



FACTORS AFFECTING THE SUCCESS OF E-LEARNING MECHANISM

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Abstract

'E-learning' means learning through electronic technologies and online platforms. It helps students to attend classes, access study materials, and interact with teachers through online platforms. Students can learn anytime and from anywhere using smartphones, laptops, and other digital devices. Now a days, the effectiveness of E-learning on students' academic performance has become an important topic of study. Therefore, the present study examines students' perceptions towards E-learning, the factors affecting its success, and the problems faced during online learning. The study is descriptive and analytical and follows a quantitative research approach. Undergraduate students studying in Arts and Science Colleges affiliated to Kannur university in Kannur district formed the population of the study. A sample of 60 students was selected through convenience sampling. Primary data were gathered using structured questionnaire and secondary data from articles, journals, institutional reports, and websites. Percentage analysis, Mean, ranking, and weighted average methods were used for data analysis. E-learning contributes to the improvement of students' academic results when proper internet facilities, digital skills, and interactive teaching methods are available. Even though, students face problems such as technical issues and reduced interpersonal interaction, the benefits of flexibility, easy access to learning materials, and convenience are greater. Therefore, E-learning should be used together with traditional classroom teaching to improve learning effectiveness.

Key Words: *E learning, Online learning, Digital learning, Academic Performance, Learning Effectiveness.*

Introduction

The teaching and learning process has changed significantly in now days. Students now prefer modern learning methods such as computers, the internet, and digital devices instead of the traditional system that uses chalk, blackboard, books, and face to face interaction. 'E-learning' means learning through electronic technologies and online platforms. It helps students to attend classes, access study materials, and interact with teachers through online platforms. Students can learn anytime and from anywhere using smartphones, laptops, and other digital devices. In recent years, the effectiveness of E-learning on students' academic performance has become an important topic of study. Therefore, the present study examines students' perceptions towards E-learning, the factors affecting its success, the problems related to online learning and their influence on academic performance.

Problem Statement

The use of E-learning increased rapidly during the COVID-19 pandemic, when educational institutions all over the world shifted from traditional class room teaching to online learning methods. Platforms such as, Google Classroom, Moodle, Whatsapp, Google meet, and Zoom helped to continue the teaching learning process during this period. However, the influence of E-learning on students' academic performance became a major concern. Though E-learning provides flexibility and easy access to learning materials problems such as poor internet connectivity, insufficient knowledge about digital methods, low student motivation, and reduced interaction still exist. Therefore, it is necessary to examine whether E-learning improves students' academic performance and to understand the various factors which affects the success of E-learning.

Research Significance

The study identifies the perceptions of college students about the E-learning methods. It also helps to understand the challenges faced by the students in E-learning and suggests measures to overcome them. In addition, the study helps to identify the factors which affect the success of e-learning and helps the educational institutions to design effective digital learning strategies.

Research Objectives

1. To analyze the perception of students in Arts and Science colleges in Kannur district towards E-learning.
2. To identify the key factors which determine the success of E-learning.
3. To identify the problems encountered by the students in the E-learning process.
4. To suggest measures for improving online learning mechanism.

Research Methodology

The study is descriptive and analytical and follows a quantitative research approach. Undergraduate students studying in Arts and Science Colleges affiliated to Kannur University in Kannur district formed the population of the study. A sample of 60 students was selected through convenience sampling. Primary data were gathered using structured questionnaire and secondary data from articles, journals, institutional reports, and websites. Percentage analysis, Mean, ranking, and weighted average methods were used for data analysis.

Discussion

The study focuses on the students' perception towards E-learning and its effectiveness. It discusses the demographic characteristics, frequency and usage of E-learning methods, and also identifies the factors that affect the success of online learning. In addition, the major challenges faced by students while using E-learning methods are discussed.

Table 1: Demographic Profile

Variables	Category	Frequency	Percentage
Gender	Male	27	45
	Female	33	55
Age	18	16	26.67
	19	22	36.67
	20	19	31.67
	21	3	5
Course	BSc	20	33.33
	BA	20	33.33
	BCom/BBA	20	33.33
Year of Study	First year	18	30
	Second year	21	35
	Third year	21	35
Total		60	100

The respondents' demographic profile shows that 55% of respondents are females and 45% are males. Most of the respondents are aged 19 years (36.67%), followed by 20 years (31.67%), and 18 years (26.67%). Only a few students (5%) are aged 21 years. The respondents were equally selected from BSc, BA and BCom/ BBA courses (20 each i.e. 33.33%). In terms of year of study, second year and third year

students form the majority of the sample (35%), while first year students represent 30 per cent of the respondents.

Students' Perceptions towards E-learning

Students were asked to give their perception regarding the various aspects of E-learning through a 5-point Likert scale ranging from Strongly agree to Strongly disagree. The weighted average of the factors is given in Table 2.

Table 2: Students' Perceptions towards E-learning

Statements	Weighted Mean
Ease to use E-learning platforms	4.1
Provides flexible learning	4.2
Saves time	3.5
Helps to understand subjects easily	3.8
Increases interest in learning	3.2
Easy access to study materials	4.3

The weighted average scores indicate that students have a positive attitude towards E-learning. 'Easy access to study materials' got the highest mean score of 4.3, followed by 'Provides flexible learning' (4.2), 'Ease to use E-learning platforms' (4.1), 'Helps to understand subjects easily' (3.8), and 'Saves time' (3.5). the lowest mean (3.2) is given to 'Increases interest in learning', hence E-learning is not increasing the students interest in learning.

Figure 1: Students' Perceptions towards E-learning

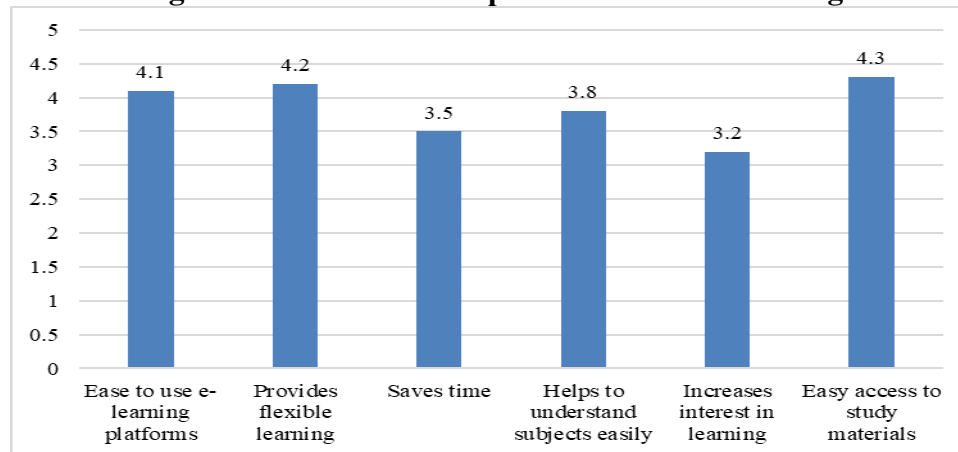


Table 3: Average Daily Internet Usage for Academic Purpose

Response	Frequency	Percentage
Less than 1 hour	11	18.33
1-3 hours	37	61.67
3-5 hours	12	20
More than 5 hours	0	0
Total	60	100

Majority of the students (61.67%) spent 1-3 hours per day for E-learning. A small number of students (11 i.e. 18.33%) spend 3-5 hours on learning. At the same time, only a few (18.33%) spend less than 1 hour and none spend more than 5 hours in a day for E-learning.

Table 4: Devices Used For Online Learning

Devices	Frequency	Percentage
Desktop	0	0
Laptop	6	10
Tablet	2	3.33
Smart phone	52	59.67
Total	60	100

From the Table 4, it is evident that most of the college students (59.67%) are using their smart phones for E-learning purpose. 10 percent students use laptop and only 3.33 percent use tablet for E-learning.

Experience with E-learning

Experience on various aspects of E-learning systems are analysed by collecting data on a 3-point scale(High, Medium, Low) and are analysed using Weighted average method

Table 5: Experience with E-learning

Experiences	Weighted Mean
Improvement in conceptual understanding	2.4
Improvement in academic grades	2.8
Participation in learning activities	2.1
Motivation to learn	1.8
Interaction with faculties	1.2
Interaction with peer group	1.4
Difficulties in learning	2.6
Effectiveness of E-learning	2.1
Overall satisfaction with E-learning	2.3

‘Improvement in academic grades’ got a weighted mean of 2.8, indicating that E-learning has a positive influence on academic performance. ‘Difficulties in learning’ with mean 2.6 indicates the number of learning challenges faced by the students. ‘Improvement in conceptual understanding’ (2.4), ‘participation in learning activities’ (2.1), ‘effectiveness of E-learning’ (2.1) and ‘motivation to learn’ (1.8) are at medium level. However, interaction with faculties (1.2) and interaction with peer groups (1.4) are at the low level, indicating limited communication and interaction in online learning. The ‘overall satisfaction with E-learning’(2.3) indicates a high level of satisfaction among the students with regard to E-learning process.

Figure 2: Experience with E-learning

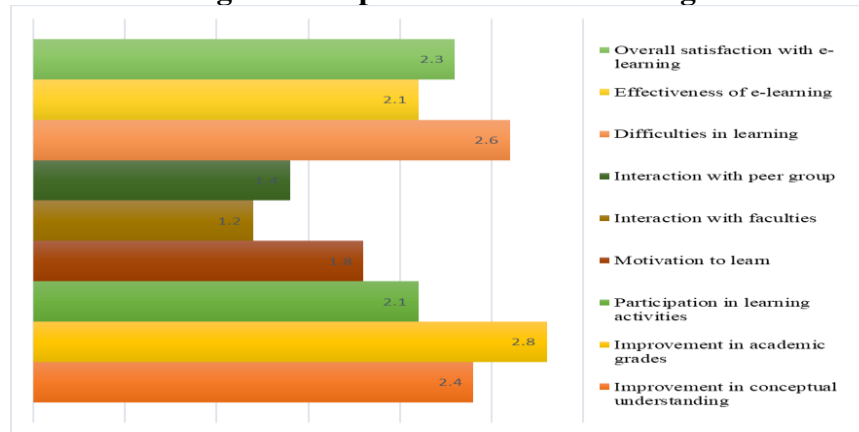


Table 6: Factors Affecting the Success of E-learning

Factors	Frequency	Percentage
Internet connection	32	53.33
Digital devices	46	76.67
Digital skills	51	85.00
Teacher support	49	81.67
Self-motivation	53	88.33
User friendly platforms	56	93.33
Assessment method	40	66.67

Note: students provided multiple options

User friendly platforms (93.33%) and self motivation (88.33%) are the major factors that affects the success of E-learning. Digital skill (85%), teacher support (81.67%), digital devices (76.67%) also have influence on the success of E-learning. Assessment methods (66.67%) and internet connection (53.33%) have lower level of influence on E-learning.

Figure 3: Factors Affecting the Success of E-learning

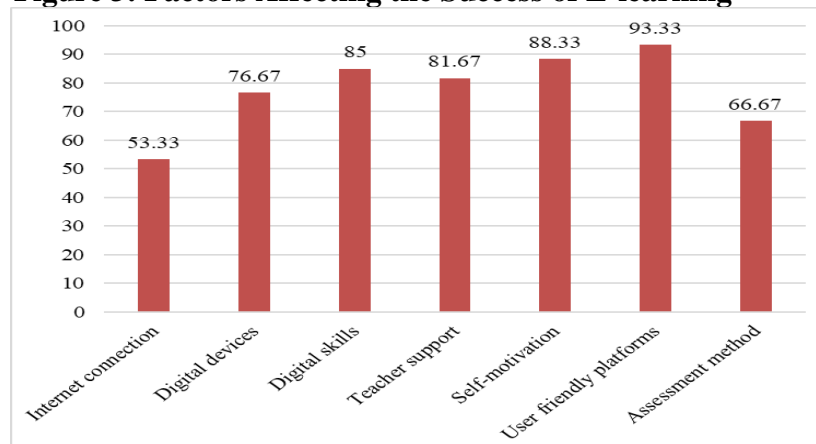


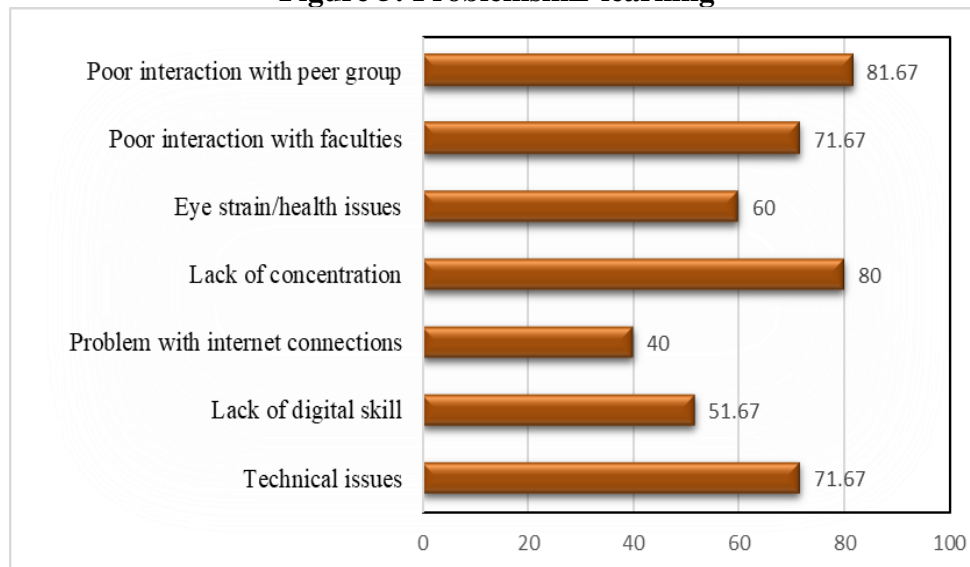
Table 7: Problems in E-learning

Problems	Frequency	Percentage
Technical issues	43	71.67
Lack of digital skill	31	51.67
Problem with internet connections	24	40.00
Lack of concentration	48	80.00
Eye strain/health issues	36	60.00
Poor interaction with faculties	43	71.67
Poor interaction with peer group	49	81.67

Note: students provided multiple options

‘Poor interaction with peer groups’ (81.67%) is major problem faced the students in E-learning. They also face the problems of ‘lack of concentration’ (80%), ‘poor interaction with faculties’ (71.67%), and ‘technical issues’(71.67%). ‘Health issues’ (60%), ‘lack of digital skill’ (51.67%), and ‘problem with internet connection’ (40%) are comparatively low.

Figure 5: Problems in E-learning



Findings

1. Majority of the respondents are females, aged 19 years.
2. Students have a positive attitude with regard to E-learning. Students said that E-learning provides easy access to study materials (WA = 4.3) and flexible learning (4.2). They also find online learning platforms easy to use and helpful for understanding subjects (3.8). However, E-learning is less effective in increasing students’ interest in learning (3.2).
3. Majority of the students (61.67%) spent 1-3 hours per day for E-learning and most of them (59.67%) are using their smart phones for E-learning purpose.
4. ‘Improvement in academic grades’ got a weighted mean of 2.8, indicating that E-learning has a positive influence on college students’ academic performance. ‘Difficulties in learning’ with mean 2.6 indicates the number of learning challenges faced by the students. ‘Improvement in conceptual understanding’ (2.4), ‘participation in learning activities’ (2.1), ‘effectiveness of E-learning’ (2.1) and ‘motivation to learn’ (1.8) are at medium level. However, interaction with

faculties (1.2) and interaction with peer groups (1.4) are at the low level, indicating limited communication and interaction in online learning. The ‘overall satisfaction with E-learning’ (2.3) indicates a high level of satisfaction among the students with regard to E-learning process.

5. User friendly platforms (93.33%) and self motivation (88.33%) are the major factors that affect the success of E-learning. Digital skill (85%), teacher support (81.67%), digital devices (76.67%) also have influence on the success of E-learning. Assessment methods (66.67%) and internet connection (53.33%) have lower level of influence on E-learning.
6. ‘Poor interaction with peer groups’ (81.67%) is major problem faced the students in E-learning. They also face the problems of ‘lack of concentration’ (80%), ‘poor interaction with faculties’ (71.67%), and ‘technical issues’ (71.67%). ‘Health issues’ (60%), ‘lack of digital skill’ (51.67%), and ‘problem with internet connection’ (40%) are comparatively low.

Suggestions

1. Teachers should make online classes more interactive and engaging for students. Multimedia tools, quizzes, and discussion forums should be used to maintain students’ attention and interest in online learning.
2. Regular online assessments should be conducted to evaluate students’ progress and learning performance.
3. Create the websites that will include videos, audios, notes etc. related to the educational syllabus. Similarly, developing applications according to the syllabus in mobile, personal computers etc. also helps on online learning.
4. Proper training should be provided to students to improve digital skills.
5. Combination of both online and classroom learning can improve academic performance.

Conclusion

E-learning has a positive impact on college students’ academic performance when proper internet facilities, digital skills, and interactive teaching methods are available. Even though students face problems such as technical issues and reduced interpersonal interaction, the benefits of flexibility, easy access to learning materials, and convenience are greater. Therefore, E-learning should be used together with traditional classroom teaching to improve learning effectiveness.

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