A Study on the Factors Impacting Digital Innovation in E-Learning Business

Priyadarshini J.[1], Tanya Ashiq[2]

Abstract

Edtech, or educational technology, is the way information and communication technology tools are introduced into the classroom to produce more engaging, comprehensive and individualized reading and jotting aids. Classrooms have moved beyond the clumsy desktop computers that were formerly the norm and now feature tablets, interactive online courses, and robots that can take notes and record lectures for absent scholars. The broad field of Ed Tech includes devices and software programs commonly known as "remote literacy," "distance literacy," or "online education," as well as literacy suggestions and the most effective ways to teach people new knowledge and skills. A wealth of Edtech tools is transforming the classroom in many ways. The objectives of the study are:

1. To study the innovative methodologies employed in the work process and the work deliverables.

2. To determine the impact of Intrinsic Motivation on Digital Innovation.

3. To analyse the effect of Social Motivation on Digital Innovation.

4. To understand the impact of Internalized Extrinsic Motivation on Digital Innovation. There is found to be a significant positive impact of Intrinsic Motivation, Social Motivation and Internalized Extrinsic Motivation on Digital Innovation.

Keywords: Intrinsic Motivation; Social Motivation; Internalized Extrinsic Motivation; Digital Innovation; Edu Tech Industry; Work deliverables.

Author's Affiliation: [1]Assistant Professor, [2]Final Year MBA Student, MEASI Institute of Management, Royapettah, Chennai 600014, Tamil Nadu, India.

Coressponding Author: Tanya Ashiq, Final Year MBA Student, MEASI Institute of Management, Royapettah, Chennai 600014, Tamil Nadu, India.

E-mail: priyadarshini.j@measiim.edu.in

INTRODUCTION

Edtech, or educational technology, is the way information and communication technology tools are introduced into the classroom to produce more engaging, comprehensive and individualized reading and jotting aids. Classrooms have moved beyond the clumsy desktop computers that were formerly the norm and now feature tablets, interactive online courses, and robots that can take notes and record lectures for absent scholars.

The broad field of Ed Tech includes devices and software programs commonly known as "remote literacy," "distance literacy," or "online education," as well as literacy suggestions and the most effective ways to teach people new knowledge and skills. It also includes searching for alternative means. A wealth of Edtech tools is transforming the classroom in many ways. Edtech robots, virtual reality tasks, and playful classroom coordination make it easier for scientists to participate through fun forms of reading and writing. The edtech Io T bias is also celebrated for being able to create digital classrooms for academics, whether they are physically at the academy, in front of a computer, or at home. In fact, machine literacy and block chain tools can help teachers score tests and hold scholars accountable for their work. The potential for scalable individualized learning has played a major role in the rise of the edtech industry. The way one learns, how one interacts with their classmates and teachers, and the general enthusiasm for the same subject, there is no one-size-fits-all situation. Every one learns at their own pace and in their own style. Edtech techniques and tools make it convenient for teachers to prepare customized lesson plans and provide innovative teaching experiences. This promotes a sense of inclusion and improves the learning capacity of all students, regardless of age or learning ability. And classroom technology seems to be taking hold. In a 2018 survey, 86% of 8th grade teachers agreed that using technology to teach students is important. In addition, 75% of teachers who participated in the survey said that the use of technology improved their students' academic performance. For this reason, many argue that it is important to understand the benefits that edtech brings in the form of improved communication, collaboration, and overall quality of education (CFI Team).

Scope of Ed – Tech Industry

The Indian EdTech diligence is credited to have entered $16.1 billion in VC (Venture Capital) backing, a 32-fold increase from $ 500 million in 2010. Combined with the growing fashion ability of Massive Open Online Courses (MOOCs) and distance literacy, India's EdTech diligence is poised to reach $30 billion in the coming decade. The long term goods of the epidemic on the education industry are yet to be determined, but learning models will really come hybrids as smartphones and the internet come more common. EdTech has the capability to bridge the literacy gap as technology can break down geographic walls. Educators understand the demand for digital

adoption today, but it offers unprecedented benefits of traditional classroom configurations, such as creating opportunities for peer discussion, one-on-one educator support, and group learning. Recent EdTech provisions include video enhanced distance learning, immersive learning, AI and VR, and on demand learning. However, a smooth implementation means that both educators and learners will need proper training to easily use the platform tools and impart their knowledge. As the demand for learning increases, more technological advances will gradually be incorporated into the classroom. Online education is much cheaper than traditional education (schools, universities). According to industry reports, education in grades 1 to 12 has increased 6.3 times in 2022 compared to 2019 levels. Affordability, accessibility, and flexibility have made quality education accessible to students of different income and social classes through these platforms (India Today).

Problem Statement

The problem statement is that there is a lack of understanding of how Intrinsic Motivation, Social Motivation, and Internalized Extrinsic Motivation can help organizations with Digital Innovation. Without a deeper understanding of how these factors contribute to Digital Innovation, organizations may struggle to optimize their innovation processes and remain competitive in today's digital economy. Therefore, the aim of this research is to investigate how Intrinsic Motivation, Social Motivation, and Internalized Extrinsic Motivation can contribute to Digital Innovation in organizational settings. By exploring the complex relationships between these motivational factors and Digital Innovation, this research can provide valuable insights into how organizations can foster a culture of innovation and leverage digital technologies to stay ahead of the curve. Ultimately, this research can help organizations better understand how to motivate their employees and create an environment that promotes Digital Innovation.

Need for the Study

- *Improved Understanding of Motivational Factors:* By examining the role of Intrinsic, Social, and Internalized Extrinsic Motivation in the context of Digital Innovation, this study can provide a more comprehensive understanding of the factors that drive innovation in organizations.

- *Identification of Best Practices:* Through this

study, best practices for promoting Intrinsic, Social, and Internalized Extrinsic Motivation in the context of Digital Innovation can be identified. These best practices can be shared across organizations, allowing for more widespread adoption of effective innovation strategies.

- *Improved Organizational Performance:* Digital Innovation is critical for organizational success in today's rapidly changing digital landscape. By improving our understanding of the motivational factors that contribute to innovation, organizations can better leverage digital technologies and improve their overall performance.

- *Improved Employee Satisfaction:* Intrinsic Motivation, Social Motivation, and Internalized Extrinsic Motivation are all factors that can contribute to employee satisfaction and engagement. By understanding how to foster these motivational factors in the context of Digital Innovation, organizations can create a more satisfying and fulfilling work environment for their employees.

Objectives of the Study

- To study the innovative methodologies employed in the work process and the work deliverables.

- To determine the impact of Intrinsic Motivation on Digital Innovation in E-Learning Business.

- To analyse the effect of Social Motivation on Digital Innovation in E-Learning Business.

- To understand the impact of Internalized Extrinsic Motivation on Digital Innovation in E-Learning Business.

Review of Literature

Tapiwa et al. (2016) examined the digitization of personnel systems as a necessity for effective he HRM in the public sector of Zimbabwe. Methodologically, the study used a qualitative research style and data analysis is carried out by content analysis and tasks from the preliminary literature. Bureaucracy, lack of a strong investment argument, weak robotics and technology infrastructure, and lack of policy frameworks to relinquish technology in HR processes were driving the shift from traditional public sector labour operations to lethal digital cash register operations.

Chen et al. (2017) aimed to investigate whether Intrinsic Motivation can enhance creative performance and what factors may moderate this relationship. The study found that Intrinsic Motivation is positively related to creative performance, with a moderate effect size. Intrinsic Motivation was found to be particularly important for creative tasks that require novelty and flexibility. The study also found that autonomy and competence were key components of Intrinsic Motivation that were positively related to creative performance. The findings suggested that promoting Intrinsic Motivation, particularly autonomy and competence, can be an effective way to enhance creative performance.

T. M. A. Batenburg et al. (2018) used a qualitative approach to explore how organizations can develop dynamic capabilities to take advantage of digital innovation. The study began with a review of the existing literature on dynamic capabilities and digital innovation. The authors identified that there is a need for a better understanding of how dynamic capabilities can be developed to enable digital innovation in organizations. They argued that digital innovation requires organizations to develop new capabilities that are different from traditional capabilities, and that this requires a dynamic approach to capabilities development.

Lawler et al. (2019) examined the impact of digital technology on various HR activities, including recruitment, training, and performance management. The authors suggested that digital technologies can improve the efficiency and effectiveness of these activities, but also raised questions about privacy, security, and the role of human resources personnel.

Sarah Lee. (2019) provided a comprehensive over view of research on Social Motivation. The findings suggested that social factors, such as social support, social comparison, and social norms, can play an important role in shaping individuals' motivation and behaviour.

Dwivedi et al. (2019) examined the digital transformation of HR in Indian organizations, discussing the different types of digital technologies in use and their impact on HR practices and performance. The authors found that digitizing talent can improve employee engagement, organizational culture, and organizational performance. They argued that social media technology has the potential to enhance HRM practices in a number of ways, such as improving recruitment and selection, facilitating communication and collaboration, and promoting

emplo yee engagement and retention. The authors also discussed the challenges and risks associated with digitalization of HRM, such as privacy concerns, information overload, and the need for new skills and competencies. They concluded by calling for further research on the topic, particularly in the areas of social media analytics and the use of artificial intelligence in HRM.

Wang et al. (2020) explored the potential benefits and challenges of using artificial intelligence (AI) in HR functions such as recruitment, selection, and training. The authors suggested that AI can improve the accuracy and objectivity of personnel decisions, but it also raises ethical concerns about bias and privacy. They also explored the potential for AI to reduce bias in the recruitment process, for example by using algorithms that are trained on diverse data sets and designed to avoid factors such as age, gender, and ethnicity. Overall, Wang *et al.*'s research provided important insights into the potential benefits of AI for HR functions, with implications for organizations seeking to leverage technology to improve HR outcomes and stay competitive in today's digital economy.

Maarten Vansteenkiste (2020) conducted research on the role of autonomy and relatedness in motivation, and has shown that individuals who have a sense of autonomy and choice in their activities are more likely to internalize external goals and values. Vansteenkiste has also examined the role of socialization in motivation, and has found that individuals who feel supported and validated by their social environment are more likely to engage in behaviours that align with their own values and interests.

Rachel Lee. (2021) aimed to investigate whether Internalized Extrinsic Motivation, which refers to motivation that comes from external factors but is integrated into one's sense of self, has a positive or negative impact on well being. The study found that Internalized Extrinsic Motivation has a small positive impact on well being, with a small effect size. The study provided important insights into the complex relationship between Internalized Extrinsic Motivation and well being. The findings suggested that Internalized Extrinsic Motivation can have positive effects on well being when individuals perceive it as personally meaningful, but can have negative effects when individuals feel pressured or obligated.

MATERIAL METHOD

Descriptive research design is used in this study.

Descriptive research design contains checks, fact findings, and varied types of examinations. The primary aim of descriptive research is to describe the current situation. The main attribute of this system is that the researcher has no control over the variable; as researcher can only report on what has happened or is happening.

Descriptive studies are one in which the researcher seeks to measure particulars similar as buying frequency and consumer preferences on products or services. When a researcher is interested in learning about the characteristics of specific groups, similar as age, occupation, experience, and so on, a descriptive study is used.

The sample size of the study is 110. The data was collected among the employees of an E-Learning business. The method used for the research was convenience sampling. The data was collected using a questionnaire adapted from previous research studies.

Data Analysis and Interpretation

Reliability

Table 1: Results of internal consistency reliability

Variables	No of Items	Cronbach Alpha
Intrinsic Motivation	3	0.705
Social Motivation	4	0.835
Internalized Extrinsic Motivation	3	0.805
Digital innovation	9	0.958

It is evident from table 1 that the measure of reliability, Cronbach's alpha, is more than the required value of 0.7 (Nunnally, 1978). The Cronbach alpha reliabilities range around 0.705 and 0.958 which are found to be above the acceptable criteria. Thus, the satisfaction of condition for Cronbach alpha support the reliability to a reasonable extent.

Correlation

H1: There is a significant and positive relationship between intrinsic motivation and digital innovation.

H2: There is a significant and positive relationship between social motivation and digital innovation.

H3: There is a significant and positive relationship between internalized extrinsic motivation and digital innovation.

Table 2: Correlation for the independent variable employed in the study with dependent variable

Correlations		Digital Innovation
Intrinsic Motivation	Pearson Correlation	.387**
	Sig. (2-tailed)	0
	N	110
Social Motivation	Pearson Correlation	.189*
	Sig. (2-tailed)	0.048
	N	110
Internalized Extrinsic Motivation	Pearson Correlation	.273**
	Sig. (2-tailed)	0.004

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

From table 2, it can be inferred that there is a significant level of correlation among the variables like "Intrinsic Motivation" and "Internalized Extrinsic Motivation." Thus, there is a significant and positive relationship between Intrinsic Motivation, Social motivation, Internalized Extrinsic Motivation and Digital Innovation. Hence. hypothesis H1, H2 and H3 are accepted as the p-values are less than 0.01.

Regression

H4: Intrinsic Motivation has a significant and positive impact on digital innovation.

H5: Social Motivation has a significant and positive impact on digital innovation.

H6: Internalized Extrinsic motivation has a significant and positive impact on digital innovation.

Table 3: Showing Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.395a	0.156	0.132	1.027	0.156	6.53	3	106	0

a. Predictors: (Constant), IEM, SM, IM

Table 4: Showing ANOVA

ANOVA						
	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	20.671	3	6.890	6.530	.000b
1	Residual	111.851	106	1.055		
	Total	132.522	109			

a. Dependent Variable: DI

b. Predictors: (Constant), IEM, SM, IM

From the above tables, Intrinsic Motivation, Social Motivation and Internalized Extrinsic Motivation explains 15.6% variance in Digital innovation. Since significant value is less than 0.01, it can be inferred that that H4, H5 and H6 are accepted. It is also found that Intrinsic Motivation is the strong predictor, Internalized Extrinsic Motivation is the moderate predictor and Social Motivation is the weak predictor.

DISCUSSION AND RESULT

It is evident from table 1 that the measure of reliability, Cronbach's alpha, is more than the required value of 0.7 (Nunnally, 1978). The Cronbach alpha reliabilities range around 0.705 and 0.958 which are found to be above the acceptable criteria. Thus, the satisfaction of condition for Cronbach alpha support the reliability to a reasonable extent.

From table 2, it can be inferred that there is a significant level of correlation among the variables like "Intrinsic Motivation" and "Internalized Extrinsic Motivation." Thus, there is a significant and positive relationship between Intrinsic Motivation, Social motivation, Internalized Extrinsic Motivation and Digital Innovation. Hence. hypothesis H1, H2 and H3 are accepted as the p-values are less than 0.01.

From the regression tables, Intrinsic Motivation, Social Motivation and Internalized Extrinsic Motivation explains 15.6% variance in Digital innovation. Since significant value is less than 0.01, it can be inferred that that H4, H5 and H6 are accepted. It is also found that Intrinsic Motivation is the strong predictor, Internalized Extrinsic Motivation is the moderate predictor and Social Motivation is the weak predictor.

Suggestions

Suggestions to Improve Intrinsic Motivation:

• *Create a Positive Work Environment*

A positive work environment can help employees feel valued and supported, leading to increased motivation. This can include things like open communication, recognition for good work, and opportunities for growth and development.

• *Encourage Autonomy*

Provide employees with the freedom to make decisions and control their work. This can help them feel more invested in their work and motivated to perform well.

• *Set Meaningful Goals*

Set goals that are challenging but achievable, and aligned with employees' personal values and interests. This can help employees feel a sense of purpose and motivation to achieve their goals.

• *Provide Opportunities for Learning and Development*

Encourage employees to learn and grow in their roles by providing opportunities for training, education, and skill building.

Suggestions to Improve Social Motivation:

• *Encourage Team Building Activities*

Organizing team building activities can help employees bond, get to know each other better, and develop stronger connections. This will improve communication and collaboration amongst the team.

• *Foster a Sense of Community*

Emphasize the importance of each employee's contribution to the organization by recognizing individual contributions and celebrating successes as a team. This can create a culture of inclusivity and belonging.

• *Provide Opportunities for Social Interaction*

Encourage social interaction among employees by providing opportunities for them to socialize outside of work related activities. For instance, organizing lunch breaks or after work events can foster a sense of community and enhance Social Motivation.

• *Encourage Collaboration*

Encouraging collaboration and teamwork by creating opportunities for employees to work together on projects or initiatives can enhance Social Motivation. Collaboration can help employees feel a sense of belonging and purpose as they work towards common goals.

• *Provide Opportunities for Professional Networking*

Encourage employees to attend industry events or participate in professional organizations to build their professional networks. This can help them feel connected to their industry and motivated to stay engaged in their work. Additionally, professional networking can facilitate knowledge sharing and collaboration within the organization.

Suggestions to Improve Internalized Extrinsic Motivation:

• *Provide Clear and Meaningful Feedback*

Employees who receive clear and meaningful feedback on their work are more likely to understand its value and importance. This can help them internalize the reasons why their work is important and stay motivated to perform well.

• *Connect Work to a Larger Purpose*

Help employees understand how their work contributes to the organization's larger mission or purpose. When employees understand the impact of their work, they are more likely to see its value and importance.

• *Offer Opportunities for Growth and Development:*

Providing opportunities for employees to develop new skills or take on new challenges can help them see the value of their work and feel more invested in their roles.

• *Recognize and Reward Good Work*

Recognize and reward employees who perform well or go above and beyond in their roles. This will give them a sense of validation and will improve their performance.

Suggestions to Improve Digital Innovation:

• *Foster a Culture of Innovation*

Create a culture that values innovation and encourages experimentation. This can be achieved by promoting open communication, creating opportunities for employees to share ideas, and celebrating successful innovations.

• *Invest in Digital Technology*

Invest in digital technologies that can improve the efficiency of operations, such as automation, artificial intelligence, or cloud computing. This can create opportunities for innovation and help the organization stay competitive.

• *Encourage Learning and Development*

Encourage employees to learn and develop

new skills related to digital technologies. This can include training programs, mentoring, or coaching. This can help build the necessary expertise within the organization to drive Digital Innovation.

- *Use Data Analytics to Inform Decision Making*

Utilize data analytics to gain insights into customer behaviour on digitally innovated work deliverables, and market trends. This can guide in the decision making process and help identify opportunities for Digital Innovation.

CONCLUSION

The research study highlights the importance of motivational factors in driving innovation in organizations. The study finds that the motivational factors namely Intrinsic Motivation, Social Motivation and Internalized Extrinsic Motivation play a critical role in creating an environment that fosters Digital Innovation.

The study shows that fostering Intrinsic Motivation through autonomy, mastery, and purpose can lead to higher levels of creativity and innovation. Social Motivation, in the form of collaboration and communication, can help teams work together more effectively and generate innovative ideas. Internalized Extrinsic Motivation, achieved through a sense of ownership and identification with organizational goals, can encourage individuals to go above and beyond in their efforts to innovate.

Moreover, the study identifies several best practices for promoting Intrinsic, Social, and Internalized Extrinsic Motivation in the context of Digital Innovation. These best practices include investing in employee training and development, promoting open communication, and creating a culture of experimentation and learning.

Overall, the study highlights the critical role that Intrinsic Motivation, Social Motivation, and Internalized Extrinsic Motivation play in driving Digital Innovation. By understanding how to foster these motivational factors, organizations can create a more innovative and competitive work environment that enables them to thrive in the rapidly evolving digital landscape.

REFERENCES

1. Chen and Jennifer A. Woolf (2017). Intrinsic Motivation and Creativity in the Classroom: Have We Come Full Circle. Frontiers in Psychology.

2. Dwivedi, Michael D. Williams (2019). Digitalization of Human Resource Management through Social Media Technology. Journal of Business Research.

3. Edward E. Lawler III, John W. Boudreau & Erin E. Lavelle (2019). Digitalization and the Future of Work: Understanding the Impact on Work, Skills and Employment Relations." Annual Review of Organizational Psychology and Organizational Behaviour.

4. Maarten Vansteenkiste (2020). Motivational Profiles from a Self-Determination Perspective: The Quality of Motivation Matters. Journal of Educational Psychology.

5. Nunnally, J. C. (1978). Psychometric Theory (2nd ed.). New York: McGraw-Hill.

6. Rachel Lee (2021). Internalization of Extrinsic Motivation: Effects on Persistence. Journal of Personality and Social Psychology.

7. Sarah E. A. Lee (2019). Motivational and Cognitive Predictors of Achievement: Exploring the Complexities of Achievement Motivation. Journal of Personality and Social Psychology.

8. T. M. A. Batenburg (2018). Digital innovation and its organizational enablers: A dynamic capabilities perspective. Journal of Business Research.

9. Tapiwa Madondo, Gift Mahere & Tendai Mugwagwa (2016). The Digitisation of Personnel Systems as a Necessity for Effective Practice of Human Resource Management in the Public Sector of Zimbabwe. Journal of Human Resource Studies.

10. Wang, Pei-Luen Patrick Rau, and Hsin-Chen Lin (2020). Exploring the Benefits of Artificial Intelligence for Human Resource Management: A Conceptual Framework. Journal of Business Research.