmaceutical education right after certification. E-ethnicity was also more successful than any instruction and comparable to traditional learning. These findings are consistent with a wide body of research showing how well e-learning works to advance knowledge in other fields. However, the lengthy effects of electromagnetic learning are unknown.

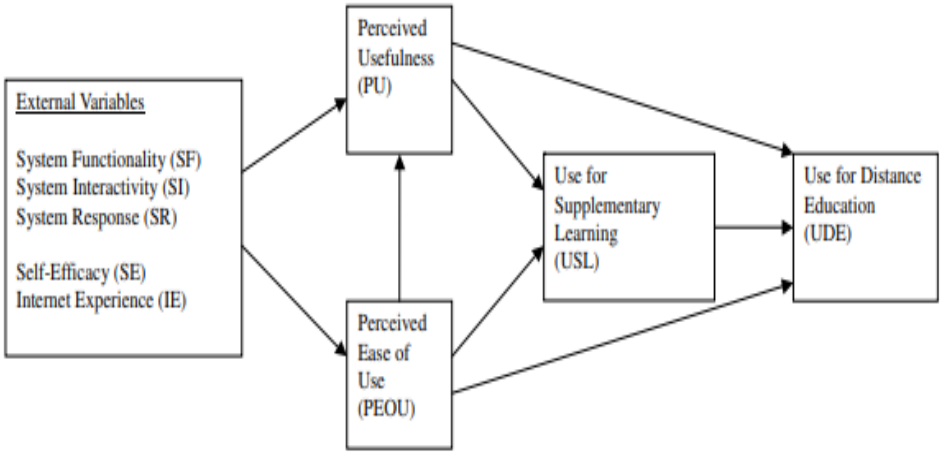

FIGURE 1. The fully mediated model for e-learning use.

The level of commitment required for an e-building project determines its success (s). Accessibility to e-class education training for teachers accompanied by instructional designers is required for contract teachers and programmed coordinators. Their education must emphasize online communication techniques and distant learning strategies. Electrical education is seen as a learning tool, particularly in the context of higher education. The best use of time and money is to expand access to quality education, especially for marginalized communities in rural areas. Businesses employ e-platforms to offer learning resources in order to boost educational materials lower the price of education, keep an eye on the employee's learning requirements, and tailor their learning programmed. Companies with a high requirement for regular training in multiple locations find electrical appealing. Companies that conduct e-building processes must bear in mind two main things when considering the possible benefits of e-alkaline: there are numerous potential errors in the usage of electrical understanding and require a sizable plan and commitment to fully execute. Investments in information systems (IT) and personnel could be significant for electrocortical projects. The particular cost comprises costs for training, development, and equipment and software that consumers need to access schooling.

3. MATERIALS AND METHOD

For multi-criteria attribute selection, "Keshavers Gorabai et al. (2015)" created the EDAS approach. The effectiveness of the EDAS technique for solving MCDM issues was also proven. An expanded variation of the EDAS approach is suggested in this section to address issues with collective decision in fuzzy contexts. In this investigation, decision-makers use linguistic expressions to convey the relative weights of the criteria and assessments of options for each criterion. These linguistics phrases have positively trapezoidal fuzzy number scales applied to them. As a result, the EDAS approach is expanded using mathematical operation and ideas of triangular fuzzy numbers. The EDAS technique has the benefit of ensuring a compromise solution based on the mean solution, which increases the approach's stability when rating the alternative (Feng et al., 2018). An easy-to-use fuzzy EDAS approach was developed to assess a waste disposal location. An EDAS approach for extended hesitant linguistic variables MCDM was created by Feng et al. (2018). Additionally, developed a new intuitionistic

fuzzy EDAS approach and looked into how it might be used to choose hospitals. Karasan and Karaman (2018) prioritised the United Nations Regional Goals Of Sustainable development using the increment neutrosophic EDAS approach. Zhang et al. (2019b) modified the EDAS approach for MCGDM using picture 2-tuple linguistic data. Additionally, Peng and Liu (2017) assembled a number of EDAS-based systems for neutrosophic smooth decision-making. " Keshavers Korabe et al. (2015)" created the EDAS approach, which is primarily based on the concept of considering potential using two euclidean distance, namely positive length from the average (PDA) and negatives length from the mean (NDM) (NDA). Cashavers Korabe et al. (2016) devised a fuzzy variation of this method in which judgement call can describe the criteria weights and assess alternatives using language phrases, which are evaluated by positive TFNs. Keshavars Gorabai and colleagues suggested the "EDAS (estimation based on distance from mean solution)" approach. An effective and recently developed way to handle initial inventory categorization is MCDM. It has recently been expanded to address various MCDM issues, including engineering issues. The EDAS approach skips the phase of intricately calculating the ideal and nadir solutions, in contrast to some Multiple criteria decision layers like VIKOR and TOPSIS. The EDAS method's fundamental tenets can be summed up as follows: The averaged solution (AS), which may be simply obtained by computing the arithmetic mean, is used for the assessment of alternatives by assessing their distances from the mean answer. Performance ratings for several alternatives in relation to each criterion.

4. RESULT AND DISCUSSION

TABLE 1. E-learning Program using EDAS Method

	E-Learning Environment	Webpage Connection	Learning Records	Instruction Materials
Analysis	55.08	145.53	37.15	25.05
Design	54.12	164.97	33.69	27.30
Development	48.08	154.58	29.18	23.10
Implementation	57.00	164.87	39.00	23.98
AVj	53.57000	157.48750	34.75500	24.85750
	B	B	NB	NB

Shows table 1 is E-learning programming using the EDAS method. The evaluation parameter is E-Learning Environment, Webpage Connection, Learning Records, and Instruction Materials. The alternatives are Analysis, Design, Development, and implementation is seen all Average in Value.

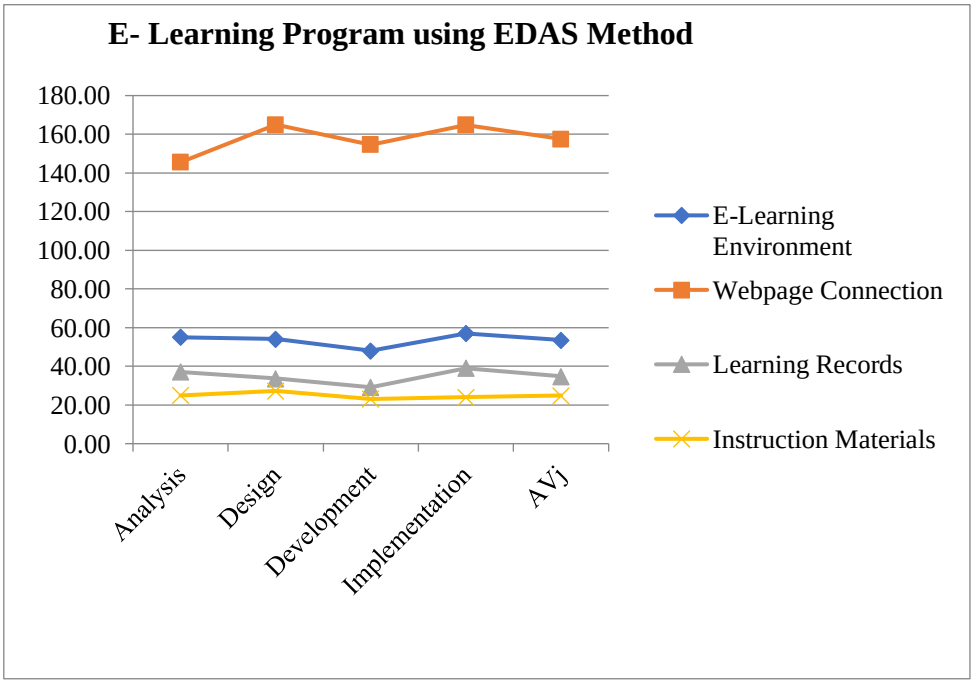

FIGURE 1. E-learning program

Shows figure 1 is E-learning programming using the EDAS method. The evaluation parameter is E-Learning Environment, Webpage Connection, Learning Records, and Instruction Materials. The alternatives are Analysis, Design, Development, and implementation is seen all Average in Value.

TABLE 2. Positive Distance from Average (PDA)

	Positive Distance from Average (PDA)			
Analysis	0.03	0.00	0.00	0.00
Design	0.01	0.05	0.03	0.00
Development	0.00	0.00	0.16	0.07
Implementation	0.06	0.05	0.00	0.04

Shows table 2. the Positive Distance from Average (PDA) in Evaluation of E-learning programing in using the Analysis method in EDAS Analysis, Design, Development, Implementation. E-Learning Environment, Webpage Connection, Learning Records, Instruction Materials is seen all Maximum Value.

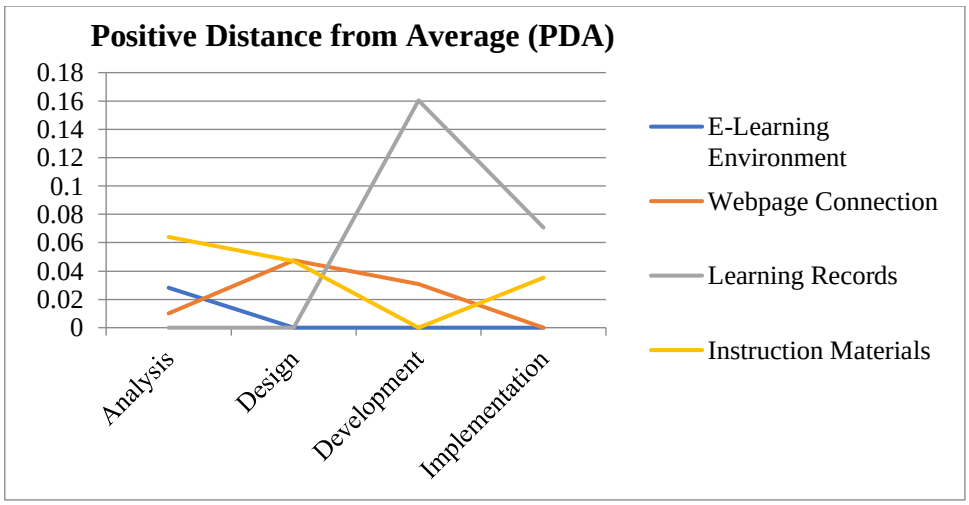

FIGURE 2. Positive Distance from Average (PDA)

Shows Figure 2. the Positive Distance from Average (PDA) in Evaluation of E-learning Programing in using the Analysis method in EDAS Analysis, Design, Development, Implementation. E-Learning Environment, Webpage Connection, Learning Records, Instruction Materials is seen all Maximum Value.

TABLE 3. Negative Distance from Average (NDA)

	Negative Distance from Average (NDA)			
Analysis	0.00000	0.07593	0.06891	0.00774
Design	0.00000	0.00000	0.00000	0.09826
Development	0.10248	0.01846	0.00000	0.00000
Implementation	0.00000	0.00000	0.12214	0.00000

Shows Table 3. the Negative Distance from Average (NDA) in Evaluation of E-learning programing in using the Analysis method in EDAS Analysis, Design, Development, Implementation, Evaluation. E-Learning Environment, Webpage Connection, Learning Records, Instruction Materials is seen all Maximum Value.

Table 4. Weight

	Weight			
Analysis	0.25	0.25	0.25	0.25
Design	0.25	0.25	0.25	0.25
Development	0.25	0.25	0.25	0.25
Implementation	0.25	0.25	0.25	0.25

Shows the Table 4 Weightages used for the analysis. We take same weights for all the parameters for the analysis.

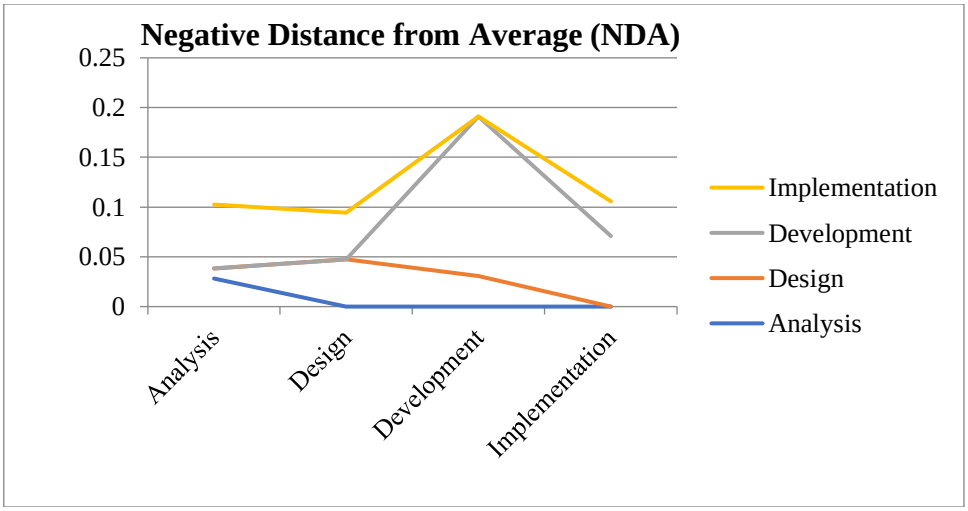

FIGURE 3. Negative Distance from Average (NDA)

Shows Figure 3. the Negative Distance from Average (NDA) in Evaluation of E-learning Programing in using the Analysis method in EDAS Analysis, Design, Development, Implementation, Evaluation. E-Learning Environment, Webpage Connection, Learning Records, Instruction Materials is seen all Maximum Value.

TABLE 5. Weighted PDA and SPI

	Weighted PDA				SPi
Analysis	0.00705	0.00000	0.00000	0.00000	0.00705
Design	0.00257	0.01188	0.00766	0.00000	0.02211
Development	0.00000	0.00000	0.04010	0.01768	0.05778
Implementation	0.01601	0.01172	0.00000	0.00883	0.03655

shows the Table 5 Weighted PDA SPi in Evaluation of E-learning Programing in using the Analysis method in EDAS Analysis is shown the Table 2 and Table 4 in Multiple Value. Design, Development, Implementation. E-Learning Environment, Webpage Connection, Learning Records, Instruction Materials is seen all Multiple Value.

TABLE 6. Weighted NDA and SNi

	Weighted NDA				SNi
Analysis	0.00000	0.01898	0.01723	0.00194	0.03815
Design	0.00000	0.00000	0.00000	0.02457	0.02457
Development	0.02562	0.00462	0.00000	0.00000	0.03024
Implementation	0.00000	0.00000	0.03054	0.00000	0.03054

Table 6 shows the Weighted PDA SPi in Evaluation of E-learning Programing in using the Analysis method in EDAS Analysis is shown the Table 3 and Table 4 in Multiple Value. Design, Development, Implementation, Evaluation. E-Learning Environment, Webpage Connection, Learning Records, Instruction Materials is seen all Multiple Value.

TABLE 7. NSPI, ASI, and Rank

	NSPi	**NSPi**	**ASI**	**Rank**
Analysis	0.12196	0.00000	0.06098	4
Design	0.38259	0.35602	0.36931	3
Development	1.00000	0.20735	0.60367	1
Implementation	0.63262	0.19951	0.41606	2

shows the table 6 Final Result of Evaluation of E-learning Programing in using the Analysis for EDAS Method. NSPi in Entrepreneurs is calculated using the Development is having is Higher Value and Analysis is having Lower value. NSPi in calculated using the Design is having is Higher Value and Analysis is having Lower value. ASi in calculated using the Development is having is Higher Value and Analysis is having Lower value. E-Learning rank Analysis is Lowest rank and Development is first rank.

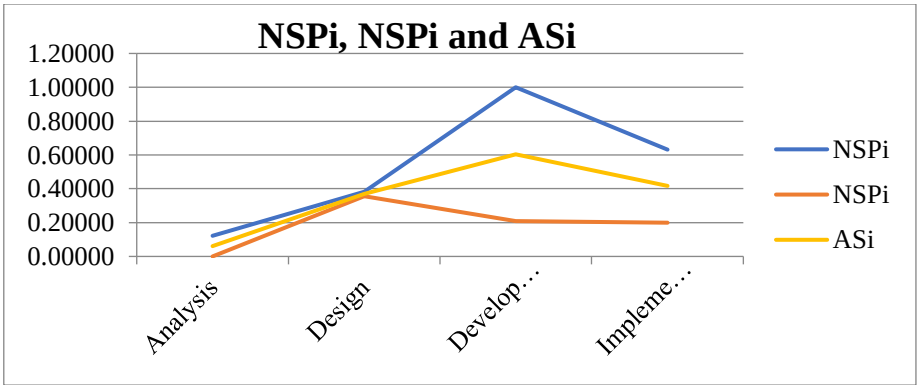

FIGURE 4. NSPI, NSPI, and ASi

Shows figure 4 the Final Result of Evaluation of E-learning Programing in using the Analysis for EDAS Method. NSPi in Entrepreneurs is calculated using the Development is having is Higher Value and Analysis is having Lower value. NSPi in calculated using the Design is having is Higher Value and Analysis is having Lower value. ASi in calculated using the Development is having is Higher Value and Analysis is having Lower value.

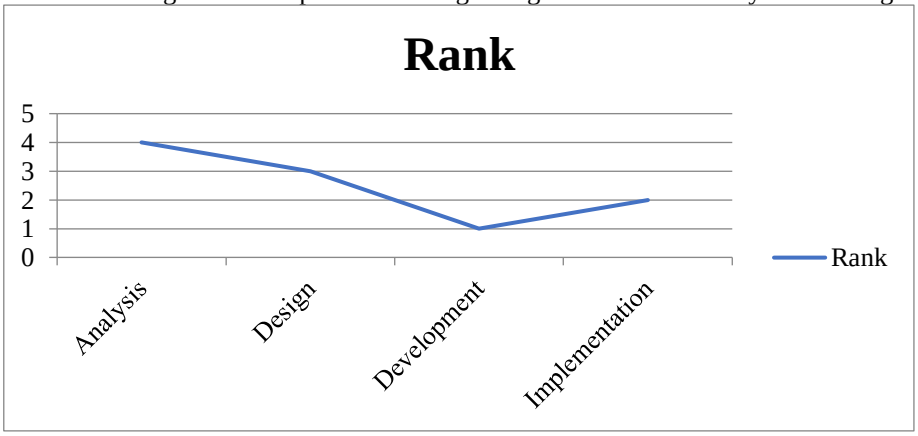

FIGURE 5. Rank

Shows the figure 5. E-learning Programing in using EDAS method. Development is got first rank and Analysis is got Lowest rank

5. CONCLUSION

The education field and the different learning govern an e-tactic software and its learning abilities. This model was scientifically investigated utilising test data for the cognitive domains and data based on how learners feel about their learning abilities. A developing trend in educational programmes is the use of e-learning as a supplementary tool. There are numerous internal and external knowledge e-learning systems available. However, the majority of them are created to work alone rather than together. Due to the variety of systems, implementing joint degrees using e-learning systems necessitates resolving a number of technological challenges. We have presented an intermission intuitively flexible EDAS (IVIF EDAS) approach in this paper. Intermission intuitive fuzzy sets with their associated mathematical functions are used to represent linguistic evaluations. The resultant ranking can switch from conventional "fuzzy EDAS (OF EDAS) to fuzzy EDAS" due to the basic differences between the fuzziness provided by the trapezoid fuzzy set and the intermission fuzzy set. IVIF EDAS computations are more challenging than those for fuzzy EDAS in general. Distributed systems and IVIF EDAS should have methods for evaluation and assessment. The popular BN technique overlooks additional risk level and competitive landscape and just assesses likelihood of the risk occurring. It would be unable to adequately explain the uncertainty in experts' cognition. To address these issues, an innovative and comprehensive paradigm for risk evaluation that combines CN with EDAS is provided in this study. By combining the advantages of CN and EDAS, the proposed framework can describe the causal relationship among significant contributing variables, address research primary focus, and completely examine construction hazards from various aspects. E-learning EDAS programming is being done. Analysis is ranked second, and development is first. last place.

REFERENCES

[1]. Tzeng, Gwo-Hshiung, Cheng-Hsin Chiang, and Chung-Wei Li. "Evaluating intertwined effects in e-learning programs: A novel hybrid MCDM model based on factor analysis and DEMATEL." Expert systems with Applications 32, no. 4 (2007): 1028-1044.

[2]. Strother, Judith B. "An assessment of the effectiveness of e-learning in corporate training programs." The International Review of Research in Open and Distributed Learning 3, no. 1 (2002).

[3]. Sahasrabudhe, Vikas, and Shivraj Kanungo. "Appropriate media choice for e-learning effectiveness: Role of learning domain and learning style." Computers & Education 76 (2014): 237-249.

[4]. Soong, Darcy. "A Study on EFL Students' Use of E-Learning Programs for Learning English--Taking a Taiwanese University as an Example." English Language Teaching 5, no. 4 (2012): 87-95.

[5]. Degerfält, Jan, Staffan Sjöstedt, Per Fransson, Elisabeth Kjellén, and Mads U. Werner. "E-learning programs in oncology: a nationwide experience from 2005 to 2014." BMC research notes 10, no. 1 (2017): 1-14.

[6]. Kanuka, Heather, and Liam Rourke. "Exploring amplifications and reductions associated with e-learning: conversations with leaders of e-learning programs." Technology, Pedagogy and Education 17, no. 1 (2008): 5-15.

[7]. Salter, Sandra M., Ajay Karia, Frank M. Sanfilippo, and Rhonda M. Clifford. "Effectiveness of E-learning in pharmacy education." American journal of pharmaceutical education 78, no. 4 (2014).

[8]. Udo, Godwin J., Kallol K. Bagchi, and Peeter J. Kirs. "Using SERVQUAL to assess the quality of e-learning experience." Computers in Human Behavior 27, no. 3 (2011): 1272-1283.

[9]. Pituch, Keenan A., and Yao-kuei Lee. "The influence of system characteristics on e-learning use." Computers & Education 47, no. 2 (2006): 222-244.

[10]. Geiger, Kaneen B., Linda A. LeBlanc, Katie Hubik, Sarah R. Jenkins, and James E. Carr. "Live training versus e-learning to teach implementation of listener response programs." Journal of Applied Behavior Analysis 51, no. 2 (2018): 220-235.

[11]. Engelbrecht, Elmarie. "Adapting to changing expectations: Post-graduate students' experience of an e-learning tax program." Computers & Education 45, no. 2 (2005): 217-229.

[12]. Alsultanny, Yas A., Ahmed M. Nouby, and Tala T. Al-Enazi. "Effects of using simulation in e-learning programs on misconceptions and motivations towards learning." International Journal of Science of Technology Educational Research 5, no. 3 (2014): 41-51.

[13]. El Gamal, Sarah, and Rasha Abd El Aziz. "Improving higher education in Egypt through e-learning programs: HE students and senior academics perspective." International Journal of Innovation in Education 1, no. 4 (2012): 335-361.

[14]. Mittal, Monika. "Evaluating perceptions on effectiveness of e-learning programs in Indian banks: identifying areas for improvement." Development and Learning in Organizations: An International Journal 22, no. 2 (2008): 12-14.

[15]. Kahraman, Cengiz, Mehdi Keshavarz Ghorabaee, Edmundas Kazimieras Zavadskas, Sezi Cevik Onar, Morteza Yazdani, and Basar Oztaysi. "Intuitionistic fuzzy EDAS method: an application to solid waste disposal site selection." *Journal of Environmental Engineering and Landscape Management* 25, no. 1 (2017): 1-12.

[16]. Hou, Wen-hui, Xiao-kang Wang, Hong-yu Zhang, Jian-qiang Wang, and Lin Li. "Safety risk assessment of metro construction under epistemic uncertainty: An integrated framework using credal networks and the EDAS method." Applied Soft Computing 108 (2021): 107436.

[17]. Mitra, Ashis. "Selection of cotton fabrics using EDAS method." Journal of Natural Fibers 19, no. 7 (2022): 2706-2718.

[18]. Polat, Gul, and Hasan Gokberk Bayhan. "Selection of HVAC-AHU system supplier with environmental considerations using Fuzzy EDAS method." International Journal of Construction Management 22, no. 10 (2022): 1863-1871.

[19]. Darko, Adjei Peter, and Decui Liang. "Some q-rung orthopair fuzzy Hamacher aggregation operators and their application to multiple attribute group decision making with modified EDAS method." Engineering Applications of Artificial Intelligence 87 (2020): 103259.

[20]. Keshavarz Ghorabaee, Mehdi, Maghsoud Amiri, Edmundas Kazimieras Zavadskas, Zenonas Turskis, and Jurgita Antucheviciene. "Stochastic EDAS method for multi-criteria decision-making with normally distributed data." Journal of Intelligent & Fuzzy Systems 33, no. 3 (2017): 1627-1638.

[21]. Asante, Dennis, Zheng He, Nana Osae Adjei, and Bismark Asante. "Exploring the barriers to renewable energy adoption utilising MULTIMOORA-EDAS method." *Energy Policy* 142 (2020): 111479.

[22]. Wei, Guiwu, Cun Wei, and Yanfeng Guo. "EDAS method for probabilistic linguistic multiple attribute group decision making and their application to green supplier selection." Soft Computing 25, no. 14 (2021): 9045-9053.

