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The Role of Electronic Reading in Reducing the Digital Divide and Its Implications for E-Learning

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Abstract: This study aims to investigate the role of technology readiness in reducing the digital divide, specifically focusing on levels of technological advancement in networks, information security, information and communications, devices and equipment, specialized creative cadres, and simplified strategies for utilizing organizational, legal, and human resources. Additionally, the study explores the implications of e-learning during the current pandemic crisis. To achieve these objectives, a homogeneous random sample of 464 academic staff and students from the Northern Technical University community, who have experience using modern technologies in e-learning, participated in the survey. Statistical analysis was performed using SPSS v26 and Amos confirmatory factor system to assess the correlation and moral effect of electronic readiness in reducing the digital divide in e-learning. The findings of this study underscore the significance of technology readiness in narrowing the digital divide and bridging the gap in e-learning, particularly amidst the COVID-19 pandemic. The results also indicate the necessity for increased financial support and emphasis on technological and educational cultural levels, as well as multilingual support to ensure effective e-learning.

Keywords: Electronic readiness, Digital divide, E-learning, Organization readiness.

1. Introduction

The digital divide is an increasing concern in our modern society, creating a gap between individuals or communities with access to modern technologies and those without. This divide restricts opportunities and resources for those on the disadvantaged side (Al-Bala & Abdullah, 2008). In the realm of education, the digital divide has significant implications for e-learning (Al-Kharshi & Elham, 2012). As education moves online, students lacking electronic readiness may face disadvantages in accessing and utilizing online resources, participating in virtual classrooms, and communicating with teachers and peers. To ensure equal access to quality education, addressing the digital divide and promoting electronic readiness becomes essential (Mohamed & Abouelsaadat, 2020).

This study aims to explore the relationship between electronic readiness, the digital divide, and e-learning, particularly in developing countries. E-learning adoption in these regions remains a contemporary application, warranting further investigation into electronic readiness for adopting e-learning systems. The paper will focus on the role of electronic readiness in reducing the digital divide, with particular attention to its implications for e-learning (Haoran et al., 2023). We will examine the contributing factors to electronic readiness and the barriers hindering individuals and communities from achieving it. Additionally, we will discuss strategies for promoting electronic readiness, including educational initiatives and policy interventions. By addressing the digital divide through electronic readiness, we can ensure that all students have access to the educational opportunities necessary for success in our digital world.

The digital divide refers to the disparity in access to and utilization of technology, particularly the internet, among individuals, communities, and countries (Aljohani & Hussin, 2018). E-learning, as an educational method, utilizes electronic devices and digital technologies to deliver content to learners, including online courses, webinars, and virtual classrooms (Zhang & Xu, 2018). The digital divide significantly impacts e-learning, restricting certain individuals and communities from participating due to limited access to reliable internet connections, computers, or necessary devices. Additionally, digital literacy skills play a crucial role in successful e-learning, as some individuals may struggle to navigate online resources and use digital tools effectively.

To ensure equitable e-learning opportunities for all learners, regardless of their background or location, reducing the digital divide becomes imperative (Loh & Yap, 2019). This may involve improving access to technology and internet connectivity, along with providing digital literacy training to empower learners with the necessary skills for online education.

2. Literature Review and Hypothesis Development

2.1 Literature Review

Several studies addressing the digital divide among students and faculty members in the field of education have been included by this paper. DiMaggio and Hargittai (2011) conducted a study to monitor the digital divide among students at the Faculty of Education. They found a moderate digital gap in information and communication technology skills among the respondents. A similar study by van Dijk (2012) focused on faculty members and their assistants in Egyptian universities, particularly Al-Azhar University. The aim was to monitor the size of the digital gap and propose ways to narrow it among the faculty members and assistants.

Norris (2018) conducted research on university students, specifically at the postgraduate level in the faculties of education at Egyptian universities. The study aimed to monitor the digital gap among researchers and proposed strategies to bridge the divide, particularly to enhance educational knowledge in Egypt.

The United Nations Development Program (2018) also confirmed that the digital divide is a significant issue in education during the digital age. The study highlighted how gifted students faced challenges in performing well due to the lack of accessible information sources.

Additionally, the ITU International Telecommunication Union (2018) conducted a study titled "The Digital Divide and Educational Equality: A Look at Students with Very Limited Access to Electronic Devices at Home." This study explored the challenges faced by high school students in the United States with limited access to electronic devices. The research aimed to avoid exacerbating social, economic, and other disparities. The study utilized a questionnaire among a random sample of high school students and found statistically significant differences based on location, type of equipment used, gender, level of parental education, and family's monthly income. The study recommended expanding Internet access for those deprived of it and facilitating educational applications via mobile phones to improve accessibility to school activities (World Economic Forum, 2019).

These studies shed light on the importance of addressing the digital divide in education and the need for comprehensive strategies to narrow this gap and ensure equal access to educational opportunities.

2.2 Study Population and Sample Collection Methods

In the field study, the researchers conducted personal interviews with various stakeholders, including leaders, professors, graduate, and undergraduate students from the Northern Technical University, which was the focus of the study community. These interviews provided valuable insights and observations on electronic readiness, addressing essential issues related to the topic. The discussions revolved around methods to minimize the digital gap in e-learning, utilizing resources such as books, periodicals, theses, university publications, and websites.

To further enhance data collection and ensure inclusivity, an electronic questionnaire was designed using the Google Forms platform. This questionnaire aimed to gather information from a wider range of participants, enabling a more comprehensive understanding of electronic readiness and its impact on reducing the digital divide in e-learning.

2.3 Research Aim and Hypothesis

The primary objective of this study was to monitor the digital divide among inclusive education students. The researchers observed that many gifted students faced challenges in their performance due to limited access to digital information sources. The study highlighted that addressing the digital divide requires more than just providing resources and information; it necessitates training and awareness initiatives to bridge the gap. Educational workshops aimed at developing technological and digital skills for effective information searching on various databases were also recommended.

In line with this context, the current study by Phan Hong Hai (2023) aimed to assess the extent of the digital divide among students at the Northern Technical University. The researchers identified various issues related to the digital divide, which were resolved through the readiness of information and communication technology during the delivery of academic research on the university's electronic educational platform. To guide the study, the following research questions were formulated:

1) What are the theoretical frameworks for technology readiness and the digital divide?
2) What is the level of access, skills, and usage among the students?
3) Are there statistically significant relationships between the level of E-readiness and the digital divide?
4) What is the proposed scenario for bridging E-readiness and the digital divide in e-learning?

Based on the discussions above, the study established the following hypothesis:

H1: Electronic readiness has a significant positive impact on reducing the digital divide in e-learning.

This main hypothesis leads to several sub-hypotheses, exploring the specific relationships between electronic readiness and the digital divide:

H1a. There is a statistically significant relationship between readiness to use technology and the digital divide.

H1b. There is a statistically significant relationship between information and communication readiness and the digital divide.

H1c. There is a statistically significant relationship between organizational readiness and the digital divide.

By investigating these hypotheses, the study aimed to contribute valuable insights towards narrowing the digital divide in e-learning and enhancing educational opportunities for all students.

3. Methodology

Electronic readiness refers to a crucial measure that assesses a country's and its economic system's preparedness to leverage the benefits provided by information and communication systems. It encompasses the level of knowledge and capability required to comprehend and effectively utilize technology and digital information. In essence, it gauges the ease with which employees and institutions can transition to digital workflows, employing various programs and technologies. The ultimate objective is to streamline business operations, leading to improved customer service (Hakanen & Banerjee, 2019).

Readiness is characterized by the inclination and willingness to embrace digital technology and explore innovative opportunities enabled by this technology. This proactive approach aims to accelerate the achievement of individual, organizational, industrial, and national goals, yielding optimal results. Some researchers break down this concept into three fundamental elements:

1) Electronic skills, which encompass the abilities necessary to initiate an online session, navigate the Internet, share content online, or perform specific tasks via the Internet.
2) Trust, which represents individuals' confidence in assessing the reliability of online information and safeguarding their personal data.
3) These two factors converge in the third component, known as usage - the extent to which individuals utilize electronic tools while carrying out online tasks.

In summary, electronic readiness is pivotal in determining a nation's capacity to embrace and capitalize on digital advancements, leading to increased efficiency and progress across various sectors. By fostering electronic skills, building trust in online information, and promoting extensive usage of electronic tools, societies can position themselves for success in an increasingly digital world.

3.1 The Importance of Electronic Readiness and its Objectives

The momentum among countries in assessing their cyber readiness stems from several reasons. Nations aspire to become inclusive global information societies, empowering all individuals to access, create, exchange, and benefit from information without discrimination, thus fostering economic, social, cultural, and political development. Countries with high levels of cyber readiness can leverage the Internet to enhance services, generate new opportunities, and gain a competitive edge over those with lower cyber readiness.

At a global level, information and communication technology (ICT) has transformed the nature of global relations, reshaping sources of competitive advantage and opportunities for economic and social development. The impact of ICT is evident in the way companies now interact with key stakeholders like suppliers, customers, employees, and investors. Success in the Information Age significantly depends on the widespread integration of ICTs throughout society. The advent of technologies like the Internet, computers, and cordless telephones has interconnected the world, fostering a network of people and businesses communicating and interacting through various channels. As the Internet continues to permeate all aspects of countries' social fabric, organizations - both large and small, public and private - are adapting their business models to leverage the potential of the information superhighway.

For businesses, information and communication technology is expected to enhance operations and management, saving time, improving quality, reducing manpower requirements, increasing cost-effectiveness, and facilitating access to commercial information. This transformation is shown in Figure No. (1) (Chen & Dahlman, 2015). Furthermore, ICT enables better presentations, information sharing, and improved general skills of employees.

Fig. 1. Variables and dimensions of the current study

Furthermore, a high level of e-readiness enables enterprises to conduct business electronically, resulting in numerous benefits. This includes reducing downtime, accelerating service delivery, enhancing product selection, boosting international competitiveness, and expanding market access. Additionally, it increases customer convenience, lowers procurement costs, and reduces average expenses. Such e-transactions facilitate efficient purchasing processes, leading to improved profitability. Moreover, businesses gain faster and unlimited access to new customers and suppliers, fostering deeper communication and information sharing. Embracing open standards also supports small businesses, enabling them to thrive in the digital landscape.

3.2 The Digital Divide

The digital divide exists at different levels. The first level concerns the gap between individuals and social classes. Communication and computer technologies have helped remove certain barriers that hinder access to information. They have overcome language-related barriers and physical obstacles, such as the availability of tools to access information and the limitations imposed by spatial location and information sources' availability. However, technical advancements have also introduced new challenges, such as the need for specialized skills and a certain level of economic capability.

Technical development and material costs have given rise to two distinct scenarios: those who possess the means, including businessmen and wealthy individuals, can access information through private databases and workstations funded by the private sector. They are more likely to own personal computers and attend schools that offer modern learning resources. On the other hand, there are the less privileged individuals, the poor, who cannot afford the expenses required to benefit from information technologies fully. They rely on manual or modest techniques for accessing information, facing limitations in their usage.

The final analysis of the collected data was carried out using the PLS (Partial Least Squares) structural equation modeling software. The process involved assessing model fit, including scale model fit, structural model fit, and general model fit, followed by testing the research hypotheses. This rigorous approach ensures a comprehensive evaluation of the data and helps draw meaningful conclusions from the study.

4. Results and Discussion

4.1 Measurement of Independent Variables

In this study, the researchers utilized the NPI-16 edited questionnaire developed by Ames et al. (2006) to assess electronic readiness. This questionnaire adopts a Likert scale format and includes 15 questions that measure the level of electronic readiness, ranging from strongly agree (5) to strongly disagree (1). It employs a one-dimensional approach, without any subscales.

The respondents are presented with pairs of items, from which they must choose the one that best reflects their perspective. Each chosen question is assigned a grade A (1), while each unselected question receives a grade B (0). To obtain the overall score for the questionnaire, the points from all questions are summed together, resulting in a score range of 0 to 14. A higher score indicates a greater degree of utilization, while a score of 7 serves as a cut-off point, suggesting higher responsiveness to

the impact of electronic readiness.

The questionnaire by Ames et al. (2006) demonstrates high validity, showing a correlation of 92% with the original version. Moreover, its reliability was calculated as 0.79, indicating its consistency and stability in measuring electronic readiness.

4.2. Measurement of Dependent Variable

In this study, due to the absence of a standardized tool, a meta-synthesis approach was employed to develop a researcher-made questionnaire for measuring the digital crowd divide. This process involved selecting reputable and valid scientific databases. Subsequently, to identify relevant research pertaining to the field of study, a screening process was carried out in three stages: title screening, content analysis, and action analysis, in order to gain a more specific understanding. For the second step, Figure (2) was utilized as a guiding framework to facilitate this process.

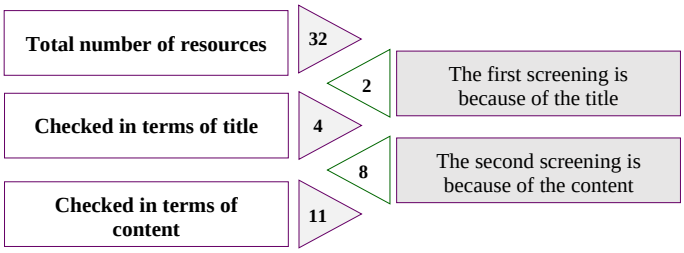


Fig.2: Screening Analysis Process

To assess the consensus of experts and align the research propositions with the main components, a Delphi analysis was conducted using two criteria: mean and coefficient of agreement. The results of this analysis are presented in Table (1), using a scale of 6 evaluation options, to guide this section of the study.

Table 1. Delphi Analysis Process

First round of Delphi		Second round of Delphi		Result		
mean	Coefficient agreement	mean	Coefficient of agreen			
3	0.25	***Delete***			vision of the future	Dimensions of techn readiness
5.35	0.65	5.50	Moral affinity	Confirm	Ethical convergence	
5	0.65	5.30	social responsibility	Confirm	social responsibility	
3	0.20	***Delete***			Symbolism	
5.5	0.80	6.20	How participatory	Confirm	Participatory	
5	0.50	5.10	Measuring rules	Confirm	Valuing of rules	
4	0.30	***Delete***			adherence to the theory	
5.30	0.60	5.30	Convergence of inter	Confirm	Equilibrium of interest	
6	0.80	6.10	Legal legitimacy	Confirm	Legal legitimacy	

After two rounds of analysis in the Delphi step, the results indicated that three themes were removed from consideration due to having an agreement coefficient below 0.5 and a mean below 5. Consequently, a total of 6 themes were approved as dimensions of the digital divide.

4.3 Test of the Conceptual Model

Confirmatory Factor Analysis (CFA) is a statistical method commonly employed in social sciences to test the hypothesis that a set of observed variables, also known as indicators or items, measure the same underlying construct or factor. Its primary goal is to assess the goodness of fit between the hypothesized factor structure and the observed data. CFA is often utilized to validate a measurement instrument or investigate the factor structure of a construct. Unlike Exploratory Factor Analysis (EFA), CFA specifies the number of factors beforehand and tests a priori hypotheses regarding the relationships between the factors and the observed variables.

To analyze the research data, Structural Equation Modeling (SEM) was utilized with the Smart-PLS approach, which is well-suited for conditions like alignment of independent variables, data normality, and small sample size. The software output, depicting the tested conceptual model, is illustrated in Figures (3).

The study gathered opinions from a community sample comprising professors and university students using a five-point Likert scale. The questionnaire consisted of 21 questions, which were treated as variables and categorized into independent variables (u1, u2, u3, o1, o2, o3, i1, i2, i3, i4) representing electronic readiness. The axes of these variables, readiness to use, information and communication readiness, and organizational readiness, were calculated. Additionally, e-learning variables (e1, e2, e3, e4, e5) and dependent variables related to the digital divide (d1, d2, d3, d4, d5, d6) were included in the analysis.

Structural Equation Modeling (SEM) is a significant analysis tool used to study data, phenomena, and behaviors. The models were designed strategically to quantitatively describe the variables and their components. Their validity and alignment with field data were tested through Confirmatory Factor Analysis (CFA), which serves as a measurement tool for identifying relationships between latent variables inferred from observation variables. The underlying digital innovation is represented by its dimensions, namely strategy, digital monitoring, and tool. Additionally, the underlying variables of digital organizational identity are also represented in the model (as shown in Figure 3).

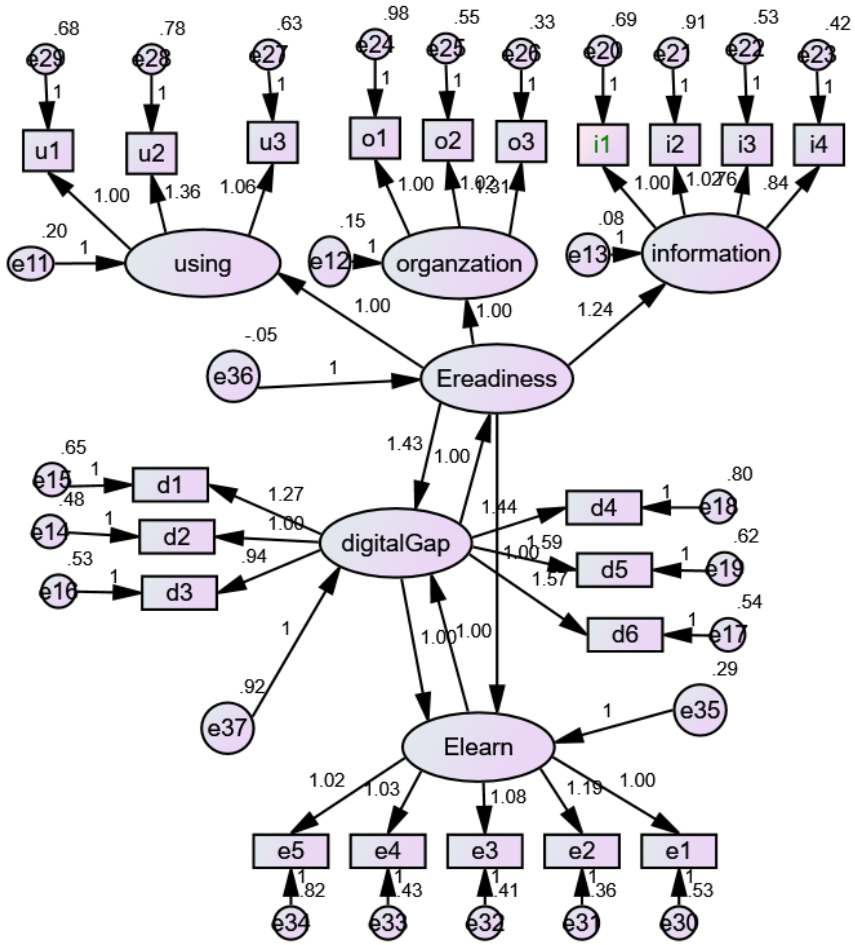


Fig .3 Results of clinical factor analysis
(AMOS V26)

The analysis results in Table (2) demonstrate a perfect match, with a higher value of 1 indicating a poor match. In this model, there are four latent variables: E-readiness, information, organization, and

using, along with five observed variables: d1-d6, e1-e5. The numbers on the right-hand side of the arrows depict the standardized regression coefficients or path coefficients, indicating the strength and direction of relationships between the variables.

For example, the estimate of 1.244 signifies a strong positive relationship between E-readiness and information. This means that higher levels of E-readiness are associated with higher levels of information. Similarly, the estimate of 1.019 indicates a positive relationship between organization and the observed variable o2, and the estimate of 1.360 indicates a positive relationship between using and the observed variable u2. It is important to note that the arrows point from predictor variables to outcome variables, indicating the direction of the relationship under examination.

The numbers on the left-hand side of the arrows represent the latent variables, while those on the right-hand side represent the observed variables. The double-headed arrows imply that the latent variables are allowed to covary in the model, allowing for a comprehensive analysis of relationships among the variables.

Table 2. obtain the estimates value of variables

			Estimate
information	<---	Ereadiness	1,244
organization	<---	Ereadiness	1,000
Using	<---	Ereadiness	1,000
i1	<---	Information	1,000
i2	<---	Information	1,022
i3	<---	Information	.760
i4	<---	information	.835
o1	<---	organization	1,000
o2	<---	organization	1,019
o3	<---	organization	1,306
u1	<---	Using	1,000
u2	<---	Using	1,360
u3	<---	Using	1,062
d2	<---	digitalGap	1,000
d1	<---	digitalGap	1,269
d3	<---	digitalGap	.941
d6	<---	digitalGap	1,575
d4	<---	digitalGap	1,435
d5	<---	digitalGap	1,589
e1	<---	learn	1,000
e2	<---	learn	1,193
e3	<---	learn	1,078
e4	<---	learn	1,028
e5	<---	learn	1,020
Ereadiness	<---	digitalGap	1,000
digitalGap	<---	Ereadiness	1,426
Learn	<---	digitalGap	1,000
Learn	<---	Ereadiness	1,000
digitalGap	<---	learn	1,000

4.4 Computation of Degrees of Freedom

In Table 3, the output displays how Amos calculates degrees of freedom by taking the difference between the number of distinct sample moments and the number of distinct parameters that need to be estimated. The count of distinct sample moments always includes variances and covariances. It also encompasses sample means when means (intercepts) are

estimated.

When tallying the number of distinct parameters to be estimated, certain parameters that are constrained to be equal to each other are counted as a single parameter. On the other hand, parameters that are fixed at a constant value are not counted at all. This is why the 'number of distinct parameters to be estimated' might be lower than the total number of regression weights, variances, covariances, means, and intercepts in the model..

Table 3: the number of distinct sample moments and the number of distinct parameters

Number of distinct sample moments:	231
Number of distinct parameters to be estimated:	65
Degrees of freedom (231 - 45):	186

When calculating the likelihood ratio (degrees of freedom) CMIN/DF, a value of 2.1 was obtained, falling between 2 and 5. This indicates that the chi-square value did not exceed the upper limit. The CMIN/DF value of 3.55 was determined using Equation No. (1), which involves dividing the minimum chi-square by degrees of freedom.

$$CMIN/DF=231/65=3.55.... (1)$$

Table No. (3) shows indicators of absolute conformity to the default model, which was accepted to be consistent with the data and compared to the saturated sample at 3.55 degrees of freedom.

Furthermore, in Table No. (4), it is observed that the data was collected randomly, and with a large sample size of 377, it was tested using the AMOS program. The congruence indicators suggested the presence of connectivity, implying that the dependent variable is continuous and exhibits moderation between dependent variables and random error. No abnormal values were observed in the statistical analysis.

However, there was an issue of multiple linear relationships between the independent variables. To address this, the unweighted least squares method was utilized for the free scale, which supported the study's hypothesis and revealed a significant correlation between digital innovation and digital organizational identity..

Table4: Indicators of good conformity and the limits of their acceptance

The study points for Amos	**Acceptance limits for Model**
Likelihood ratio (degrees of freedom) CMIN/DF	It was 3.55, which is close to (5), identical to the assumed model
(GFI) Goodness of Fit Index of good fit	The identical value is (0.90), but a value of measured is 0.995 which is greater than or more means a good match.
Adjusted Goodness of Fit Index (AGFI).	Its value is 0.932, meaning that it matches the production quality
(NFI) Normal Fit Index Standard fit index	Its value is 0.922, which indicates the good quality of the model
Parsimony Goodness of fit index Economic conformity quality index (PGFI)	Its value is 0.761, which indicates the good quality of the model
(RFI) Relative Fit Index relative conformity index	Its value of 0.912 indicates the good quality of the model and its conformity with the data
(RMR) Root mean square residence Root mean squares residual index	Its value is 0.089. This indicator indicates a good fit for the model

4.5 Hypotheses Test

After thoroughly assessing the fit of the measurement models and structural model, and achieving a satisfactory fit, the research hypotheses were examined and tested. The results pertaining to significant coefficients for each hypothesis, standardized coefficients of paths related to each hypothesis, and the outcomes of hypothesis testing at the 95% confidence level are presented below. Table (5) displays the significance coefficients of the variables.

It is important to note that all significance coefficients of the variables surpass the absolute value thresholds of 8.4 and 9.3, confirming the acceptance of the hypotheses. Furthermore, the positive coefficient path indicates that electronic reading effectively reduces the digital divide in e-learning, signifying a significant and positive impact.

Table 5: Hypotheses Test

Hypothesis	**Causal relationships between researcl variables**	**Path coefficient**	**Significance fact (T-Value)**	**test resu**
H_1	electronic reading by reducing the di divide.	0.294819	8.360517	Confirm
	E-learning	0.274919	9.340745	Confirm

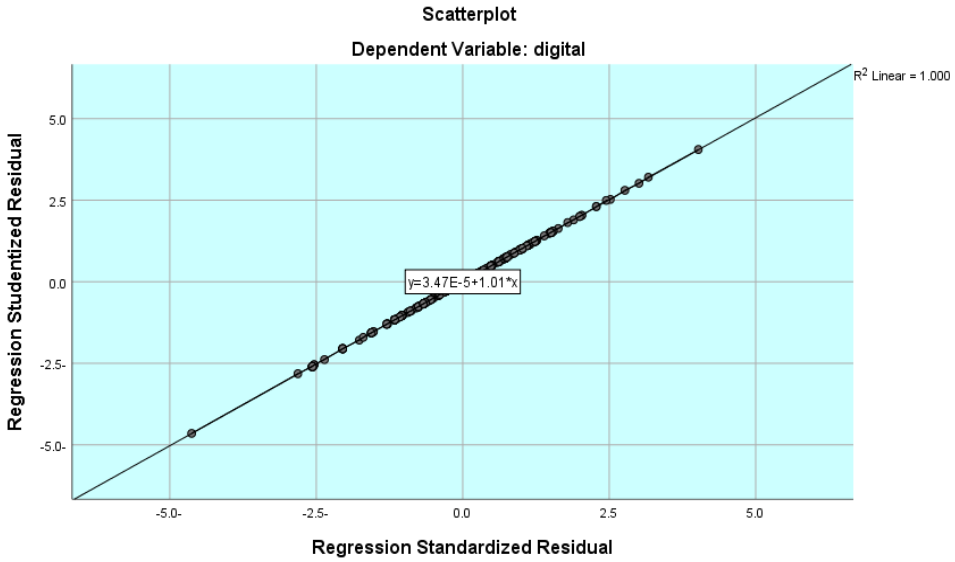
The results of the analysis, presented in Table 6, demonstrate a significant relationship between electronic readiness and the digital divide. The analysis, conducted using the SPSS v26 program, revealed a calculated F-value of 147.556 at a significance level of 0.01. The corresponding P-value was found to be 0.000, which is lower than 0.01 with a degree of freedom of (464-2). Consequently, the null hypothesis is rejected, and the alternative hypothesis is accepted, indicating a substantial effect between the study variables. Furthermore, Table 6 also presents the coefficient of determination (R2) with a value of 0.63. This signifies that digital innovation explains 63% of the variations observed in electronic readiness. This suggests a significant influence of digital innovation on enhancing electronic readiness.

Table 6: the test of ANOVA model

		ANOVA					
Model		Sum of squares	Df	mean square	F	R2	T
1	Regression	93,380	2	46,690	147,556	0.627	9.41
	Residual	145,870	461	.316			
	Total	239,250	463				
	a. Dependent Variable: digital divide. Sig. 000b						
	b. Predictors: (constant), e-learning, readiness						

Chart No. (1) displays the linear regression equation relating the independent study variable, digital innovation (X), to the dependent study variable, digital organizational identity (Y). The goodness of fit for the hypothetical model is indicated by a matching ratio of R2 = 1.000, signifying a perfect fit between the variables. The linear equation, denoted as Equation (1), effectively captures the impact of digital innovation on digital organizational identity. By utilizing Equation (1), we can calculate the output of electronic readiness, given the relationship between digital innovation and digital organizational identity. The equation provides valuable insights into how changes in digital innovation influence digital organizational identity, thus enabling the prediction of electronic readiness outcomes.

$$Y=3.4E\text{-}5+1.01*x\ldots\ldots (1)$$



5. Conclusions

The study highlights the significant role of electronic readiness in reducing the digital divide, specifically in the context of e-learning. The term "electronic readiness" encompasses a country's ability to effectively use technology and the internet to enhance economic and social outcomes. High levels of electronic readiness are achieved through investments in infrastructure, policies, and education, ensuring equitable access to technology for all citizens.

By focusing on electronic readiness, countries have succeeded in bridging the digital divide, granting people from diverse backgrounds access to education, job opportunities, and previously inaccessible resources. This has also fostered entrepreneurship, innovation, and economic growth.

It is essential to acknowledge that while electronic readiness has made a substantial impact, there are still significant disparities in technology and internet access worldwide. Addressing the digital divide requires collaborative efforts from governments, organizations, and individuals. Investment in infrastructure, education, and policies that support technology growth across societies is crucial to achieving equality in access.

In conclusion, the study's structural modeling and hypothesis tests demonstrate the positive impact of electronic readiness on reducing the digital divide in the realm of e-learning. The research findings support the validity of the hypothetical model, which includes electronic readiness dimensions (readiness to use, readiness of communication and information, readiness to organize), all contributing to reducing the digital divide.

The results of the regression analysis reveal a statistically significant effect of electronic readiness dimensions (combined) as an independent variable on the digital divide as a dependent variable, as evidenced by the calculated value of F (147.556), exceeding the tabular value (1.041) at a significance level of (0.000) and degrees of freedom (2). The coefficient of determination (R2) is (0.627), indicating that 62.7% of the variance in reducing the digital divide is attributed to the effect of electronic readiness, while the remaining variance is due to uncontrolled or unaccounted-for factors. The regression coefficient (β1) is (0.294819), signifying that a unit change in the electronic readiness combined variable leads to a change of (2.94) in the digital divide..

- E-readiness plays a pivotal role in enhancing the effectiveness of e-learning and its ability to reduce the digital divide. Several key effects of e-readiness in e-learning contribute to bridging the gap:

- Access to Technology: E-readiness guarantees that learners have access to essential technology, including computers, smartphones, tablets, and internet connectivity. This accessibility empowers learners to actively participate in e-learning activities and access online educational resources.
- Flexibility: E-readiness affords learners the freedom to engage with e-learning content at their own pace and convenience. This flexibility makes e-learning more accessible to individuals with various commitments or those residing in different time zones.
- Collaborative Learning: E-readiness facilitates collaborative learning environments by enabling learners to communicate with one another virtually. Online discussions and group projects foster valuable communication and teamwork skills.
- Self-Directed Learning: E-readiness empowers learners to take charge of their own learning journey by granting access to a vast array of online resources. This fosters the development of crucial self-directed learning skills, which are increasingly important in today's rapidly changing world.
- Improved Learning Outcomes: E-readiness contributes to improved learning outcomes by providing learners with access to high-quality and interactive learning materials tailored to their individual needs and learning styles.

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