Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 5 | May 2025 -Peer-Reviewed Journal

EVALUATING THE IMPACT OF VIRTUAL LEARNING ON STUDENT PERFORMANCE IN TIRUPUR DISTRICT

Mr. Sam Abishake P [1], Dr. K. Priyatharsini[2], Dr. A. Giriprakash [3]
[1] *II-MBA*
[2] *Assistant Professor*
Assistant Professor, Sakthi Institute of Information and Management Studies, Pollachi, Coimbatore, Tamilnadu – 642 001

ABSTRACT
In today's digital age, virtual learning has become a cornerstone of modern education, offering flexibility and accessibility to students. This study investigates the effectiveness and efficiency of virtual learning in the Tirupur District, focusing on how students engage with online education platforms. With the rapid shift towards digital learning, platforms like Zoom, Google Classroom, and Moodle are being widely used to enhance academic performance. The research aims to identify key factors influencing the success of virtual learning, such as digital literacy, technology access, motivation, and the adaptability of students. Data for this study was gathered through a structured questionnaire using a convenient sampling method among students in Tirupur. The findings provide valuable insights into how virtual learning can be optimized for better educational outcomes.

KEYWORDS: *Virtual Learning, Student Education, Digital Learning, Tirupur, Online Education, Educational Efficiency*

INTRODUCTION

The landscape of education has undergone a significant transformation in recent years, particularly with the widespread adoption of virtual learning platforms. Accelerated by the global COVID-19 pandemic, schools and educational institutions across the world including those in India were compelled to shift from traditional classroom teaching to online modes of instruction. This sudden transition has brought both opportunities and challenges to the forefront, especially in terms of accessibility, engagement, and academic performance.

Virtual learning, often facilitated through digital tools such as video conferencing, learning management systems, and interactive content platforms, offers flexibility and the potential for personalized learning experiences. However, its effectiveness remains a subject of ongoing debate, particularly in regions where infrastructure and technological literacy vary widely.

In the context of Tirupur District, a region known for its industrial development and growing educational institutions, the implementation of virtual learning presents unique dynamics. While some students have adapted well to digital platforms, others face barriers such as lack of access to devices, unstable internet connectivity, and limited digital literacy. These disparities raise important questions about whether virtual learning is genuinely enhancing academic performance or inadvertently widening the educational gap.

Given this backdrop, the present study seeks to evaluate the effectiveness of virtual learning in enhancing academic performance among students in Tirupur District. By analyzing both quantitative academic data and qualitative feedback from students and educators, the study aims to provide evidence-based insights into the strengths and limitations of virtual learning in this specific regional context.

RESEARCH OBJECTIVES

- To evaluate the effectiveness of virtual learning in enhancing academic performance among students.

REVIEW OF LITERATURE

Allen and Seaman (2013) reported significant growth in online education across higher education institutions, attributing this trend to technological advancements and increased demand for flexible learning options. **Anderson (2008)** developed a model of online learning that highlights the interplay between student-content, student-instructor, and student-student interactions as essential components for effective virtual education.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 5 | May 2025 -Peer-Reviewed Journal

Hrastinski (2008) emphasized that online participation—through discussions, collaboration, and digital interaction—is critical for student engagement and learning outcomes in virtual environments.

Means et al. (2009) demonstrated that students in online learning environments tend to perform slightly better than those receiving face-to-face instruction, emphasizing the effectiveness of virtual learning when implemented properly. **Sun et al. (2008)** explored learners' satisfaction in online education and identified key factors such as course quality, instructor feedback, and system usability as drivers of successful virtual learning experiences.

RESEARCH METHODOLOGY

This study employs a descriptive research design to assess the effectiveness and efficiency of virtual learning among students in Tirupur. A structured questionnaire was developed based on validated metrics from previous studies on virtual education and online learning environments. The data was collected from 387 students across various colleges and educational institutions in Tirupur using convenience sampling. The survey included both closed-ended and multiple-choice questions to evaluate students' experiences with online learning, their academic outcomes, and the challenges faced in adapting to digital education.

DATA ANALYSIS & INTERPRETATION

The data collected was analyzed using SPSS to derive meaningful insights from the responses. The analysis focused on understanding how various factors, such as digital literacy, internet access, and motivational levels, influenced the effectiveness and efficiency of virtual learning in Tirupur. The students with better digital literacy and consistent internet access reported higher satisfaction with virtual learning platforms. However, challenges such as internet connectivity issues and limited digital skills were identified as significant barriers.

Table 1: Demographic Profile of the Respondents (Virtual Learning in Tirupur District)

Particulars	Frequency	Percent (%)
Age Group		
Below 18	36	9.3
18–22	206	53.2
23–26	119	30.8
Above 26	26	6.7
Gender		
Male	213	55.0
Female	174	45.0
Educational Level		
Diploma	47	12.1
Bachelor's Degree	213	55.0
Master's Degree	112	28.9
PhD	15	3.9
Marital Status		
Single	336	86.9
Married	51	13.1
Years of Virtual Learning		
Less than 6 Months	79	20.4
6 Months – 1 Year	121	31.3
1–2 Years	143	36.9
More than 2 Years	44	11.4

Table 1 presents the demographic profile of the respondents who participated in the study on the effectiveness and efficiency of virtual learning in the Tirupur district. The majority of respondents (53.2%) were aged between 18 and 22 years, indicating that most participants were undergraduate students. This was followed by 30.8% in the 23–26 age group, 9.3% below 18, and 6.7% above 26 years. The gender distribution showed a relatively balanced representation, with 55% male and 45% female respondents. In terms of educational qualifications, more than half of the respondents (55%) were pursuing or had completed a bachelor's degree, while 28.9% held a master's degree, 12.1% had a diploma, and a small proportion (3.9%) were PhD scholars. The majority of participants (86.9%) were single, reflecting the typical marital status of students, while 13.1% were married. Regarding experience with virtual learning, 36.9% had engaged in virtual learning for 1 to 2 years, 31.3% for 6 months to 1 year, and 20.4% for less than 6 months, with only 11.4% having more than 2 years of experience. This

demographic composition highlights that the sample mainly consists of young, single students with moderate experience in virtual learning, which provides a relevant base for evaluating its impact on student education.

Table 2: Age and Impact on Academic Performance, Knowledge Retention, and Skill Development

Age and Impact on Academic Performance, Knowledge Retention, and Skill Development	Value	Df	Asymptotic Significance (2-Sided)
Virtual learning has improved my academic performance	9.036	6	.172
I retain knowledge better when learning virtually	21.134	12	.048
Virtual learning has enhanced my self-discipline and time management skills	20.698	12	.055
Online learning has helped me develop stronger digital literacy skills	14.552	9	.104
Virtual learning allows me to understand concepts as well as traditional learning	56.390	12	.000
I feel confident in applying skills learned through virtual education	17.381	12	.136

A Chi-Square test was conducted using SPSS 2020 to examine the association between age and students' perceptions of virtual learning. Significant associations were found for the beliefs that virtual learning aids in understanding concepts as effectively as traditional methods ($p = .000$) and that it improves knowledge retention ($p = .048$), indicating these perceptions vary by age. However, no significant association was found for academic performance ($p = .172$), self-discipline and time management ($p = .055$), digital literacy skills ($p = .104$), and confidence in applying skills ($p = .136$), suggesting these factors are not influenced by age.

CONCLUSION

It showed that virtual learning has both benefits and challenges for students in Tirupur District. It was found that students with good digital skills and reliable internet had a better learning experience. Online platforms helped many students understand concepts and remember information well, especially among younger learners. However, poor internet and lack of digital knowledge made learning harder for others. To improve virtual learning for everyone, schools should focus on giving students better access to technology and training to use online tools effectively.

REFERENCES

1. *Allen, I. E., & Seaman, J. (2013). Changing course: Ten years of tracking online education in the United States. Babson Survey Research Group.*
2. *Anderson, T. (Ed.). (2008). The theory and practice of online learning (2nd ed.). Athabasca University Press.*
3. *Hrastinski, S. (2008). Asynchronous and synchronous e-learning. EDUCAUSE Quarterly, 31(4), 51–55.*
4. *Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. U.S. Department of Education.*
5. *Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-learning? An empirical investigation of the critical factors influencing learner satisfaction. Computers & Education, 50 (4), 1183–1202. https://doi.org/10.1016/j.compedu.2006.11.007*