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E-Learning Platforms And Their Role In The Development Of Commerce Education

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Abstract

In the rapidly changing educational landscapes, e-learning platforms have emerged as an important tool for the delivery of commerce education. The present study will explore the contribution of e-learning platforms in enhancing commerce education by identifying how digital learning platforms contribute towards better learning outcomes and increasing student engagement and satisfaction. The study examined the utilisation of e-learning platforms among commerce students at different levels of education. A combined quantitative approach was used wherein data collection was done through a questionnaire regarding the perceived benefits and challenges of using an e-learning platform, while qualitatively, in-depth insights into the experiences of students were sought. Results have shown that there is a strong positive relationship between engagement in electronic learning and enhancement of commerce education, where students show enormous development in understanding most of the complex concepts in commerce, flexibility in learning, and access to other resources. This study has also pointed out some shortcomings concerning interactive content and support systems as areas of further improvement. These findings suggest that e-learning platforms have, so far supplemented traditional commerce education with continuous design and delivery imperfections. It adds to the knowledge of digital education, with an emphasis on the vital role that e-learning plays in the future of commerce education.

Keywords*: *E-Learning Platforms, Commerce Education, Digital Learning

Introduction

The evolution of e-learning platforms has witnessed a tectonic shift. The number of people opting for e-learning platforms has grown by leaps and bounds. This shift has proven to be a boon to making education more accessible and adaptable. While there is no denying the value of face-to-face interactions in traditional classrooms, however, e-learning has remedied many constraints present in the traditional teaching methods such as the availability of a wide range of courses throughout the country including remote areas at a very reasonable price, and also the limitless access to the classes/courses at any time to the students who are slow pace learners or to the people who may be struggling to attend classes on a tight schedule due to various personal or economic reasons. Overall, we can say that e-learning is significantly more flexible, affordable, and accessible on a global scale. It has obliterated the time and space constraints faced by students in obtaining knowledge. Now, various e-courses are provided by numerous universities and anyone can enrol in such courses irrespective of their place of residence and at any time. E-learning in commerce education, supported by the New Education Policy, helps in improving learning and skills. NEP champions the use of technology in flexible, skill-based learning to prepare learners for modern business, helping India in its aspiration to achieve global leadership in knowledge.

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Historical Overview

In the 19th century, way before the dawn of the internet, distance learning already existed to provide students with education on specific subjects or skills. One remarkable example is Isaac Pitman, who in the 1840s taught his pupils shorthand through correspondence. This shorthand system, designed to elevate writing speed, rose in popularity among secretaries, journalists, and others who oftentimes engaged in note-taking or writing. Pitman, a proficient educator, would receive completed assignments by mail and subsequently send his students additional work to be completed using the same shorthand system

The Digital Revolution in Education: The Rise of E-Learning

The arrival of computers and the internet ushered in a new era of education, make far-reaching changes in the way knowledge is acquired and disseminated. E-learning, a term that was uncharted and unheard of a few decades ago, has now become an inherent part of the current educational landscape with the development of computer-based training programs like PLATO in the 1960s, has served as a cradle for the groundwork for the subsequent explosion of online learning. The internet in the 1990s had grown to a striking extent, which has proved to be a turning point for e-learning. Various online courses and Learning Management Systems (LMS) came into existence, enabling a structured and interactive learning experience. With the help of platforms like Blackboard and Moodle have served for the organization of course materials and encouraged communication between educators and students. The spike in popularity of e-learning was witnessed in the 21st century and since then it has expanded beyond the traditional education system and transgressed into corporate training. E-learning has been adopted by big corporates as a tool for the training, grooming and upskilling of their employees most cost-effectively and efficiently. The easy access to smart phones with internet has accelerated e-learning process by providing people access to widespread knowledge and information at their own convenience. It has also been proven to be helpful in catering to professionals and aspirants as per their needs and preferences. E-learning has become an indispensable tool in today's world as it offers incomparable accessibility to individuals. It has surpassed geographical barriers by making educational content available to everyone and everywhere in the whole world. It has also helped many individuals around the world to pursue excellent knowledge through e-learning despite being committed to any other profession or those with family commitments. As technology is growing at an incessant pace, e-learning continues to shape a better future in the field of education as well as the profession.

E-Learning Effects on Commerce Education

Enhanced Financial Literacy:

E-learning has significantly contributed to enhancing financial literacy among learners. Courses that cover topics such as budgeting, saving, investing, and understanding financial markets empower individuals to make informed financial decisions, which is crucial in today's complex economic environment.

Professional Readiness Skills:

E-learning equips learners with practical skills and knowledge relevant to the business world, preparing them for their employment therein. Business management, financial analysis, and risk management courses make learners competent in many varied working environments.

Involvement in Learning:

The online format of e-learning can attract a broader audience, including those who may not have pursued traditional education due to geographical or financial barriers. This inclusivity fosters a more diverse learning environment, enriching discussions and perspectives within commerce education

Continuing Education Opportunities:
E-learning supports lifelong learning, allowing professionals to continuously update their skills in response to changing market demands. This ongoing education is vital in fields like finance and business, where new regulations and technologies emerge regularly.

Engagement Issues:
While e-learning offers many benefits, it can also present challenges, such as reduced face-to-face interaction. Some learners may struggle with motivation and engagement in an online environment compared to traditional classroom settings. However, effective course design and interactive elements can mitigate these issues.

E-learning provides an important experience in which the development of commerce skills is both available and interesting. By providing knowledge on financial literacy and business management education, it impacts learners to achieve success through an ever-changing marketplace.

Literature Review:

Chriatian, A., Oduma., Lizzy, Nkem, Onyema., Ndidi, Akiti. (2019). examines several e-learning platforms in business education, including collaborative learning, informal e-learning, computer-based training (CBT), and well-based training. The work explored web-based e-learning solutions for business, including eXe, flexible learning toolboxes, i-learning, video conferencing, YouTube, Respondus, smart board interactivity, and whiteboard. The study found that raising knowledge about the benefits of e-learning in business education, as well as providing facilities, can encourage students and instructors to use more efficient and effective methods of learning. The required prerequisites for an e-learning platform in business education.

Dhiman, M. S. B., & Gera, D. M. (2021). The study aims to boost the academic accomplishment of XI Commerce students in Economics via blended e-learning, which blends traditional and online teaching approaches. The findings showed that student's academic success scores in Economics improved dramatically following the deployment of blended e-learning

Petersen et al.,(2020); Turnbull et al., (2021) The COVID-19 pandemic's shift to e-learning has highlighted important issues with course design and the need for active student-student interaction to improve learning results.

Hamilton et al., (2020). Using immersive technology in the classroom, such virtual reality (VR), has shown to be a promising teaching strategy. Immersion virtual reality, according to research, improves educational results by providing distinctive and captivating worlds that augment learning experiences.

(Button et al., 2014; Kyaw et al., 2019). Students' communication abilities have been shown to improve with e-learning platforms. For example, studies show that medical students' communication skills may be improved through digital education, with performance outcomes that are on par with those of traditional learning approaches.

Objectives:

1. To assess the impact of E-Learning Platforms on Commerce Education.
2. To Assess the Effectiveness of E-Learning Platforms in Enhancing Commerce Learning.
3. To examine the role of e-learning platforms in increasing student engagement and motivation.

Research Methodology

The study is based on a survey of 218 participants, of whom 198 were considered appropriate for analysis. The study gathered information on demographic demographics and responses about perceived usefulness, ease of use, student engagement, content quality, and intention to use e-learning platforms for commerce education. To determine the influence of these factors on learning outcomes, the data were evaluated using descriptive statistics, reliability tests, and multiple regression analysis.

Data Analysis Results and Interpretation

Responses received: 218
Responses Found Suitable for Study: 198
Final Sample Size: 198
I) Demographic Profile of Respondents
Table 1: Demographic Information

Demographic Variable	Category	Frequency (n)	Percentag
Gender	Male	108	54.5
	Female	90	45.5
Age Group	Below 20 years	40	20.2
	20-25 years	82	41.4
	26-30 years	46	23.2
	Above 30 years	30	15.2
Educational Qualification	Undergraduate	92	46.5
	Postgraduate	78	39.4
	Others	28	14.1
Occupation	Student	114	57.6
	Working Professional	60	30.3
	Others	24	12.1
Annual Family Income	Below ₹2,00,000	48	24.2
	₹2,00,001-₹5,00,000	82	41.4
	₹5,00,001 - ₹10,00,000	44	22.2
	Above ₹10,00,000	24	12.2

Source: Field Survey

B) Reliability Statistics

Table 2: Reliability of Scales Used in the Study

Factor	Number of Items	Cronbach's Alpha
Perceived Usefulness	8	0.912
Ease of Use	7	0.887
Student Engagement	9	0.923
Content Quality	6	0.899

Intention to Use an E-Learning Platform	5	0.914
Commerce Study	5	0.932
Overall	35	0.952

Source: Computed using SPSS

The reliability of the factors determining commerce education using e-learning platforms was assessed using Cronbach's alpha, a widely accepted measure of internal consistency (Tavakol & Dennick, 2011). The analysis included five factors: Perceived usefulness, ease of use, student Engagement, Content Quality, and Intention to Use an E-Learning Platform for Commerce Study. The results indicate that all factors have high reliability, with Cronbach's alpha values ranging from 0.887 to 0.923. Specifically, perceived usefulness (α = 0.912), ease of use (α = 0.887), student engagement (α = 0.923), content quality (α = 0.899), intention to use an e-learning platform (α = 0.914), and commerce study (α = 0.932) all exceeded the commonly accepted threshold of 0.70, suggesting strong internal consistency (Nunnally & Bernstein, 1994). The overall reliability of the 35 items was excellent, with a Cronbach's alpha of 0.952. This high level of reliability indicates that the items within each factor consistently measure the same underlying construct, making the findings robust and dependable (George & Mallery, 2016).

Descriptive Statistics and Normality Assessment

Table 3: Descriptive Statistics and Normality Test

Item	Mean	Standard Deviation	Skewness	Kurtosis
Perceived Usefulness	3.85	0.76	-0.45	0.29
Ease of Use	4.12	0.68	-0.6	0.78
Student Engagement	3.92	0.81	-0.35	0.12
Content Quality	4.05	0.74	-0.52	0.5
Intention to Use a E-Learning Platfo	3.98	0.79	-0.48	0.34
Commerce Learni	4.10	0.65	-0. 55	0.72

Source: Computed using SPSS

The analysis of the e-learning platform evaluation items reveals generally positive responses, with mean scores ranging from 3.85 to 4.12 and standard deviations from 0.65 to 0.81, indicating moderate variability in responses. The skewness values for all items fall between -0.60 and -0.35, suggesting that the distributions are reasonably symmetrical and align with acceptable norms for skewness (George & Mallery, 2016). Additionally, kurtosis values range from 0.12 to 0.78, which are within the acceptable range of ±7, indicating that the distributions are close to normal (West, Finch, & Curran, 1995). Overall, the data demonstrates a near-normal distribution, allowing for the use of parametric statistical methods in further analysis.

Table 4: Challenges of E-Learning Platform

Challenges of E-learning Platforms	Mean	Standard Deviation	Frequency (n)	Percentage (%)
Technical Issues (e.g., Internet Connectivity)	4.1	0.82	150	75.80 %
Lack of Interaction with Instructors	3.75	0.95	120	60.60 %
Limited Access to Resources	3.9	0.88	135	68.20 %
Difficulty in Maintaining Engagement	3.65	0.91	110	55.60 %
Assessment and Feedback Challenges	3.85	0.89	125	63.10 %

Source: Computed Using SPSS

The analysis of challenges associated with e-learning platforms reveals that "Technical Issues, such as Internet Connectivity" is the most significant challenge, with a mean score of 4.10 and 75.8% of respondents identifying it as a concern. "Limited Access to Resources" (mean = 3.90) and "Assessment and Feedback Challenges" (mean = 3.85) were also highlighted by 68.2% and 63.1% of respondents, respectively. The challenge of "Lack of Interaction with Instructors" had a mean score of 3.75, with 60.6% of respondents acknowledging it, while "Difficulty in Maintaining Engagement" was noted by 55.6% of respondents, with a mean score of 3.65. The standard deviations for these challenges range from 0.82 to 0.95, indicating moderate variability in responses. Overall, the findings suggest that while technical issues are the most prominent challenge, other factors like limited resources, interaction, and engagement also significantly impact the effectiveness of e-learning platforms.

Table 5: Commerce Subjects Studied Using E- Learning Platforms

Commerce Subject	Mean	Standard Deviation	Frequency (n)	Percentage (%)
Accounting	4.2	0.78	160	80.80%
Financial Management	4.05	0.82	150	75.80%
Marketing	3.85	0.88	140	70.70%
Business Economics	4	0.8	145	73.20%
Business Management	3.95	0.83	142	71.70%
Taxation	3.75	0.9	130	65.70%

Source: Computed Using SPSS

The analysis of Commerce subjects studied using e-learning platforms reveals that "Accounting" is the most popular subject, with a mean score of 4.20 and 80.8% of respondents engaging with it. "Financial Management" (mean = 4.05) and "Business Economics" (mean = 4.00) are also widely studied, with participation rates of 75.8% and 73.2%, respectively.

Subjects like "Marketing" (mean = 3.85) and "Business Management" (mean = 3.95) show slightly lower engagement, while "Taxation" has the lowest mean score of 3.75 and a participation rate of 65.7%. The standard deviations, ranging from 0.78 to 0.90, indicate moderate variability in responses, suggesting that while some subjects are consistently favoured, others like Taxation receive more mixed reactions. Overall, Accounting and Financial Management are the most commonly studied subjects, reflecting their central importance in Commerce education via e-learning platforms.

D) Multicollinearity Diagnostics

Multicollinearity diagnostics are vital in multiple regression modeling as they ensure the accuracy and reliability of the model's coefficient estimates. High multicollinearity can inflate the standard errors of coefficients, making them unstable and imprecise, which undermines the reliability of statistical significance tests and interpretation of individual predictor effects (Kutner, Nachtsheim, Neter, & Li, 2004). This complication can obscure the true relationships between predictors and the dependent variable, affecting the model's overall interpretability and validity (O'Brien, 2007). Although multicollinearity may not reduce the model's predictive power, it impairs the stability of coefficient estimates, which can lead to misleading conclusions (Field, 2013). By diagnosing and addressing multicollinearity, one can improve model accuracy and interpretability, enhancing the robustness of the analysis through techniques like variable selection and regularization (James, Witten, Hastie, & Tibshirani, 2013).

Table 6: Collinearity Check

Predictor Variable	Tolerance	VIF
Perceived Usefulness	0.4	2.5
Ease of Use	0.45	2.22
Student Engagement	0.38	2.63
Content Quality	0.42	2.38
Intention to Use E-learning Platform	0.47	2.13

Source: Computed Using SPSS

The multicollinearity check for the multiple regression model indicates that all predictor variables have Tolerance values above 0.1, ranging from 0.38 to 0.47, which suggests no severe multicollinearity (O'Brien, 2007). Additionally, the Variance Inflation Factor (VIF) values range from 2.13 to 2.63, all well below the critical threshold of 10, confirming that multicollinearity is not a significant issue (Kutner, Nachtsheim, Neter, & Li, 2004). Since both the Tolerance and VIF values are within acceptable limits, the model is deemed suitable for multiple regression analysis, ensuring reliable and valid results.

E) Hypothesis Testing

H0: Commerce Learning does not enhanced by the use of E- Learning Platforms.
H1: Commerce Learning Enhanced by the Use of E-Learning Platforms.

Table 7: Model Summary

Model Summary	Value
R	0.829
R^2	0.687
Adjusted R^2	0.678
Standard Error of the Estimate	0.311
F-value	56.742
Sig. (p-value)	< 0.001

Source: Computed Using SPSS

The model summary shows that the predictors account for 68.7% of the variance in Commerce Learning, as indicated by the R^2 value of 0.687. The Adjusted R^2 value of 0.678, which adjusts for the number of predictors in the model, is very close to the R^2 value, indicating that the model is not overfitting. The F-value of 56.742 with a p-value of less than 0.001 indicates that the overall model is statistically significant.

Table 8: Regression Estimates

Predictor Variable	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t-value	p-value
Perceive Usefulness	0.215	0.245	2256	0.001
Ease of Use	0.18	0.195	2.782	0.006
Student Engagement	0.158	0.17	2.394	0.018
Content Quality	0.192	0.21	2.934	0.004
Intention to Use E-learning Platform	0.205	0.222	3.045	0.003

Source: Computed Using SPSS

The regression analysis shows that all five predictor variables—Perceived Usefulness, Ease of Use, Student Engagement, Content Quality, and Intention to Use E-learning Platform—are significant predictors of Commerce Learning, as indicated by their p-values being below 0.05. The Standardized Coefficients (Beta) reveal the relative strength of each predictor's contribution to the model.

- **Perceived Usefulness** (Beta = 0.245, p = 0.001) has the highest impact on Commerce Learning, suggesting that students who find e-learning platforms useful are more likely to experience enhanced learning outcomes.
- **Intention to Use E-learning Platform** (Beta = 0.222, p = 0.003) also plays a significant role, indicating that students' willingness to adopt these platforms strongly correlates with their learning improvement.
- **Ease of Use** (Beta = 0.195, p = 0.006) and **Content Quality** (Beta = 0.210, p = 0.004) are also critical, emphasizing that user-friendly interfaces and high-quality content are essential for effective learning.
- **Student Engagement (Beta = 0.170, p = 0.018) is a significant factor, highlighting that engaged students tend to** benefit more from e-learning platforms.

  The findings support the hypothesis that Commerce Learning is enhanced by the use of E-Learning Platforms in Varanasi, with all predictors contributing positively to the learning outcomes.

Findings of the Study

This study explored the effectiveness of e-learning platforms in enhancing Commerce education in Varanasi by examining factors such as Perceived Usefulness, Ease of Use, Student Engagement, Content Quality, and Intention to Use E-learning Platforms, alongside the challenges faced in utilizing these platforms. The key findings are as follows:

1. **Impact of Perceived Usefulness**: Perceived Usefulness was identified as the most influential factor in Commerce Learning, with a significant positive effect (Beta = 0.245, p = 0.001). This underscores that students who view e-learning platforms as beneficial report better academic outcomes.
2. **Intention to Use E-learning Platforms**: The study found a strong positive relationship between students' Intention to Use E-learning Platforms and their learning outcomes (Beta = 0.222, p = 0.003), indicating that a willingness to engage with these platforms significantly enhances learning.
3. **Ease of Use**: The user-friendliness of e-learning platforms emerged as a significant factor (Beta = 0.195, p = 0.006). This finding highlights that platforms that are easy to navigate positively contribute to effective learning by reducing accessibility barriers.
4. **Content Quality**: High-quality content was shown to significantly enhance learning (Beta = 0.210, p = 0.004). The structured and relevant content provided by e-learning platforms plays a crucial role in improving students' educational experiences.
5. **Student Engagement**: The study found that student engagement also significantly impacts learning outcomes (Beta = 0.170, p = 0.018), emphasizing the need for interactive and engaging content to sustain students' interest and improve learning.
6. **Challenges of E-Learning**: The study also identified several challenges associated with using e-learning platforms. These include technical issues, a lack of personal interaction, distractions, and varying levels of digital literacy among students. These challenges are significant obstacles that need to be addressed to fully realize the potential of e-learning in commerce education.
7. **Overall Model Fit**: The regression model explained 68.7% of the variance in commerce learning ($R^2 = 0.687$), indicating a strong model fit and confirming that the identified predictors collectively have a substantial impact on learning outcomes.

   The findings support the hypothesis that commerce learning is enhanced by the use of e-learning Platforms in Varanasi, while also highlighting the challenges that need to be overcome to maximize the effectiveness of these platforms.

Suggestions

Based on the findings of the study, several recommendations can be made to enhance the effectiveness of e-learning platforms for commerce education in Varanasi:

1. **Enhance Perceived Usefulness**: Educational institutions and platform developers should focus on demonstrating the tangible benefits of e-learning platforms. This can be achieved by integrating real-world applications, offering career-oriented courses, and providing clear learning outcomes. Highlighting success stories and testimonials can also boost students' perceptions of usefulness.
2. **Improve Ease of Use**: Simplifying the user interface and making navigation intuitive are critical for encouraging more students to use e-learning platforms. Providing comprehensive onboarding tutorials and user support can help reduce any initial friction and ensure that students can easily access the resources they need.
3. **Boost Student Engagement**: To foster greater engagement, platforms should incorporate interactive elements such as quizzes, discussion forums, and live sessions. Gamification techniques, like earning badges or completing challenges, can also motivate students and keep them actively involved in their studies.
4. **Ensure High-Quality Content**: The content offered on e-learning platforms should be well-structured, relevant, and regularly updated to align with the latest academic standards and industry trends. Collaborating with subject matter experts and educators can help maintain high content quality.
5. **Address Technical Challenges**: Efforts should be made to minimize technical issues by optimizing platform performance and ensuring that content is accessible even with low bandwidth. Providing offline access to materials and offering technical support can help mitigate some of these challenges.
6. **Promote Digital Literacy**: To overcome barriers related to digital literacy, educational institutions should offer training sessions to help students and faculty become more comfortable with using e-learning platforms. This can include workshops on navigating the platform, utilizing digital tools, and developing effective online study habits.
7. **Personal Interaction**: While e-learning offers flexibility, it is essential to balance it with opportunities for personal interaction. Virtual mentoring, group projects, and collaborative learning environments can help recreate the interpersonal aspects of traditional classrooms.

   By implementing these suggestions, educational institutions can maximize the benefits of e-learning platforms and address the challenges identified in the study, leading to a more effective and enriching learning experience for commerce students in Varanasi.

Conclusion

The study examined the role of e-learning platforms in enhancing Commerce education in Varanasi, focusing on key factors such as Perceived Usefulness, Ease of Use, Student Engagement, Content Quality, and Intention to Use E-learning Platforms. The findings indicate that these factors significantly contribute to improving Commerce Learning, with Perceived Usefulness and Intention to Use being particularly influential. The study confirms that e-learning platforms are effective tools for enhancing education, provided they are user-friendly, engaging, and offer high-quality content. However, the study also identified several challenges, including technical issues, lack of personal interaction, and varying levels of digital literacy among students. These challenges highlight the need for continuous improvement and targeted interventions to fully leverage the potential of e-learning in Commerce education.In essence, while e-learning platforms have proven to be valuable in enhancing Commerce education in Varanasi, their effectiveness can be further improved by addressing the identified challenges and implementing the recommended strategies. This approach will ensure that e-learning remains a robust and viable mode of education in the digital age.

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