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E-Learning Programs Evaluation using COPRAS MCDM Method

By

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Abstract

In this article, Analysis have been made upon college students' conception of better education and scholarship, communique, excellent Education, critical Thinking. Online Study shows how self-study complements teacher engagement. Key requirements for learning online learning have proven to be helpful for soaring student study, engagement, motivation, and attendance. Effective e-learning can improve performance in key subject areas and improve 21st century skills in mature or growing countries. Students have the potential to discover new mastering applications and web sites that boost up their competencies. One of the main limits of the E - learning is lack of contact with friends and instructors, this may be irritating for a few students. Study also shows that E – learning strategy helps in interactive study atmosphere which provides opportunity in learning from teachers and improves our information and attitude. It is miserable among students reduces tension as many people are not able to speak more through online education. The various parameters used in this study as a evaluation preferences. The COPRAS method is employed in this analysis to identify the most suitable solution regarding intended subject under study. However, the distance comparison excluded to their relative importance. The analysis reveals that the qualified quantitative measures which have been assessed receives the highest rank, while the people set is ranked lowest.

Keywords: E – learning, Communique, Self – study, CORPAS, Quantitative measures

Introduction

To see if organizations are adopting e-studying techniques, despite the fact that e-gaining knowledge of has been evolving over time, evaluating e-gaining knowledge of overall performance is critical. To be considered for performance appraisal A sizable range of research had been conducted emphasizing the elements. Many assessment models are taken into consideration with precise capabilities [21] Used for e-getting to know ability assessment Criteria are many and affect each different. The conventional teaching method in universities has lengthy been a lecture room, There the professors deliver lectures to the students and the scholars concentrate and take notes. The communication among professor and student has been diagnosed as a crucial studying issue at this distribution web page. This article indicates the consequences of e-mastering on language getting to know and its additives. By the usage of language learning in this paper we are regarding 2d language getting to know or foreign language learning. Language mastering thru distance training is global and includes the Internet, multimedia, CDs, DVDs and Can be finished in lots of paperwork. Language getting to know is challenging and it's time ingesting and on occasion Because of the excessive cost, distance training and e-gaining knowledge of can reduce fees and time.

E-Learning Programs

To improve the outcomes of e-learning programs, an alternative approach is to focus on content quality measures, which refer to the excellence of the product for online educational. According to study conducted by the National Education Association and Blackboard Inc, degree programs on Internet-based higher education are offered to distance learners by six institutions with the aim of determining the extent to which numerous quality measures identified in prior work were integrated into the policies as well as practices, and procedures [22]. The study identified twenty-four benchmarks that were considered critical for warranting excellence in Internet-based learning. The standards are categorized as institutional and student support, course structure and development, faculty, teaching / learning, assessment and evaluation.

Complex Proportional Assessment (Copras)

In this phase, a model of the assessment framework, for setting up included issue evaluation and calibration standards The DEMATEL method has been brought. In real estimation troubles, it is difficult to calculate the price of the complex estimation method accuracy [23]. Nonetheless, the complex estimation setting is able to be broken down into multiple standards or subsystems, without problems determine differences or to degree the ratings of man or woman criterion agencies or sub-systems Factor investigation technique is normally utilized to distribute the standards into organizations Of those criteria for calculating factor performance Although compiling rankings might also appear logical, weights may additionally range among criteria. Assuming the same size weights may additionally falsify the outcomes. The suggested version uses DEMATEL, Ambiguous size as well as ambiguous integration to address those difficulties [24]. To the criteria DEMATEL is used to create interactions between, at the same time as ambiguous measurement and ambiguity Integration computes the weights and artificial software of the standards. It can obtain factor weights with the aid of processing character or organization subjectivity via the AHP technique. E-gaining knowledge of technologies Were discussed and studied. For the past 3 many years, this literature has been characterized by strong rhetoric and difficult statistics Related, the result has been conclusive outcomes against and towards e-studying technology. Attempts to measure and calculate the variances among e-gaining knowledge and direct gaining knowledge of Comparative research have additionally been performed. Comparative research based on the idea that technologies have an effect on getting to know reviews Are provided. However, the technique of such comparative research is primarily based at the consequences of technology It was argued that viewing is a essentially improper way For instance, main academic era researchers, studies on the use of era, They argue that they raise the deceptive query of whether they lead to greater powerful learning. Maintaining primary articles. Likewise, the efficacy of experiences in the learning is evaluated using the instructional techniques employed afore the technology utilized. According to Clark, technology is unbiased and intended to support the content [25]. Learning between conventional lecture room getting to know and e-learning There are many versions, including roles, mastering abilities, communiqué strategies, and assessment methods. Past studies has shown that meta-know-how, teamwork and time control are crucial e-gaining knowledge of capabilities As a end result, people surprising with e-learning will inevitably make the effort to broaden gaining knowledge of competencies Should use new era and improve their learning overall performance. Conversely, e-studying Users who're familiar with the method are probably to have mastered and mastered the specified studying capabilities.

Analysis And Discussion

Table 1. illustrates that the Evaluation value are Source of variance, Sum of sq, difference, Mean square, Probability and the Alternative values are between people, within the people, between measures, residual ,grand mean values.

Source of variance it is seen that Between measures is showing the highest value for Between people is showing the lowest value. Sum of sq it is seen that Grand mean is showing the highest value for Within people is showing the lowest value. difference it is seen that Grand mean is showing the highest value for Between measures is showing the lowest value. Mean square it is seen that Between people is showing the highest value for Between measures is showing the lowest value.

TABLE 1. *E-LEARNING PROGRAMS*

	Source of variance	Sum of sq	difference	Mean square
Between people	67	68	35	44
Within people	98	57	24	33
Between measures	99	68	23	14
Residual	57	84	32	35
Grand mean	68	85	46	20

Table 1. shows the E-Learning Programs Alternative: Source of variance, Sum of sq, difference, Mean square. Evaluation Preference includes Between people, Between measures and Within people parameters in addition to Grand mean and Residual as shown in this table.

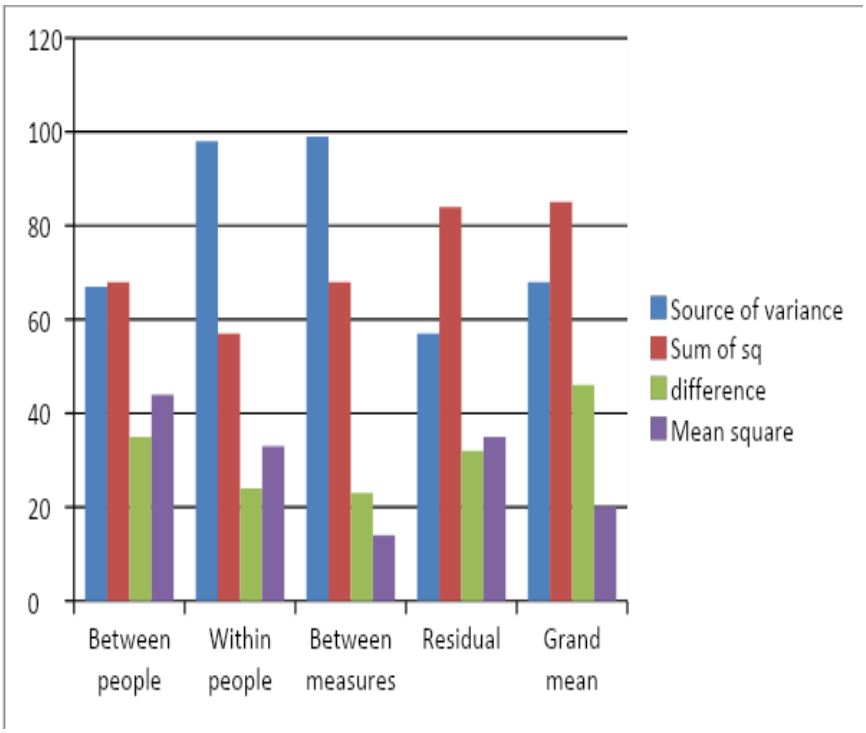

Figure 1. *E-Learning Programs*

Figure 1 shows the graphical representation. E-Learning Programs Source of variance, Sum of sq, difference, Mean square. Between people, Within people, Between measures, Residual, Grand mean.

TABLE 2. *NORMALIZED DATA*

Normalized Data			
Source of variance	***Sum of sq***	***Set difference***	***Mean square***
0.1722	0.1878	0.2188	0.3014
0.2519	0.1575	0.15	0.226
0.2545	0.1878	0.1438	0.0959
0.1465	0.232	0.2	0.2397
0.1748	0.2348	0.2875	0.137

Table 2. illustrates that the set difference is the highest value while the mean square contains the lowest value and the sum of sq average value.

TABLE 3. *WEIGHT*

Weight			
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25

Table3 shows that the values of the weight ages are same for the all the variance value.

TABLE 4. *WEIGHTED NORMALIZED DECISION MATRIX*

Weighted normalized decision matrix			
Source of variance	**Sum of sq**	**difference**	**Mean square**
0.04	0.05	0.05	0.08
0.06	0.04	0.04	0.06
0.06	0.05	0.04	0.02
0.04	0.06	0.05	0.06
0.04	0.06	0.07	0.03

Table.4 shows that the source of variance and the sum of sq are the average value and set difference contains the uppermost value and the mean square is the lowermost one.

TABLE 5. *BI&CI*

Bi	Ci
0.09	0.13
0.102	0.094
0.111	0.06
0.095	0.11
0.102	0.106
min(Ci)*sum(Ci)	0.03

Table.5 shows that the when Bi is compared to Ci has it has low valve and ci has highest value.

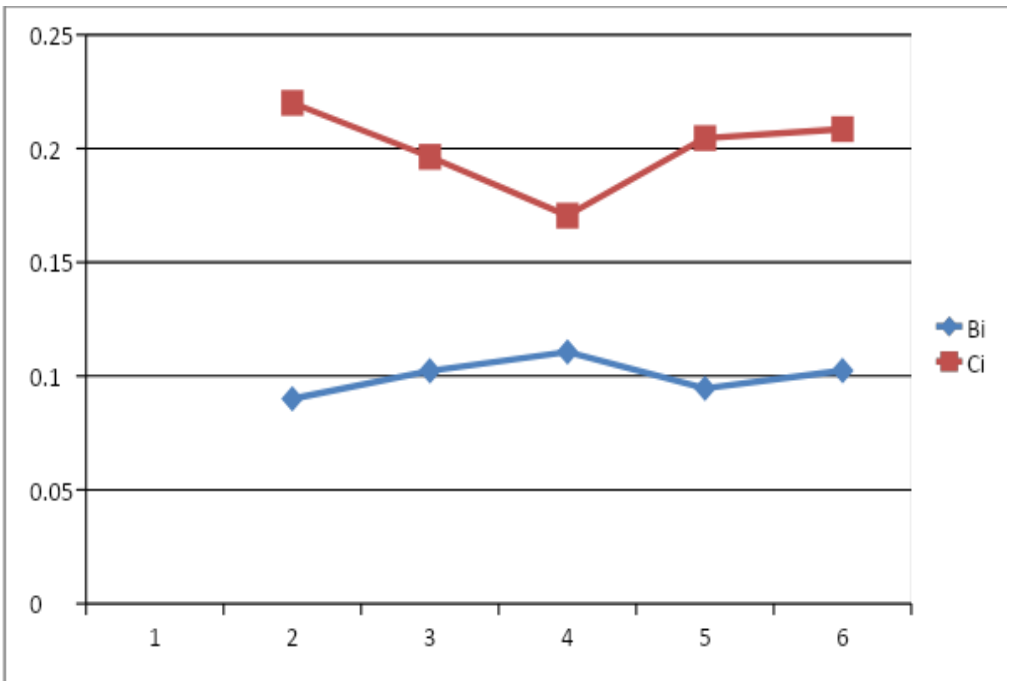

Figure 2. *Bi, Ci*

Figure 2 shows plot that the Ci has the highest value and Bi has the lowest value

TABLE 6. *MINIMUM CI*

	Qi	Rank	Ui	Rank
Between people	0.1618	5	0.60736	5
Within people	0.2017	2	0.7569	2
Between measures	0.2665	1	1	1
Residual	0.1796	4	0.67399	4
Grand mean	0.1904	3	0.71455	3

Table.6 shows that the between measures have the highest value and residual and grand mean has the average value and the between value has the lowest value.

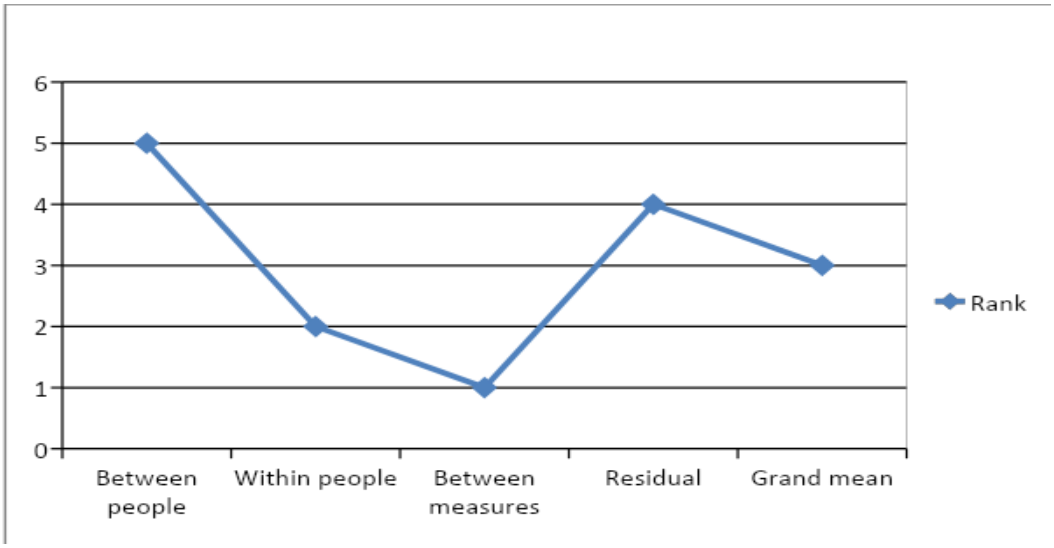

Figure 3. *Rank*

Figure 3. Plot that the between measures has the highest rank and the between people has the lowest rank and the within the people and grand mean are the average value.

Conclusion

The purpose of e-learning continuum is to cater to users having varying stages of practice in e-learning. This study is a model for understanding and determining and examining the moderate effects of e-learning experience Proposes. Five external constructions impact directly or indirectly on the successive decisions of learners' results Negative overall events, alleged efficacy, simplicity of usage, quality features and attitudes illustrates overall gratification. Negative important events regardless of the user's previous status and the findings also reveal that approaches are crucial drivers of sustainability in the e-learning atmosphere. One hope in the e-learning experience is that designers and teachers will not convert to the lecture format will try to use other learning teachings. Meaningful courses that really make a difference by tapping into individual differences. New technology leaders will help create. Additionally enjoyed the degree online with students. Then, it will be helpful if students make real friends. And lifelong communication with their peers. This study was computer-generated of children's social responses and delivers practical support for the assertion that social references may be expressed and affected. Side panels achieve this goal rather than utilizing anthropological interface or AI, this article seeks to exploit some aspects of man. The Communication from human to computer, simple and embedded social tips in computer interfaces Give social characteristics and familiarity with man - computer communication. So, kids are not just looking at the computer as a device but can feel like a mate or friend. Helps to create a social connection between them. According to the result we can say that Between measures is at the first level while the lowest rank is obtained by Between people set.

References

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

Harandi, Safiyeh Rajaee. "Effects of e-learning on Students' Motivation." Procedia-Social and Behavioral Sciences 181 (2015): 423-430.

Mohammadi, Neda, Vahid Ghorbani, and Farideh Hamidi. "Effects of e-learning on language learning." Procedia computer science 3 (2011): 464-468.

Bredesen, Ida Marie, Karen Bjøro, Lena Gunningberg, and Dag Hofoss. "Effect of e-learning program on risk assessment and pressure ulcer classification—A randomized study." Nurse education today 40 (2016): 191-197.

Wan, Zeying, Yinglei Wang, and Nicole Haggerty. "Why people benefit from e-learning differently: The effects of psychological processes on e-learning outcomes." Information & management 45, no. 8 (2008): 513-521.

Nahm, Eun-Shim, Shijun Zhu, Michele Bellantoni, Linda Keldsen, Vince Russomanno, Matt Rietschel, Tabassum Majid, HyoJin Son, and Leslie Smith. "The effects of a theory-based patient portal e-learning program for older adults with chronic illnesses." Telemedicine and e-Health 25, no. 10 (2019): 940-951.

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.

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.

Feng, Jui-Ying, Yi-Ting Chang, Hsin-Yi Chang, William Scott Erdley, Chyi-Her Lin, and Ying-Ju Chang. "Systematic review of effectiveness of situated e-learning on medical and nursing education." Worldviews on Evidence-Based Nursing 10, no. 3 (2013): 174-183.

Hagen, Janne Merete, and Eirik Albrechtsen. "Effects on employees' information security abilities by e-learning." Information Management & Computer Securit(2009).

Lee, Ming-Chi. "Explaining and predicting users' continuance intention toward e-learning: An extension of the expectation–confirmation model." Computers & Education 54, no. 2 (2010): 506-516.

Vachon, Mark. "An investigation of the profiles of satisfying and dissatisfying factors in e-learning." Performance Improvement Quarterly 18, no. 2 (2005): 97-113.

Kiboss, Joel Kipkemboi. "Effects of special e-learning program on hearing-impaired learners' achievement and perceptions of basic geometry in lower primary mathematics." Journal of Educational Computing Research 46, no. 1 (2012): 31-59.

Sung, Young Hee, In Gak Kwon, and Eunjung Ryu. "Blended learning on medication administration for new nurses: integration of e-learning and face-to-face instruction in the classroom." Nurse education today 28, no. 8 (2008): 943-952.

Mohammadyari, Soheila, and Harminder Singh. "Understanding the effect of e-learning on individual performance: The role of digital literacy." Computers & Education 82 (2015): 11-25.

Law, Kris MY, Victor CS Lee, and Yuen-Tak Yu. "Learning motivation in e-learning facilitated computer programming courses." Computers & Education 55, no. 1 (2010): 218-228.

Brown, Kenneth G. "A field study of employee e-learning activity and outcomes." Human Resource Development Quarterly 16, no. 4 (2005): 465-480.

Ho, Li-An, and Tsung-Hsien Kuo. "How can one amplify the effect of e-learning? An examination of high-tech employees' computer attitude and flow experience." Computers in Human Behavior 26, no. 1 (2010): 23-31.

Lin, Kan-Min. "e-Learning continuance intention: Moderating effects of user e-learning experience." Computers & Education 56, no. 2 (2011): 515-526.

Kalidasan, B., Pandey, A.K., Shahabuddin, S., George, M., Sharma, K., Samykano, M., Tyagi, V.V. and Saidur, R., 2021. Synthesis and characterization of conducting Polyaniline@ cobalt-Paraffin wax nanocomposite as nano-phase change material: Enhanced thermophysical properties. Renewable Energy, 173, pp.1057-1069.

Kumar, A., Sharma, K. and Dixit, A.R., 2020. Role of graphene in biosensor and protective textile against viruses. Medical hypotheses, 144, p.110253.

Sharma, K.R., Raju, S.V.S., Jaiswal, D.K. and Thakur, S., 2018. Biopesticides: an effective tool for insect pest management and current scenario in India. Ind. J. Agric. Allied Sci, 4, pp.59-62

Shukla, M.K., Kumar, A., Yadav, A. and Sharma, K., 2019. Improved mechanical properties of graphene oxide reinforced cross-linked epoxy nanocomposites: a molecular dynamics approach. Materials Today: Proceedings, 11, pp.679-685.

Chaturvedi, R., Islam, A. and Sharma, K., 2021. A review on the applications of PCM in thermal storage of solar energy. Materials Today: Proceedings, 43, pp.293-297.

Wang, G., Feng, L., Altanji, M., Sharma, K. and Nisar, K.S., 2021. Proposing novel "L" shaped fin to boost the melting performance of a vertical PCM enclosure. Case Studies in Thermal Engineering, 28, p.101465.