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Research Article

Innovative Strategy In E-Competence & Learner Edification-An Exploratory Investigation

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ABSTRACT

This research article is based on determining e-competence and learner edification and the post-pandemic changes that occurred. The usage of digital technologies and online education has been significantly impacted by the COVID-19 epidemic. Despite the early hiccups associated with using new technology and switching to blended learning, Indian educational institutions have steadily adjusted to the new normal as educational institutions worldwide have embraced various types of computer-mediated communication. It became more and more important to comprehend students' viewpoints on the recently developed learning environment. This inspired the researchers to investigate E-competencies (EC) and how they affect learner edification (LE)—the process of learning. This research is quantitative. The research was conducted for selected schools based on their popularity in the public. The selected schools counted to 5 that are privately owned. Total number of respondents i.e.; the learners was 86 in the count. Data was collected in the year 2023 from October to May. The basis for sampling was a non-random sampling technique. Used regression as a research tool from SPSS 22. The research showcased the relevance of e-competence in the learner's process of learning and understanding. Later on, by proving various hypotheses, the study concludes on the significance of the innovative strategy in e-competence on learners' edification.

Keywords: *E-Competence, Schools, Learner Edification, Pandemic.*

INTRODUCTION

E-competence is defined as a person's knowledge, skills, and other abilities in using information and communication technology (ICT) to execute a task against a certain standard in a personal or professional situation. To put it another way, "E-competence is the set of knowledge, skills, attitudes (thus including abilities, strategies, values, and awareness) that are required when using ICT and digital media to effectively, efficiently, appropriately, critically, creatively, autonomously, flexibly, ethically, reflectively for work, leisure, participation, learning, socializing, consuming, and empowerment." The more and more that technology permeates both adults and children's daily lives, the more crucial it is that pupils acquire innovative strategy in e competence abilities. Being computer savvy is becoming essential to succeed in today's environment, from social media to the business, education, and entertainment.

With the help of e-competence, students can include new interactive media into their learning, including movies, animations, simulations, and more. The capacity to efficiently acquire, assess, and process information in a variety of digital formats is known as e-competence. It is the ability to use communication and information technologies. (Manubey, 2022).

Even in the most stable ecosystem of education, digital technologies are reshaping and becoming more powerful in light of the extraordinary arrival of COVID-19 in our lives. (Marko Teräs, 2020)Technology is being used to try and remedy the flawed educational system of today (technologization). Despite the early difficulties in implementing new technologies and transitioning to blended learning, Indian educational institutions have progressively adjusted to the new normal. (IBEF, 2024), (Indiatoday, 2021). Recent years have seen a significant amount of study focused on the impact of e-competence on student learning outcomes. Positive effects of e-competence on student learning outcomes include the following; however, It's important to keep in mind that additional elements like motivation, the classroom setting, and the caliber of the teacher, all have an impact. Several studies have shown that e-competence can help students find the information they need to

learn, grow as critical thinkers, and improve as communicators. E-competence enables the use of technological tools in the learning process, including e-books, instructional videos, simulations, and online learning platforms. (Deja, 2021).

Learning can be made more engaging and student involvement can be increased using this technology-based method. Pupils with strong e-competence skills typically take part in online forums, group chats, and other collaborative platforms more actively. Through the sharing of ideas between students and lecturers, these interactions can improve comprehension and learning. Additionally, e-competence can support students' critical thinking abilities in assessing information critically, differentiating between reliable and unreliable sources, and determining the veracity of information (Wang, 2023).

Pupils with a strong technological background are typically more equipped to handle changes in the workplace and may incorporate new technologies into their coursework. But even though e-competence has the potential to improve student learning outcomes, several obstacles must be overcome, including:

Technical issues: Students might not have access to the resources they require to log in and complete their remote learning. If they work from home, they might be running an older operating system than the computers in your company. On the other hand, their bandwidth may be scarce and their internet unreliable.

Distractions: Too frequently, Online students read books on a computer, watch lectures, or just sit still as examples of passive learning. When workers are not compelled to interact with the information, they lose interest. Online chats, email clearing, and tab surfing easily divert their attention.

Monotony and Screen Fatigue: Long-term screen staring can result in screen fatigue, which shortens attention span and causes mental tiredness. This problem can be made worse by online learning, particularly when it is presented through protracted video lectures. Learning can seem like work due to the repetition of screen-based training, which lowers motivation. This monotony can be lessened and student engagement maintained by incorporating interactive components and a variety of learning resources.

Lack of interaction: Learning from home might be convenient, but it can also result in isolation. Proactive learning can be hampered by spending more time alone in front of a screen, as remote workers often already report feeling alienated.

Students nowadays may obtain answers to a wide range of queries, no matter how simple or difficult, if they have access to the internet and even a smartphone. They might not comprehend the solutions, though. Furthermore, neither the source nor the accuracy of the information is known to them. The onus of guiding pupils regarding authentic and regularly updated sources, relevant websites related to the subject, and, crucially, whether the information is written objectively or with prejudice is on the digitally literate instructor. The teacher is the one who encourages students to think critically and logically, as well as to be creative. The pupils produce unique ideas and solutions in this way. Teachers need to support their pupils in developing a comprehensive understanding of the software (GHOSH, 2024). Methods to overcome the challenges: Consider technological capabilities when developing your training. Use smaller media files whenever possible. Reduce loading times by creating succinct information. Another way to assist people in overcoming technical difficulties is to offer consistent, easily accessible support. Include a troubleshooting tutorial in your help features and provide a phone number or chat button for additional in-depth inquiries. Assist individuals in having a seamless training experience by organizing solutions for technological problems. Incorporate response-based examinations and quizzes.

Take breaks even if all you do is turn off your screen while on a Zoom call. Even if you don't feel sleepy, breaking up extended work sessions with frequent pauses from the screen is the greatest method to prevent eye fatigue. They can set up chat rooms, forums, or webinars where students can ask questions and get answers. Teachers are also able to provide classes via FaceTime. Games, real-time chat, surveys, and other tools can be used to conduct interactive sessions. The following study findings demonstrate how e-competence affects learning outcomes:

a) The research conducted by Walsh et al., 2022, necessitates the mastery of specific competencies about the identification of training needs, digital environment access to information, information management via ICT tools, interpretation and representation of information, information evaluation, and information transmission.
b) The study conducted by Nieves et al,2022, reveals that university students generally possess digital literacy, effectively utilizing the Internet and digital media for communication and collaboration. However, they exhibit lower proficiency in creating and disseminating multimedia content, indicating a need for improvement in this area. Disparities exist based on factors like gender, age, and academic background. The findings suggest the necessity of comprehensive digital literacy programs for teachers in training, integrated into the official curriculum in an interdisciplinary manner, to equip them with the skills to create and share digital content effectively.
c) Higher education must seek to bridge the noticeable gap between the high value that students place on the digital literacy that is necessary for both their learning and their lives, as demonstrated by the study's findings by Erika E. Smith 2023, and the scant attention that students reported receiving on these subjects during their undergraduate studies. Increased coverage of digital literacies in courses and across the curriculum in ways that develop understanding and application of procedural technical, cognitive, and sociocultural competencies that are necessary both within and outside of social media spaces is evident.

d) The research results by Farah Latif Naz et al. 2022 lend credence to the idea that computer-literate students outperform non-literate students and that digital literacy enhances students' performance in higher education. Additionally, computer-literate female students outperform their male counterparts; students without a computer addiction outperform those with one; and students with computer literacy in co-educational environments outperform their peers academically, or vice versa.

In summary, e-competence—which includes ICT knowledge, abilities, and attitudes—becomes more and more important in both professional and educational contexts. As technology becomes more commonplace, students need to acquire e-competence to thrive in various fields. Integrating diverse and interactive learning approaches can improve student engagement and results, even in the face of technical malfunctions, interruptions, and screen weariness. Teachers are essential in helping kids to critically and creatively navigate the digital world so they can use technology for learning and empowerment. To overcome obstacles, one must take into account available technology, offer easily accessible assistance, and use dynamic learning design. Including interactive components and response-based tests can improve learning even further. All things considered, developing e-competence in students is crucial to preparing them for the needs of a digitally advanced world.

METHODS AND MATERIALS

This research is quantitative, meaning that it employs a positivist research methodology to investigate certain populations or samples. Research tools are utilized for data collecting, and quantitative statistical data analysis is performed by the researcher to test hypotheses.There are 2 kinds of variables set out for this research a) Innovative strategy in E-competence -the independent variable b) Learner edification- the dependent variable. For the independent variable and dependent variable, the Likert scaling is used where upon data analysis the e-competence statements' s mean is determined to carry on the regression analysis. The data was collected from 5 schools of Kozhikode district. The data collected resulted in 86 respondents comprising of students of higher secondary level. The data was collected using a non-random sampling technique Later on the data was put on analysis using SPSS software.

FINDINGS

REGRESSION ANALYSIS

H: There is a significant impact of innovative strategy in EC-(e-competence) and LE- (Learner edification)

Hypothesis	*Regression weights*	*Beta coefficients*	*R2*	*F*	*P value*	*Hypothesis supported*
H1	EC-LE1	.741	.549	102.299	.000	YES
H2	EC-LE2	.683	.466	73.448	.000	YES
H3	EC-LE3	.764	.583	117.669	.000	YES
H4	EC-LE4	.748	.559	106.389	.000	YES
H5	EC-LE5	.667	.445	67.444	.000	YES
H6	EC-LE6	.502	.252	28.327	.000	YES
H7	EC-LE7	.328	.108	10.160	.002	YES
H8	EC-LE8	.291	.085	7.766	.007	NO

The hypothesis tests if the EC i.e.; MEANEC carries a significant impact on statements of LE (LE1-LE7). To test hypotheses H1–H8, the dependent variable LE was regressed on the predictive variable EC. The fact that the EC strongly predicted LE (F and p values) suggests that the EC can have a substantial influence on how LE is shaped (with beta coefficient values and p values). These results clearly show the positive effect of the EC. Moreover, the R^2 values indicate that the model explains the percentages of variances in LE (LE1-LE7).
The last statement of Learner edification -LE 8 whose hypothesis has not been supported since the values obtained don't satisfy the required hypothesis.

DISCUSSIONS AND CONCLUSIONS

It's critical to keep in mind that, much like technology, E-competence is a talent that keeps developing. Consequently, ongoing education and learning are crucial for enhancing a person's E-competence so they may stay competent and relevant in a world that is becoming more and more digital. Lifelong edification is supported by the idea of E-competence. Through webinars, online courses, and other digital learning resources, people can stay current with their knowledge without being constrained by time or space (Su, 2023).
In the classroom, E-competence helps foster creativity and problem-solving skills. Pupils who are proficient in using digital tools are likely to employ them to produce original works of art, eye-catching presentations, or novel approaches to assigned problems (Deja et al., 2021). When it comes to influencing how someone learns

and engages with information in a digital setting, E-competence is crucial. The way someone learns and engages with information in a digital context is significantly influenced by their level of E-competence. As technology advances and learning styles shift, people must build their E-competence abilities to attain the best possible edification (Nika, 2022). The term "influence of learner edification on E-competence" describes how an individual's degree of education and edification has an impact on their level of comprehension and proficiency with digital technologies and information in general. The capacity to utilize, access, assess, evaluate, and engage with digital technology efficiently is a component of E-competence (Lingga, 2022).

E-competence makes it simpler to use the internet to access various information sources and educational resources. “Quickly and effectively, instructors and students can access course materials, e-books, scientific journals, instructional videos, and various other learning tools (Durán, 2021)”. Pupils with strong E-competence can also improve their ability to solve problems. With the assistance of technology, they can look for alternatives, recognize issues, and find solutions. All things considered, E-competence has altered how we teach and learn. Its beneficial effects on learner edification can lead to opportunities for creativity, diversity, and skill development pertinent to a world that is becoming more digitally connected and interconnected.

“Based on the findings of the study and the test results, it is possible to conclude that e-competence influences the district of Kozhikode schools' learner edification. which is demonstrated by a very significant association.”

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