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Modernization and E-Learning among Prospective Teachers: A New Paradigm in Education

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Abstract:

Modernization has fundamentally transformed various sectors, with education being one of the most significantly impacted. The advent of e-learning has revolutionized the traditional education system, offering a more flexible, accessible, and personalized learning experience. This paper explores the relationship between modernization and e-learning. In this study the researcher has used the descriptive survey research design. In this present study the population consists of the B.Ed. college students studying in different colleges (Govt, Govt. Aided and Self Finance) of Paschim Medinipur district of West Bengal. Out of the population a sample 60 students including male (30) and female (30) were selected by following purposive sampling method for the purpose of the study. Test of E Learning Related Attitude and Comprehensive

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Modernization Inventory (Ahluwallia & Kalia, 2010) were used for data collection. For the purpose of the study the researcher used both the descriptive statistics and inferential statistics. The study reveals that there is not a meaningful relationship between modernization and e-learning.

Keywords: Modernization, Personalized Learning, Globalization, Social, Economic, And Technological Development.

Introduction:

Modernization, characterized by rapid technological advancements, globalization, and shifts in societal values, has reshaped numerous aspects of human life. In the realm of education, one of the most prominent manifestations of modernization is e-learning. E-learning, defined as the use of digital technologies to facilitate teaching and learning, has gained significant traction in recent decades.(Taoge,2012) This article examines how modernization has influenced e-learning and the ways in which it is reshaping the educational landscape.

Modernization refers to the process of social, economic, and technological development that leads to the transformation of traditional systems and practices (Sehrt, 2003). In education, modernization has shifted the focus from rigid, instructor-led methods to more student-centered, flexible approaches. The rise of the internet, mobile technology, and digital tools has enabled educators to design and deliver content in innovative ways. Learning management systems (LMS), virtual classrooms, and mobile apps allow students



to access materials anytime, anywhere. (Roca, 2006). Modernization has facilitated the exchange of knowledge and cultural perspectives across borders. E-learning platforms often host a diverse range of learners from different geographical locations, fostering a global exchange of ideas and experiences. The rapid pace of technological innovation requires continuous skill development. (Miramar, and Kumar, 2008) Lifelong learning, supported by e-learning, is now essential for individuals to remain competitive in the modern workforce.

Research Gap:

While modernization and e-learning have been studied extensively in general educational settings, much of the existing research tends to focus on either current students or in-service teachers. There is a lack of focused studies that explore how prospective teachers, those still in training, perceive and adapt to modernization and e-learning environments. Although modernization has brought about technological innovations in teacher education, studies often examine modernization and e-learning as separate entities. There is a need for research that investigates how these two concepts are integrated within teacher preparation programs and how this integration shapes the skills, attitudes, and competencies of future teachers. Much of the literature on e-learning and modernization tends to be concentrated in developed countries with advanced technological infrastructures. There is a gap in research examining how these trends affect prospective teachers in diverse cultural and socio-economic contexts, particularly in developing countries. In summary, while modernization and e-learning are well-researched areas, their combined influence on prospective teachers remains underexplored. Addressing these gaps will provide valuable insights into how future teachers can be better equipped to thrive in a digital and modernized educational environment.

Significance of the Study:

The study of modernization and e-learning holds considerable importance as it addresses the evolving dynamics of education in an increasingly digital and globalized world. By examining the relationship between modernization and e-learning, this study provides insights into how technological, economic, and social changes are transforming the educational landscape. It sheds light on the way modernization has influenced the shift from traditional to digital education, helping educators, policymakers, and institutions understand and adapt to these changes. this study is significant as it explores the intersection of modernization and e-learning, offering a roadmap for improving education in the digital age. It serves as a valuable resource for educators, institutions, policymakers, and learners seeking to navigate and leverage the opportunities of modern education systems.

Objectives: The present study has been carried out with the following objectives-

- To study the nature of Modernization, and E-learning of prospective teachers
- To find out the relationship between Modernization and E-Learning.

Hypothesis:

Ho1. There is no significant relationship of Modernization and E-learning of prospective teachers.

Ho2. There is no significant relationship of Modernization and E-learning of male prospective teachers.

Ho3. There is no significant relationship of Modernization and E-learning of female prospective teachers.

Methodology:

Method: In this study the researcher has used the descriptive survey research design

Population And Sample: In this present study the population consists of the B.Ed. college students studying in different colleges (Govt. Aided and Self Finance) of Paschim Medinipur district of West Bengal.



Out of the population a sample 60 students including male (30) and female (30) were selected by following purposive sampling method for the purpose of the study.

Tools of Research:

• **Test of E Learning Related Attitude:** It is a self structured questionnaire consisting of 36 items with the response of Strongly Disagree, Disagree, Agree and Strongly Disagree.

Comprehensive Modernization Inventory (Ahluwallia & Kalia, 2010)

A standardized questionnaire–Comprehensive Modernization Inventory(CMI-AK)developed by Dr. S. P. Ahluwalia and Dr. A. K. Kaliawas used for the purpose of studying the attitude of adolescents towards modernization with respect to 7 dimensions viz., education, parent–child relationship, politics, status of women, marriage, religion and socio–cultural factors. Education ii)Parent Child relation iii)Politics iv)Status of Women v)Marriage vi)Religion vii)Socio-Culture.

Statistical Techniques: For the purpose of the study the researcher used both the descriptive statistics and inferential statistics

DATA ANALYSIS AND INTERPRETATION:

S.E. Mean Skew S.E. Kurt Maximum Skewness StdDev Variance Kurtosis Minimum Mean Range Sum \mathbf{Z} S.E. Modernization 60 148.72 3.66 28.37 804.61 .98 .61 -.88 .31 134.00 75.00 209.00 8923.00 E-learning 60 93.27 1.10 8.55 73.08 -.82 .61 -.38 .31 34.00 74.00 108.00 5596.00 Valid N 60 (listwise) Missing N 0 (listwise)

Table 1: Descriptive Statistics of Modernization and E-Learning

The mean score for **Modernization** is 148.72, higher than the mean score for **E-learning**, which is 93.27. This suggests that respondents score higher on modernization measures compared to e-learning. **Modernization** has a standard deviation of 28.37 and variance of 804.61, indicating a wider spread of scores compared to **E-learning** (standard deviation of 8.55 and variance of 73.08). This suggests that there is more variability in responses related to modernization. **Modernization** shows a slight positive kurtosis (0.98), indicating a somewhat peaked distribution. In contrast, **E-learning** has a negative kurtosis (-0.82), indicating a flatter distribution than a normal curve. Both variables show negative skewness: **Modernization** (-0.88) is more skewed left than **E-learning** (-0.38), implying that for both variables, there are more values clustered at the higher end of the scale. The range for **Modernization** (134.00) is significantly larger than for **E-learning** (34.00), showing a broader range of values in the modernization data set.



		Modernization	E-learning
Modernization	Pearson Correlation	1.000	.069
	Sig.(2-tailed)		.602
	Ν	60	60
Elearning	Pearson Correlation	.069	1.000
	Sig.(2-tailed)	.602	
	Ν	60	60

Table 2: Relationship between Modernization and E-Learning

The Pearson correlation coefficient between modernization and e-learning is **0.069**. This value is very close to 0, indicating a **very weak positive correlation** between the two variables. In practical terms, this suggests that there is almost no linear relationship between modernization and e-learning scores in this sample. The significance level (p-value) for the correlation between modernization and e-learning is **0.602**, which is much higher than the commonly accepted threshold of 0.05 for statistical significance. This means that the correlation observed is **not statistically significant**. In other words, we cannot conclude that there is a meaningful relationship between modernization and e-learning based on this sample.

		Modernization	E-learning
Modernization	Pearson Correlation	1.000	.137
	Sig. (2-tailed)		.480
	Ν	30	30
E-learning	Pearson Correlation	.137	1.000
	Sig. (2-tailed)	.480	
	Ν	29	30

Table 3: Relationship between Modernization and E-Learning for Male prospective Teachers

For male prospective teachers the Pearson correlation coefficient between modernization and e-learning is **0.137**. This indicates a **slightly positive but weak correlation** between the two variables. While there is a small positive relationship, it is still not strong enough to suggest a meaningful connection between modernization and e-learning in this sample. The significance level (p-value) for the correlation between modernization and e-learning is **0.480**. This is much higher than the common threshold of **0.05** used to determine statistical significance. As a result, the correlation is **not statistically significant**, implying that the weak relationship observed could be due to chance.

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I able 4. Relationshi	n netween wodernizatio	n and ELearning for	· temsie nros	nective teachers
Table II Relationship	p between model mzacio		ionnaic pros	pectre ceachers

		Modernization	E-learning
Modernization	Pearson Correlation	1.000	137
	Sig. (2-tailed)		.478
	Ν	30	30



E-learning	Pearson Correlation	137	1.000
	Sig. (2-tailed)	.478	
	Ν	29	30

The Pearson correlation coefficient between modernization and e-learning is -0.137, indicating a very weak **negative correlation** between the two variables. While this suggests a slight inverse relationship (as modernization increases, e-learning might slightly decrease, and vice versa), the relationship is very weak. The p-value is 0.478, which is well above the common threshold of 0.05 for statistical significance. This means the correlation is **not statistically significant**, implying that the weak negative relationship observed is likely due to chance and cannot be generalized to a broader population.

Findings:

- There is not a meaningful relationship between modernization and e-learning
- The correlation is not statistically significant between Modernization and E-Learning for male prospective teachers
- There exists no significant Relationship between Modernization and E-Learning for female prospective teachers

Conclusion:

E-learning is a product of modernization, reflecting the changing needs and expectations of 21st-century learners. Its flexibility, accessibility, and personalization make it a powerful tool for expanding educational opportunities. However, to fully realize its potential, the challenges of digital equity, quality assurance, and learner engagement must be addressed. As technology continues to evolve, e-learning is poised to play an even more central role in shaping the future of education.

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