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Investigation of the Successful Implementation of E-Learning in Senior Vocational High School during the Pandemic Period of Covid-19
A Case Study in Tarakan City, North Kalimantan

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ABSTRACT
The perpose of this research is to examine the writing on E-Learning basically. It distinguishes significant elements that influence the accomplishment of E-Learning, fosters a reasonable structure that coordinates basic E-Learning elements and segment factors, and overhauls and changes the theoretical system for fruitful execution of E-Learning in the instruction area. The research design was quantitative decriptive with the exploration subjects of high teachers and student in Tarakan City, North Kalimantan. The overview procedure as a questionnarel was utilized to be broke down quantitatively in diagrams and tables. The survey data shows that teachers' and students' attitudes are considered the most critical and significant E-Learning application factors. Survey data analysis shows teachers' need to control technology and manage E-Learning tools and applications in the learning environment. The survey findings also identify the need for teaching styles and pedagogy that must be considered in order to achieve a successful E-Learning implementation. Survey findings show that many design and content issues need to be addressed and require sufficient attention from E-Learning developers and implementers. Student motivation is a significant factor during the implementation and development of E-Learning

Keywords:*E-Learning, Covid-19, Evaluation*

1. INTRODUCTION

Covid 2019 (COVID-19) has shut schools all throughout the planet. Worldwide, more than 1 billion students are leaving study halls. Accordingly, schooling has changed significantly, with the development of particular e-learning, where instructing is done from a distance and on digital platform. Exploration shows that web based learning has been displayed to expand data maintenance, and take less time, which implies the progressions brought about by the Covid might be here to go up close and personal learning into online learning.

Web based learning or E-learning is a term used to portray different learning conditions did and upheld by PCs and the web. There are a few definitions and wording used to depict web based learning. These incorporate E-learning, distance learning, PC learning, among others (Anon, 2001).[1] Remote learning is one of the terms utilized in E-learning and incorporates all learning strategies used to prepare student geographically far way from the preparation school. Then again, virtual learning is utilized to depict all learning techniques upheld by the web (Moore et al., 2011)[2]. One more phrasing utilized is learning techniques upheld by PCs, web-empowered correspondence, and new innovative instruments that improve communication (Spector et al., 2008).[3] Other phrasing used to depict this type of web based learning is virtual learning, community learning, electronic learning, and PC upheld synergistic learning (Conrad, 2006).[4]

E-learning gives many advantages that serve the primary instruction partners in the learning environtment, to be specific student and teacher (Al-Marabeh and Mohammad, 2013).[5] These incorporate expanded openness to data, better substance conveyance, customized directions, content normalization, responsibility, on-request accessibility, self-speed, intuitiveness, certainty, and expanded accommodation. E-Learning decreases costs, empowers predictable substance conveyance, and further develops following. The advantages of E-Learning can be summed up in the accompanying three benefits:

- Providing Effective Learning

E-Learning can possibly establish a fruitful and significant learning environment that persuades students and offers useful assets for collaboration and communiction. Utilizing sight and sound improvement assets fosters student' arrangement and advances their instructive experience (Al-Harbi[6], 2010;Jethro [7], Grace, and Thomas, 2012).

- Enabling Interaction and Communication

Mahdizadeh, Biemans and Mulder 2008)[8] not really set in stone that the connection among teacher and student is presently not a single direction relationship yet more about making more joint effort and collaboration between student to expand their participation and involvement in classrom.

- Provides adaptability in the delivery of learning

One of the focal possibilities of E-Learning is adaptability. The writing recommends that instructive settings have been found to share specific normal convictions about the viable advantages that e-learning can give in giving adaptable learning (Al-Kharang and Ghinea, 2013). [9]

While E-Learning gives a few advantages to instructive settings that work on the nature of training and foster a learning environment, alternately, there are as yet many difficulties that thwart investigation and double-dealing of chances (Al-Kharang and Ghinea, 2013).[9] E-Learning activities' multidimensionality shows that different difficulties block execution and improvement (Andersson, 2008).[10] For instance, as Kwofie and Henten(2011) [11] detailed, E-Learning is costly, includes struggle needs, and requires specialized and scholarly certainty, social help and inspiration, specialized abilities and skills, and stable specialized foundation. Executing E-Learning requires looking at the accompanying fundamental variables: cost, time, innovation, mentalities, the board mindfulness, backing, and language (Al-Kharang and Ghinea, 2013). [9] Moreover, E-Learning issues incorporate ICT foundation, openness issues, quality and effectiveness of E-Learning, innovation convenience, and educational contemplations (Mapuva, 2009)[12]. Additionally, Bhuasiri et al.(2012)[13] featured that the significant variables of E-Learning include: attributes and inspiration of student, qualities of educators, E-Learning environment, nature of establishments and administrations, nature of framework and frameworks, and nature of courses and data.

In light of the clarification above, scientists are keen on researching the achievement of carrying out E-Learning in High Schools (SMA) during the Covid-19 pandemic. This review plans to address the accompanying inquiries:

1. What are the basic factors that impact the achievement of E-Learning?

2. How do teacher and student vary in their view of basic E-Learning factors?

3. How do educators vary in their view of basic E-Learning factors dependent on chose socioeconomics (e.g., sex, specialization, showing experience, and E-Learning experience)?

4. How do student vary in their view of basic E-Learning factors dependent on chose socioeconomics (e.g., sex, level of study (a long time in school), and specialization)?

2. METHODOLOGY

The decision of a specific quantitative exploration strategy relies upon the examination question to be talked about. In light of the above conversation, this current review's spellbinding methodology plans to assemble an exact portrayal of individuals, occasions, circumstances, and conditions and eventually make a comprehensive perspective on the peculiarities associated with this review. Likewise, quantitative examination strategies incorporate reviewing, displaying, and measurable investigation. Thusly, this examination configuration is illustrative quantitative (Creswell, 2014)[14]. This examination populace is the educators and student of Senior High School (SMA) and Vocational High School (SMK) in Tarakan City, North Kalimantan. The example acquired is an example of the consequences of arbitrary inspecting directed from the current exploration populace. This review picks a study system to be applied. Quantitative information investigation is utilized to sum up the outcomes from the example populace. The quantitative investigation in this exploration is planned to clarify the peculiarity by gathering mathematical information examined utilizing numerical based strategies and in this review in elucidating measurements. It is a sort of estimating individuals' thinking as a factual perspective from the acquired poll information.

3. RESULTS AND DISCUSSION

There were 135 teacher and 929 student of Senior High School (SMA) and Vocational School (SMK) in Tarakan who wish to finish up the poll. The overview results are introduced in the table underneath.

a. Student Characteristics

Ten inquiries survey the qualities of student whose outcomes are depicted as follows.

Table 1. Student Characteristics

No	Question	Percentage (%)				
		1	2	3	4	5
1	The use of E-Learning is more encouraging than traditional methods	5,9	10,4	39,6	30,7	13,5
2	Using E-Learning is more fun than traditional methods	6	12,6	35,9	31,4	14,2
3	The use of E-Learning facilitates learning more than traditional methods	3,4	10,2	28,8	42,6	15,1
4	The use of E-Learning allows students to complete assignments more easily than traditional methods	3	8,7	31,3	38,9	18,1
5	Use of E-Learning requires more assistance with applications than traditional methods	2,7	4,9	23,6	45,7	23,2
6	The use of E-Learning provides a more attractive learning environment than traditional methods	4,8	12,7	33,3	33,9	15,5
7	The use of E-Learning provides more opportunities to participate in activities than traditional methods	5,9	14,9	35,9	32,3	11,1
8	The use of E-Learning is more satisfying than traditional methods	6,2	14,7	40,8	27,9	10,5
9	The use of E-Learning improves learning performance	6,2	11,5	34,9	34,8	12,6
10	Using E-Learning is more fun than traditional methods	6,6	11,4	38,2	30,6	13,3

The review discoveries uncover that student perspectives are a fundamental element in the effective utilization of E-Learning, reflecting past research (Zewayed, Maynard, and Murray, 2011). [15] Student perspectives are a significant and critical component that influences the fruitful

execution of E-Learning in the educating and learning process. Understanding student' mentalities towards E-Learning decides the client's availability to acknowledge E-Learning as a learning mode (Fageeh, 2011).[16] The overview discoveries recount a comparable story, and they show that student' perspectives towards E-Learning impact the effective execution of E-Learning. A potential clarification for this finding may be that E-Learning is another learning model that offers one more way to deal with working on the instructing and learning process. One of the huge changes in E-Learning is the shift from Teacher focused schooling to student focused training. This gives more critical freedoms to student to consider as indicated by individual requirements and favored learning styles. E-Learning empowers and upgrades student' capacity to cooperate during the learning system by empowering them to learn and partake in their learning encounters and further develop their E-Learning mentalities. In this way it very well may be inferred from these discoveries that student mentalities influence respondents' impression of E-Learning.

The outcomes got from research studies uncover that student' inspiration and perspectives altogether influence the effective utilization of E-Learning. Student mentalities show a huge variable, and in particular, student inspiration. These discoveries show that student attributes' job will help clients and leaders execute and foster fruitful E-Learning. Accordingly, it tends to be inferred that student' attributes and mentalities impact the fruitful execution of E-Learning; inspiration is principal to E-Learning achievement.

Table 2. Teacher Characteristics

No	Question	Percentage (%)				
		1	2	3	4	5
1	The use of the E-Learning method is better in the teaching and learning process	6,1	15,8	39,3	29	10
2	The use of E-Learning is more beneficial than traditional methods	4,6	15,6	42,3	29,5	8,1
3	The use of E-Learning is more profitable than traditional methods	4,4	11,5	41,6	32,1	10,5
4	The use of E-Learning is more possible than traditional methods	3	14,5	45,6	29,9	7,2
5	The use of E-Learning provides more control over the learning and teaching process than traditional methods	5,9	19,9	39	28	7,3
6	The use of E-Learning is more encouraging and motivating for interaction than traditional methods	6,6	21,8	35,2	27,5	8,9
7	Using E-Learning requires more time and effort than traditional methods	3,7	11,3	40	35,1	10,1
8	The use of E-Learning is more effective and efficient than traditional methods	5,3	13,9	38	33,2	9,8
9	The use of E-Learning is more productive than traditional methods	4,5	13	41,9	32	8,8
10	The use of E-Learning improves the quality of the teaching and learning process more than traditional methods	5,2	17,1	40,1	28,5	9,2

b. Teacher Characteristics

Ten questions review the characteristics of teachers whose results are described as Table 2 above.

Mentalities towards the E-Learning framework influence the educator's goal to utilize the E-Learning framework. Teacher' perspectives towards innovation additionally influence educator acknowledgment of innovation and its incorporation into instructing. He additionally tracked down that in case educators' mentalities are positive towards instructive innovation, they can rapidly give helpful bits of knowledge about the reception and incorporation of ICT into the instructing and learning process (Ferdousi, 2009)[17].

Overview information show that educator mentalities are viewed as the most significant and huge variable in E-Learning application. Most of members concurred that the educator disposition factor was one of the main issues during E-Learning application. One potential clarification for this finding is that the educator is a critical player in the learning system. They assume a fundamental part in the learning system overall and in E-Learning specifically. The more energetic the teacher are about E-Learning, the more they will apply it as an establishment in their instructive practices. The useful application and execution of E-Learning rely upon educators' encounters and perspectives towards this new worldview or mode.

Many exploration studies have affirmed the significance of constructivist picking up putting resources into the gigantic chances given by ICTs to advance the job of teacher in helping student through continuous help, guidance, assistance, and training rather than just spreading information. In an E-Learning environtment, educators are urged to make a genuine, significant, and true learning environtment that adds to addressing student' requirements and gives genuine freedoms to student to collaborate and assemble information. These discoveries affirm the discoveries of the writing of Musa and Othman(2012)[18], which propose that expanding educator perspectives towards the utilization and execution of E-Learning will build the achievement of carrying out E-Learning in an instructive environtment.

c. Technology

Five inquiries audit the innovation, the consequences of which are depicted as follows.

Table 3. Technology

No	Question	Percentage (%)				
		1	2	3	4	5
1	E-Learning is more difficult to use in the teaching and learning process	7,2	22,6	39,1	22,6	8,6
2	Having online E-Learning material is practical for the learning and teaching process	3,2	8,7	33,3	43,5	11,5
3	The E-Learning environment gave me the opportunity to participate in E-Class	2,3	4,7	34,9	45,7	12,6
4	Usually, I need help or training when using the E-Learning system for the first time	3,7	8,8	31,1	41	15,6
5	Overall, the infrastructure of the E-Learning environment is effective and efficient	3,3	7,7	42,2	38,8	8,1

Overview information examination shows educators' need to control innovation and oversee E-Learning instruments and applications in the learning environment. The discoveries demonstrate that members know about mechanical control's significance for executing E-Learning in optional schools. Many overview members concurred that teacher' capacity to control and oversee innovation devices and applications had impacted E-Learning in their schools.

d. Plan and Content

There are six inquiries that survey plan and content, the consequences of which are portrayed as follows.

Tabel 4. Design dan Content

No	Question	Percentage (%)				
		1	2	3	4	5
1	The E-Learning environment is easily integrated with the teaching and learning process	3	8	42	38	9
2	Easy to manage and update my electronic content	2	6	39	42	10
3	In E-Learning students are more involved with content than traditional methods	3	9	41	38	9
4	The use of E-Learning content and materials takes time and effort	3	10	44	38	10
5	Overall, the E-Learning environment improves the quality of content, learning, and teaching processes	3	9	43	38	8
6	Availability of E-content is an essential point in the implementation of E-Learning.	0	4,4	22,2	58,5	14,8

Study discoveries show that many plan and content issues should be tended to and require adequate consideration from E-Learning designers and implementers. The plan and content analyzed in this review incorporate impression of usability and nature of content. Examination discoveries additionally uncover that content issues are not treated as a fundamental element by and by, reflecting past research (Johnson, Homik, and Salas, 2008). [19]

Information examination shows, on account of E-Learning, the requirement for easy to use plans during E-Learning execution. This is for a long time. For instance, the usability of the interface energizes and builds student' inspiration and perspectives towards learning as a result of the chances and enhancement of the material they give. It energizes cooperation among student and teacher and supports the educating and mastering process by creating acquiring abilities and extending their mastering encounters. The progress from the instructing age to the taking in age and from Teacher focused to student focused has established another learning environtment that empowers participation and supports collaboration by creating and combining educator and student jobs. Teacher should guarantee that the interface is not difficult to utilize and the substance is excellent to set out genuine open doors for student to become useful people and dependable students. In writing, convenience of configuration has been viewed as a huge component that impacts E-Learning reception

(Owens and Price, 2010).[20] The discoveries of this review support this. Numerous respondents concur that usability affects the turn of events and assumes an imperative part in the effective execution of E-Learning. This shows that there is a need to fabricate and foster easy to understand interface plans.

The study discoveries demonstrate that the substance quality variable is the most basic part of an E-Learning application. The student showed that the fruitful execution of E-Learning relies upon reasonable material and proper media enhancement, which should be doable and address student' and teacher' issues and requests. One potential clarification might be that the fast development of programming plan, the exceptional measure of advanced instructive substance, and the incredible adaptability in utilizing these assets and materials have upset instructive administrations by making them more appealing, more alluring, or more all. More helpful in accomplishing the designated results and objectives. According to the point of view of the examination test, teacher and student accept that the nature of instructive substance and the interfaces utilized contribute essentially to the achievement of E-Learning in a school environtment (Owens and Price, 2010).[20]

4. CONCLUSION

With progresses in data and correspondence innovation, E-Learning has become more far and wide in the instructive environtment. E-Learning can upgrade instruction change by making a change in outlook from Teacher focused and maintenance based training to student focused schooling. Student work cooperatively, assemble their insight, and further develop critical thinking and higher-request thinking abilities. E-Learning is likewise described by the adaptability of admittance to data, stresses a student focused methodology, elevates students' chances to produce information, and permits students to transform data into helpful information to address their issues and capacities.

In any case, existing examination shows that not all E-Learning in an instructive environtment is fruitful and compelling, which recommends that with the expanding utilization of E-Learning, there is a need to foster an applied structure to carry out an E-Learning environtment effectively. The outcomes uncover the significance of variables identified with student and Teacher qualities, innovation, and plan and content as elements for the achievement of E-Learning according to the viewpoint of the exploration test. The outcomes likewise show that student attributes factors (student perspectives and student inspiration), educator qualities factors (Teacher mentalities, dominance of innovation and showing styles), innovation factors (IT adequacy and innovation quality), and plan and content variables (content quality and saw usability). Utilization is the most essential element influencing E-Learning (educator and student insights), however with a low degree of importance given to PC abilities. In view of these discoveries, it very well may be inferred that student attributes, educator qualities, innovation and plan, and content impact the achievement of E-Learning.

AUTHORS' CONTRIBUTIONS

Winarno added to information assortment, information investigation, composing unique drafts, audit writing, and altering.

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REFFERENCES

[1] Anon, C. (2001). E-learning is taking off in Europe. *Industrial and Commercial Training*, *33*(7), 280–282.

[2] Moore, J. L., Camille, D., & Galyen, K. (2011). E-learning, online learning, and distance learning environments: Are they the same? *Internet and Higher Education*, *14*(1), 129–135.

[3] Spector, J., Merrill, M., Merrienboer, J., & P., D. M. (2008). *Handbook of Research on Educational Communications and Technology*. New York: Lawrence Erlbaum Associates, Publishers LEA.

[4] Conrad, D. (2006). *E-learning and Social Change: Perspectives on Higher Education in Digital Age*. New York: Nova Science Publisher.

[5] Al-Marabeh, T., & Mohammad, H. (2013). E-learning in the Jordanian higher education system: Strengths, weakness, opportunities, and threats. *Journal of American Science*, *9*(3), 281–287.

[6] Al-Harbi, K. R. A.-S. (2010). *Investigating Factors Influencing the Adoption of E-learning: Saudi Students Perspective*. University of Leicester.

[7] Jethro, O., Grace, A. M., & Thomas, A. K. (2012). E-learning and its effects on teaching and learning in a global age. *International Journal of Academic Research in Business and Social Sciences*, *2*(1), 203–210.

[8] Mahdizadeh, H., Biemans, H., & Mulder, M. (2008). Determining factors of the use of e-learning environments by university teachers. *Computers & Education*, *51*, 142–154.

[9] Al-Kharang, M. M., & Ghinea, G. (2013). E-learning in higher educational instruction in Kuwait: Experiences and Challenges. *International Journal of Advanced Computer Science and Applications (IJACSA)*, *4*(4), 1–6.

[10] Andersson, A. (2008). Seven major challenges for e-learning in developing countries: Case study eBIT, Sri Lanka. *International Journal of Education and Development Using Information and Communication Technology (IJEDICT)*, *4*(3), 45–62.

[11] Kwofie, B., & Henten, A. (2011). The advantages and challenges of e-learning implementation: The story of a developing nation. *The 3rd World Conference on Educational Science Bahcesehir University, Istanbul*.

[12] Mapuva, J. (2009). Confronting challenges to e-learning in higher education institutions. *International Journal of Education and Development Using Information and Communication Technology (IJEDICT)*, *5*(3), 101–114.

[13] Bhuasiri, W., Xaymoungkhoun, O., Zo, H., Rho, J. J., & Ciganek, A. P. (2012). Critical success factors for e-learning in developing countries: A comparative analysis between ICT experts and faculty. *Computers & Education*, *58*, 843–855.

[14] Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. USA: SAGE Publications Ltd.

[15] Zewayed, N., Maynard, S., & Murray, I. (2011). Factors influencing students' acceptance of e-learning at secondary schools. *World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education*. Honolulu, Hawaii, USA.

[16] Fageeh, A. I. (2011). ELF students' readiness for e-learning: Factors influencing e-learners' acceptance of the blackboard in a Saudi university. *The JALTCALL Journal*, *7*(1), 19–42.

[17] Ferdousi, B. J. (2009). *A Study of Factors that Affect Instructors' Intention to Use E-learning System in Two Year College*. Nova Southeastern University.

[18] Musa, A. M., & Othman, M. O. (2012). Critical success factors in e-learning: An examination of technology and students factors. *International Journal of Advances in Engineering and Technology (IJAET)*, *3*(2), 140–148.

[19] Johnson, R. D., Homik, S., & Salas, E. (2008). An empirical examination of factors contributing to the creation of successful e-learning environments. *International Journal of Human-Computer Studies*, *66*, 356–369.

[20] Owens, J. D., & Price, L. (2010). Is e-learning replacing the traditional lecture? *Education and Training Journal*, *52*(2), 128–139.