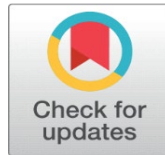
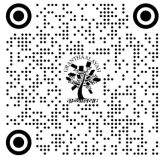


VIRTUAL LEARNING ENVIRONMENT WITH REFERENCE TO THE PERCEIVED PREPAREDNESS OF COLLEGE STUDENTS IN MADURAI DISTRICT: A STUDY

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ABSTRACT

This study examines college student's readiness for a newly introduced virtual learning environment by analyzing factors influencing their skills and attitudes towards web-based courses. Grounded in the technology acceptance model, the research explores user acceptance and behavior among students in Madurai district, known for their regular internet and computer usage. Focusing on moderate to heavy technology users, the study aims to illuminate their readiness and willingness to adopt virtual learning platforms. Key findings indicate widespread engagement of undergraduate students with virtual learning environments, particularly through platforms like the National Digital Library of India (NDL) and Study Webs of Active-learning for Young Aspiring Minds (SWAYAM). Email emerges as the predominant internet activity, crucial for student communication. Moreover, a significant number of students demonstrate awareness and active use of NDL and other open education resources, underscoring their seamless integration into academic routines.

Keywords: Virtual Learning, Learning Environment, College Students in Madurai District

1. INTRODUCTION

The rapid evolution of technology has profoundly impacted the landscape of education, with virtual learning environments becoming increasingly integral to higher education. These environments, characterized by their utilization of digital platforms and tools to enhance learning, provide a versatile and interactive alternative to traditional classroom settings. The advent of virtual learning environments has revolutionized the way educational content is delivered, accessed, and interacted with, providing students with unprecedented opportunities for personalized and self-paced learning. The success of virtual

learning environments significantly relies on students' readiness to interact with these digital platforms. Perceived preparedness encompasses various dimensions, including technological proficiency, adaptability to digital learning formats, self-regulation skills, and access to necessary resources. Understanding these aspects is crucial for educators and institutions aiming to optimize the benefits of virtual learning environments and address potential challenges.

This study seeks to assess the readiness of learners to adopt virtual learning environments, emphasizing the necessity for students to possess computer literacy to effectively participate in these virtual learning environments. This research aims to uncover the levels of preparation and attitudes of students towards online learning, providing insights into the conditions under which web-based courses are accepted or rejected by students. Understanding these dynamics will empower administrators and educators to cultivate a more favourable outlook on virtual learning and establish an efficient and supportive environment for web-based courses. This knowledge is crucial for improving the implementation and reception of web-based courses, ensuring that students are well-prepared and motivated to succeed in a virtual learning setting. This research aims to deepen our understanding of students' readiness and perspectives on the virtual learning environment. It aims to discern the circumstances under which web-based courses are embraced or declined by students. Insight in this area will empower administrators and instructors in educational institutions to enhance a positive outlook and establish an efficient and supportive virtual learning environment.

2. REVIEW OF RELATED LITERATURE

The literature surrounding virtual learning environments (VLEs) and digital libraries highlights diverse approaches and challenges in enhancing educational practices through digital platforms. **Kumaran and Latha (2023)** propose an ontology-supported collaborative filtering (CF) recommendation system to personalize learning resources in digital libraries. By integrating semantic similarity and user preferences, their model aims to improve resource accuracy and efficiency, facilitating adaptive access to educational materials. **Virkus et al. (2009)** emphasize the integration of digital libraries with VLEs to streamline access and promote collaborative learning environments. They discuss technical, human, and administrative challenges in achieving seamless integration, underscoring the potential for enhanced resource reusability and time-saving benefits across academic communities. **Na Li (2021)** synthesizes empirical studies across 42 countries, exploring factors influencing VLE adoption. Their institutional theory framework integrates cultural dimensions like power distance and uncertainty avoidance, revealing nuanced influences on technology adoption within educational institutions. This holistic approach aims to clarify contradictory research findings and inform strategies for effective VLE implementation. **Yassine (2021)** conducts a systematic review on community detection techniques in online learning environments, emphasizing their ability to analyze interaction patterns and improve educational decision-making. The study advocates for further research into leveraging automated community discovery tools to reveal hidden insights and enhance the usability of online learning platforms.

3. METHODOLOGY

This study adopted the survey research method to assess students' readiness and perspectives on the virtual learning environment. Unlike previous research,

which often focused on controlled conditions and specific groups, this study surveyed regular college students enrolled in degree programs at various selected colleges in the Madurai district. A stratified random sampling approach was utilized to guarantee representation across various academic disciplines and levels of study. Questionnaires were distributed to 209 students, aiming to determine whether different levels of study influence students' perceptions of the online learning environment.

4. OBJECTIVES OF THE STUDY

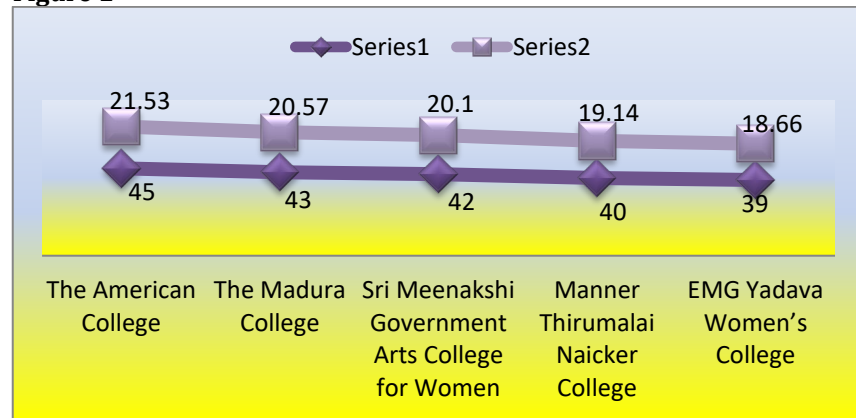
- To dimensions of technology acceptance model
- To distribution of selected colleges in Madurai district
- To distribution of usage in internet by hours in a week
- Frequency distribution of college students by gender
- Frequency distribution of college students by usage of internet resources
- Frequency distribution of college students using internet for academic purpose
- Frequency distribution of level of study of the college students
- To overall scores of open education resources in the order of preference by the college Students
- To overall usage of virtual learning environment by the respondents

Table 1

Table 1 Distribution of selected Colleges in Madurai District			
<i>S. No</i>	<i>Name of the Colleges</i>	<i>No. of Respondents</i>	<i>Percentage</i>
1.	The American College	45	
2.	The Madura College	43	20.57
3.	Sri Meenakshi Government Arts College for Women	42	
4.	Manner Thirumalai Naicker College	40	19.14
5.	EMG Yadava Women's College	39	
Total		209	100.00

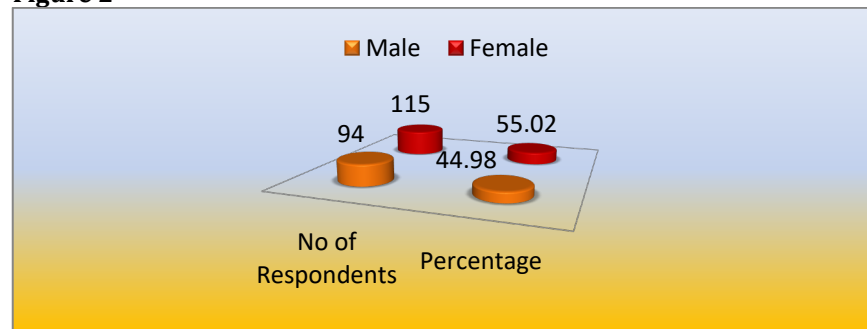
Source Primary Data

Among the lists of five selected colleges in Madurai district, these colleges were chosen based on their geographic distribution within the city and the students' familiarity with the internet. A total of 209 students participated in this study, selected based on their moderate to high internet usage. The sampling approach could be characterized as purposive sampling or judgment sampling. The American College, there are 45 (21.53 percent) respondents are selected for survey, The Madura College, there are 43 (20.57 percent) respondents are selected for survey, Sri Meenakshi Government Arts College for Women, there are 42 (20.10 percent) respondents are selected for survey, Manner Thirumalai Naicker College, there are 40 (19.14 percent) respondents are selected for survey and EMG Yadava Women's College, there are 39 (18.66 percent) respondents are selected for survey.

Figure 1**Figure 1** Distribution of Selected Colleges in Madurai District**Table 2****Table 2 Frequency Distribution of College Students Based on Gender**

S. No	Gender	No. of Respondents	Percentage
1.	Male	94	44.98
2.	Female	115	55.02
Total		209	100.00

Source Primary Data

Figure 2**Figure 2** Frequency Distribution of College Students Based on Gender

This table shows the female students have outnumbered male students. Nearly 55 percent of the participants in this research were female and the remaining was male. This interpretation proves that male student users are less when compared to female students.

Table 3**Table 3 Frequency Distribution of Level of Study of the College Students**

S. No	Level of Study	No. of Respondents	Percentage
1.	UG	164	78.47
2.	PG	45	21.53
Total		209	100.00

Source Primary Data

This is clear from the table that more than 78 percentages (~78.47) of undergraduate college students are involved in the practice of using virtual learning environments for education. The postgraduate student's participation in this research is 21.53 percent.

Figure 3

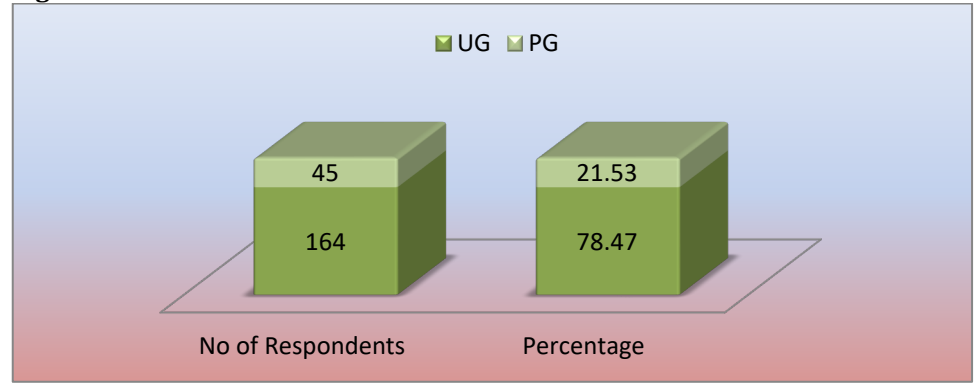


Figure 3 Frequency Distribution of Level of Study of the College Students

Table 4

Table 4 Distribution of Internet Usage among College Students for Academic Purposes

S. No	Usage of Internet for Academic Purpose	No. of Respondents	Percentage
1.	Yes	178	85.17
2.	No	31	14.83
Total		209	100.00

Source Primary Data

Over (~85.17) of students have been using the internet for over two years, with a significant majority using internet resources for academic purposes. This underscores the widespread use of the internet among students for their academic activities.

Table 5

Table 5 Frequency Distribution of College Students Based on Internet Resource Usage

Sl. No	Internet Resources	No. of Respondents	Percentage	Average	Mean	SD
1.	E-Mail	185		119.6667	112	41.35517
2.	Entertainment	165	78.95			
3.	Travel and Tourism	145				
4.	Education Sites	131	62.68			
5.	News Update	112				
6.	Web Shopping	109	52.15			
7.	Job or Business Opportunities	95				
8.	Health Care	81	38.76			
9.	Others	54				

Note Respondents may have selected more than one option

The above table clearly indicates E-mail more than eighty eight percent (~88.52) leads in the usage of internet resources, students use Internet for browsing

Entertainment sites more than seventy eight percent (~78.95), followed by Travel and Tourism (69.38 percent) and Education sites (62.68 percent).

The Frequency distribution of College Students by usage of Internet Resources by the selected college students in Madurai district, had an average of 119.6667, had mean average of 112 with the standard deviation 41.35517 seems to lie within the high distribution.

Table 6

Table 6 Distribution of Usage in Internet by hours in a Week			
<i>Sl. No</i>	<i>Usage</i>	<i>No. of Respondents</i>	<i>Status</i>
1.	Bellow one hour	37	
2.	2 to 4 hours	49	23.44
3.	5 to 7 hours	75	
4.	Above 7 hours	48	22.97
Total		209	100.00

Source Primary Data

The table indicates more than thirty five percentage (~35.89) of the students are using Internet for more than 5 to 7 hours a week, followed by next majority of the students are using internet for 2 to 4 hours and 22.97 percent of the students are using internet above 7 hours.

Table 7

Table 7 Overall scores of Open Education Resources in the order of preference by the College Students						
<i>Sl. No</i>	<i>Open Education Resources</i>	<i>No. of Respondents</i>	<i>Percentage</i>	<i>Average</i>	<i>Mean</i>	<i>SD</i>
1.	National Digital Library of India (NDL)	153		107.5556	126	42.31167
2.	NPTL	144	68.90			
3.	Study Webs of Active-learning for Young Aspiring Minds (SWAYAM)	139				
4.	CEC (Under graduate)	126	60.29			
5.	AICTE Online Courses	125				
6.	Free and Open Source Software in Education (FOSSEE)	112	53.59			
7.	others	85				
8.	e-PG Pathshala	43	20.57			
9.	Shodhganga	40				

Note Respondents may have selected more than one option

The above table clearly denotes that more than seventy three percent (~73.21) of the college students have some sort of awareness about National Digital Library of India (NDL) open education resources for their academic purpose. Followed by more than sixty eight percent (68.90) of the college students have awareness about NPTL open education resources for their academic purpose, more than sixty six percent (66.51) of the college students have awareness about Study Webs of Active-learning for Young Aspiring Minds (SWAYAM) open education resources for their

academic purpose, more than sixty percent (68.90) of the college students have awareness about CEC (Under graduate) open education resources for their academic purpose and more than fifty nine percent (59.81) of the college students have awareness about AICTE Online Courses open education resources for their academic purpose.

The Overall scores of Open Education Resources in the order of preference by the College Students by usage of Internet Resources by the selected college students in Madurai district, had an average of 107.5556, had mean average of 126 with the standard deviation 42.31167 seems to lie within the high distribution.

Table 8

Table 8 Dimensions of Technology Acceptance Model						
<i>Sl. No</i>	<i>Usage</i>	<i>No. of Respondents</i>	<i>Percentage</i>	<i>Average</i>	<i>Mean</i>	<i>SD</i>
1.		178		132.8333	127	33.91411
2.	Perceived Easiness of using Internet	163	77.99			
3.		144				
4.	Perception of Interactive learning	110	52.63			
5.		109				
6.	Study Habits	93	44.50			

Note Respondents may have selected more than one option

The above table revealed that the Dimensions of Technology Acceptance Model by the selected respondents, there are more than eighty five percent (~85.17) of the respondents dimension of 'Perceived Usefulness of Internet', followed by more than seventy seven percent (~77.99) of the respondents dimension of 'Perceived Easiness of using Internet' and more than sixty eight percent (~68.90) of the respondents dimension of 'Perception of IT in virtual learning'.

The Dimensions of Technology Acceptance Model by the selected college student respondents in Madurai district, had an average of 132.8333, had mean average of 127 with the standard deviation 33.91411 seems to lie within the high distribution.

Table 9

Table 9 Overall Utilization of Virtual Learning Environments by Participants			
<i>S.No</i>	<i>Overall Usage</i>	<i>No. of Respondents</i>	<i>Status</i>
1.		27	12.92
2.	Average	49	23.44
3.		133	63.64
Total		209	100.00

Source Primary Data

It is evident that the majority of respondents, approximately 63.64%, were classified as high users of virtual learning environments. This was followed by around 23.44% who were categorized as average users, with approximately 12.92% identified as low users.

5. CONCLUSION

This study explores the utilization of online educational resources among college students in Madurai district. These students engaged with various Open Education Resources such as the National Digital Library of India (NDL), Study Webs of Active-learning for Young Aspiring Minds (SWAYAM), NPTEL, Free and Open Source Software in Education (FOSSEE), and others. The result of the selected college students in Madurai district, nearly 55 percent of the participants in this research were female and the remaining was male. More than 78 percentages (~78.47) of undergraduate college students are involved in the practice of using virtual learning environments for education, indicates E-mail more than eighty eight percent (~88.52) leads in the usage of internet resources, students use Internet for browsing Entertainment sites more than seventy eight percent (~78.95), more than seventy three percent (~73.21) of the college students have some sort of awareness about National Digital Library of India (NDL) open education resources for their academic purpose.

CONFLICT OF INTERESTS

None.

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