

IMPACT OF PARENTAL E-LEARNING SUPPORT ON LEARNING ENGAGEMENT AMONG COMPETITIVE EXAMINATION ASPIRANTS: THE MEDIATING ROLE OF LEARNING SELF-EFFICACY

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ABSTRACT

The study examined the relationships among parental support in e-learning on learning engagement with the mediating role of learning self-efficacy. E-learning platforms provides an opportunity of skill development and knowledge gain from anywhere, and anyplace. Parents have a role to play in developing learning self-efficacy serves as a mediator between parental support in e-learning engagement research has emphasized the importance of parental support, e-learning competitive exam, self-efficacy, and learning engagement. **To assess the influence of parental support on student's learning engagement in e-learning platforms. To examine the mediating role of learning self-efficacy in the relationship between parental support and Learning Engagement in e-learning among school students.** The study adopted a quantitative descriptive research design. Primary data were collected through a structured questionnaire from 120 respondents using convenience sampling from students and parents who involved in using e-learning platforms. The collected data were analyzed using SPSS through correlation matrix, multiple regression analysis and mediation analysis. It revealed that parental e-learning support significantly enhances learning engagement among competitive examination aspirants. Furthermore, learning self-efficacy partially mediates the relationship between parental e-learning support and learning engagement, emphasizing its role in improving learners' academic engagement. The findings showed that 51.7% of the respondents were male and 48.3% were female as respondents and the majority of respondents were belonged to age group of 18-22 years and 30% were preparing for TNPSC and UPSC. The most respondents select online and hybrid mode and 33.3% of respondents had been preparing for 1-2 years were preparation duration for competitive examinations. It suggests that parental support not only directly enhances learning engagement but also indirectly strengthens engagement by improving learning self-efficacy. Students who have supportive parents tend to have learning self-efficacy. Further research can be done with large sample size and considering different geographical area for the study. It may also extend this by using mixed method or experimental research designs to gain. This study would be beneficial for educationalist while adopting an E-learning platforms.

Keywords: Parental support, E-Learning Platforms, Student Engagement, Learning Self-Efficacy

INTRODUCTION

E-learning is becoming an essential component of academic and professionals worldwide due to the active development of digital innovation which has completely changed the educational environments. The manner that knowledge is obtained has changed as a result of the growing usage of e-learning learning platforms which give student's access to high quality educational materials regardless of time or location. For competitive examination aspirants e-learning has become an essential mode of preparation due to its flexibility, affordability and accessibility. However the students get support from their families is very important to the success of online learning as the technology infrastructure. In order to keep students motivated and committed to their preparation, parental e-learning support which includes financial assistance, technical advice, emotional support and the provision of a conducive learning environment is essential. Simultaneously learning engagement which reflects student's level of behavioral, emotional and cognitive involvement in the learning process has become a crucial factor in determining academic performance. India has experienced remarkable growth in the digital education sector, supported by increasing internet penetration, smart phone usage and the rapid expansion of educational technology platforms. Millions of students getting ready for competitive exams like UPSC, TNPSC, SSC, NEET, JEE, CAT, Banking and other entrance and recruitment exams. Chennai, one of India's top educational and technical hubs has gained prominence as a place to study for competitive exams because of its reputable coaching centers and extensive e-learning usage. Even if access to educational possibilities has been enhanced through digital learning candidates still show differing degrees of involvement, perseverance and academic dedication, suggesting that individual and families circumstances have a major impact on their online learning engagement. Competitive examination preparation requires sustained concentration, self-discipline and continuous learning over prolonged periods. However a lot of candidates face difficulties such as stress, diminishing motivation, educational pressure and digital distractions all of which have an adverse effect on their learning engagement. Parents frequently offer emotional and financial support but it is unknown to what extent this helps encourage active participation in e-learning. Additionally, students who have high levels of learning self-efficacy that is confidence in their capacity to accomplish learning tasks are more likely to continue being, self-assured, tenacious and engaged in their studies. Therefore, developing self-efficacy may serves as a psychological mechanism that improves learners online learning engagement through parental e-learning support.

Existing studies have primarily examined parental support, learning self-efficacy and learning engagement among school and university students. The limited research has examined how parental learning support influences learning engagement and learning self-efficacy among competitive examination aspirants. **To assess the influence of parental support on students' learning engagement in e-learning platforms. Therefore, this study aims to investigate the relationship between parental learning support, learning self-efficacy, and learning engagement among students preparing for competitive examinations through e-learning platforms.** However a small amount of empirical study has been conducted into how parental e-learning support affects learning engagement among candidates for competitive exams, especially by looking at the mediating function of learning self-efficacy. Furthermore, despites Chennai's increasing importance as a hub for competitive exam preparation there are still few studies that concentrate on candidates in the city. With learning self-efficacy act as a mediating role that the current study attempts to investigate the effect of parental e-learning assistance on learning engagement among competitive examination aspirants. In addition e-learning and educational result are anticipated to help parents, educators, coaching organizations and legislators create strategies that boost student's self-esteem, increase their performance on competitive exams. **The scope of the research is confined to competitive examination aspirants using online learning, and it focuses on the effects of parents' support on students' engagement and self-efficacy.**

REVIEW OF LITERATURE

Mary Ann L. Nim and Las Johansen B. Caluza(2026), this study examined the relationships among parental

involvement, learning engagement, self-efficacy and achievement to identify actionable factors for improve student performance and analysis both direct and mediated relationships among parental involvement, learning engagement, self-efficacy. A data driven quantitative design was employed using secondary data from 354 respondents. It shows the integrated strategies that strengthen family-school partnerships, fostering engagement and confidence to optimize outcomes. The study concludes that parental involvement, learning engagement and self-efficacy are critical, interrelated factors in achievement and recommends while acknowledging limitations of secondary data. The future scope should employ longitudinal and experimental designs to establish causality and validate these findings across diverse contexts.

Rahmin Baki (2025), the study aimed of this research was to define the most effective criteria for adoption of an ELS with an evaluation model based on a fuzzy multi-criteria approach and to compare alternatives. It was examined comprehensively decision makers with expertise in relevant fields were interviewed, and the fuzzy COPRAS technique was applied. Based on this study focused on e-learning platforms that provide support to middle school students for high school entrance exams, and seven criteria were selected, and the current study makes a contribution to knowledge in this field when examined from theoretical and practical perspectives. The findings of this study contribute to the review by expanding the field of knowledge about MCDM. The scope of research was tested on ELS developed for high school entrance exams.

Faiza Bashir Sahira Zaman (2024), this study investigated the relationship between self-regulated learning and academic grades and the correlation between the student self-efficacy and university academic success. The impact of self-regulated learning on university students academic grades, self-efficacy and the effect of parental involvement was assessed between self-regulatory learning and the dependent variables. Data analysis was used with 250 students from public universities and Pearson Correlation, Regression. The study did not include teacher or peer involvement, which was acknowledged as a notable limitation.

Khoirunnisa and Eny Purwandari (2023), the study aimed to examine the measurement and structural models and empirically test the relationship between parental support, academic self-efficacy, teacher-student relationships, and student engagement. The instrument uses a scale of student engagement, parental support, academic self-efficacy, and teacher-student relationship. Data analysis using Structural Equation Modeling (SEM) and Chi-square and 323 junior high schools and four private and public schools. It showed that academic self-efficacy partially and significantly mediated between parental support with student engagement. Parents can develop parenting by providing more positive support during online learning. It has contributed strategies for increasing student engagement through parental support, teacher-student relationships, and academic self-efficacy.

Yanhong shao and Shumin kang (2022), the study investigated how parent-child relationship among related to learning engagement via the mediating roles of learning motivation. It focused on the parent-child relationship, learning motivation, academic self-efficacy and learning engagement. Structural equation modeling (SEM) was adopted for the analysis of 280 participants from china. It showed that parent child relationship indirectly predicted adolescents' learning engagement via learning motivation and academic self-efficacy, respectively and sequentially. Among the three indirect effects, the indirect effect of learning motivation and academic self-efficacy was the greatest. In depth research could be conducted through a third party observation to collect data in future studies.

Swati Kirange Savitribai Phule (2021), the purpose of this research is to study various activities performed in e-learning environment. This presents was comparable analysis of widely adopted e-learning platforms. Schools and higher education institutes are facing closures due to the spread of the covid-19. During this period a noticeable impact is observed in take up of digital learning by students and professionals. Nowadays there is variety in e-learning platforms. This study would be beneficial for educationalists while adopting an online learning platform. This focused on popular and widely used e-learning platforms in the market and academic institutions are in need of secured software that integrates LMS with video conferencing and live streaming

facilities.

Hong Gao et.al (2021), the study focuses on students perceived family support and their e-learning engagement and analyzes the effects of e-learning normative consciousness and behaviors and self-efficacy on the relationship between family support and e-learning engagement in college students .The relationship between these variables was unknown. The Structural Equation Modeling (SEM) was used with 1317 of total respondents from college students .The findings complement and extend the understanding of factors influencing student e-learning engagement. The results showed that e-learning that e-learning normative consciousness and behaviors and self-efficacy played significant and mediating roles between students perceived family support and e-learning engagement.

Feifei Huang et.al (2021), aimed to find out relationship between parental involvement and mathematics achievement of chinese early adolescents multiple mediating roles of mental health and mathematics self-efficacy. It focused on multidimensional construct of parental involvement and examined mediating role of students mental health and mathematics self-efficacy. The study was conducted using primary data collected from 2866 early adolescents and their parents in china and it was analysed through structural equation modeling and bias corrected bootstrap methods. The result showed that different dimension of parental involvement had different effects on mathematical achievement by partially or completely mediating by student mental and mathematical self-efficacy. By inter grading theortically and empirically evidence the future research can be done to promote mathematical achievement not just focusing on specific roles of student and parental involvement.

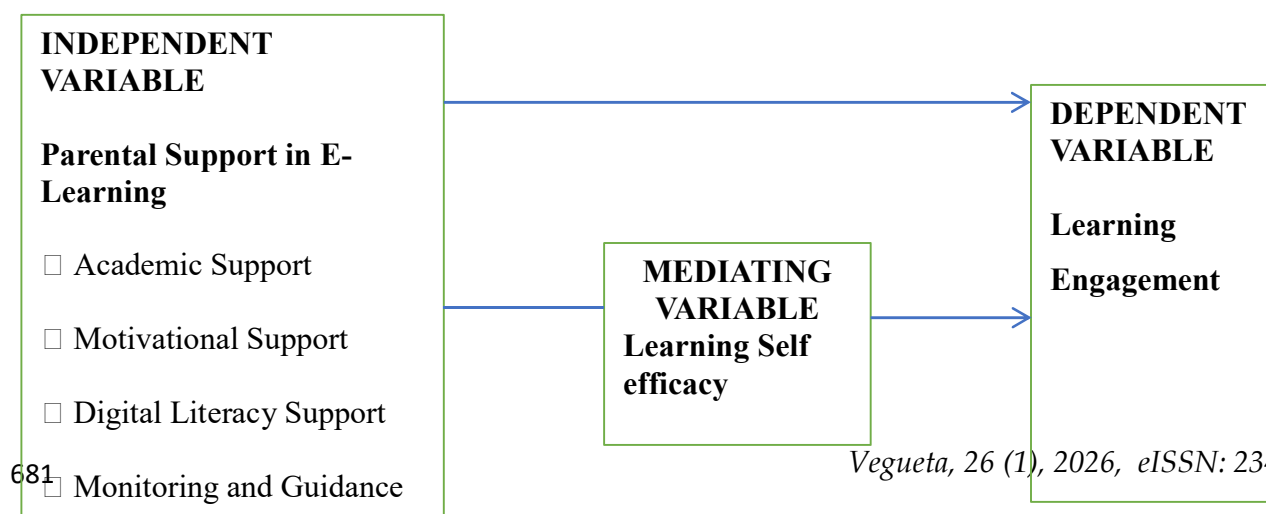
RESEARCH GAP

Few studies have looked into the impact of parental e-learning support on the learning engagement of competitive examination aspirants, despite the fact that existing literature has examined the role of parental support, e-learning, learning engagement and learning self-efficacy among students. With very little attention paid to candidates preparing for competitive exams, the majority of prior research has been on formal educational environments, online learning during schooling, university students, and overall academic achievement. Additionally, It is known about how learning self-efficacy functions as a mediator in the relationship between parental e-learning assistance and learning engagement. This gap emphasizes the necessity to investigate how parental e-learning support affects competitive test candidates learning engagement through learning self-efficacy, thereby adding to the body of information already in existence.

OBJECTIVES

1. **To assess the influence of parental support on Student's Learning Engagement in e-learning platforms.**
2. **To examine the mediating role of learning self-efficacy in the relationship between parental support and Learning Engagement in e-learning among school students.**

Figure 1: Conceptual Framework of the Study



RESEARCH METHODOLOGY

The present study employed a descriptive research design to examine the impact of parental e-learning support on learning engagement among competitive examination aspirants, with learning self-efficacy as a mediating variable. A structured questionnaire was used as part of a quantitative research technique to gather primary data. Convenience sampling was used to administer the questionnaire to candidates for competitive exams, and 120 valid responses from them whereas the incomplete were omitted. Descriptive statistics, correlation analysis, multiple regression analysis, ANOVA, and the Sobel test were used to assess the mediating effect of learning self-efficacy and test the hypotheses.

DATA ANALYSIS AND INFERENTIAL

(a) Descriptive Statistics

Table: 1-Descriptive characteristics

Gender		
	Frequency	Percent
Male	62	51.7
Female	58	48.3
Total	120	100
Competitive examination preparation for		
	Frequency	Percent
UPSC	24	20
TNPSC	36	30
SSC	18	15
Banking	20	17
NEET	12	10
JEE	10	8
TOTAL	120	100
Mode of preparation		
	Frequency	Percent
Online	48	40
Offline	24	20
Hybrid	48	40
TOTAL	120	100
Duration of preparation		
	Frequency	Percent
Less than 6 months	22	18.3
6-12 months	38	31.7
1-2 years	40	33.3
More than 2 years	20	16.7
TOTAL	120	100

Interpretation: (Table:1)The descriptive characteristics of respondents indicated that gender factor, male

respondents accounted for 51.7% of the total response, while female respondents constituted 48.3%, indicating a nearly balanced representation of competitive examination aspirants. The majority of respondents (46.7%) belonged to 18-22 years age group, followed by 23-27 years (28.3%), suggesting that most aspirants were young adults actively preparing for competitive examinations. Among the respondents, 30% were preparing for TNPSC, followed by UPSC (20%) indicating that state and central government examinations attracted the highest participation. The increasing usage of e-learning materials is reflected in the fact that 20% of respondents depended on offline preparation, 40% chose online learning and another 40% used the hybrid mode, reflecting the growing use of e-learning resources. Further 33.3% of the respondents had been preparing for 1-2 years, followed by 31.7% preparing for 6-12 months, demonstrating that competitive examination preparation generally requires sustained and continuous learning efforts. Overall the descriptive statistics provide an appropriate representation of competitive examination aspirants for examining the impact of parental e-learning support on learning engagement.

(b) Hypothesis

1. **H₀:** There is no association among parental support, learning self-efficacy and learning engagement

H₁: There is an association among parental support, learning self-efficacy and learning engagement

Table: 2-Correlation Matrix

	AS	MS	DLS	MG	LSE	LE
AS	1.000					
MS	.428**	1.000				
DLS	.386**	.364**	1.000			
MG	.452**	.397**	.371**	1.000		
LSE	.511**	.487**	.423**	.469**	1.000	
LE	.538**	.519**	.448**	.492**	.612**	1.000

Interpretation: (Table: 2) The correlation results indicate that all dimensions of parental support in e-learning have a positive significant relationship with both learning self-efficacy and learning engagement ($p < 0.01$). It suggests that when null hypothesis is rejected and alternative hypothesis is accepted and academic support, motivational support, digital literacy support, monitoring and guidance, their learning self-efficacy are also associated with greater learning engagement, providing support for the proposed hypothesis.

Multiple Regression

2. **H₀:** There is no significant relationship between parental support and learning engagement.

H₁: There is a significant relationship between parental support and learning engagement.

Table: 3-Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	.737	.543	.538	.474

Table: 4-ANOVA

Source	Sum of Squares	Df	Mean Square	F	Sig. p value
Regression	99.872	4	24.968	111.297	.000
Residual	84.118	375	.224		
Total	183.990	379			

Table: 5- Coefficients (Unstandardized and Standardized)

Variable	B	Std. Error	Beta (β)	T	Sig. p value
(Constant)	0.892	0.211	—	4.227	.000
Academic Support (AS)	0.224	0.052	.241	4.308	.000
Motivational Support (MS)	0.213	0.054	.227	3.944	.000
Digital Literacy Support (DLS)	0.131	0.048	.149	2.729	0.007
Monitoring & Guidance (MG)	0.178	0.051	.193	3.490	.001

Interpretation: (Table:3) Considering the coefficient(R) is 0.737, it shows that there is relationship between the parental support and learning engagement. R Square value (0.543) represents the contribution of coefficient of determination on independent variable to dependent variable. Dimension of parental support affects learning engagement by 54.3% (Table:4)ANOVA, results shows that p value is less than 0.01, the model is significant, which means parental support is highly satisfied with learning engagement, as the p value is less than 0.01. Null Hypothesis is rejected and alternative hypothesis is accepted and t(Table:5) regression analysis revealed that academic support(4.308) have a significant positive effect on learning engagement ,as their t-values exceed the critical value and their significance levels are below 0.05.Academic support are the key Parental support dimensions influencing learning engagement in learning self -efficacy.

Mediation Analysis

- H₀:** Learning self-efficacy does not mediate the relationship between parental support and Learning Engagement in e-learning among school students.

H₁: Learning self-efficacy mediates the relationship between parental support and Learning Engagement in e-learning among school students.

Table: 6-Path Coefficients

Path	B	SE	t-value	p-value
AS → Learning Self-Efficacy (Path a ₁)	0.286	0.059	4.847	.000
MS → Learning Self-Efficacy (Path a ₂)	0.268	0.061	4.393	.000
DLS → Learning Self-Efficacy (Path a ₃)	0.201	0.057	3.526	.000

MG → Learning Self-Efficacy (Path a ₄)	0.224	0.058	3.862	.000
Learning Self-Efficacy → Learning Engagement (Path b)	0.402	0.054	7.444	.000
AS → Learning Engagement (Path c, direct)	0.224	0.052	4.308	.000
MS → Learning Engagement (Path c, direct)	0.213	0.054	3.944	.000
DLS → Learning Engagement (Path c, direct)	0.131	0.048	2.729	.007
MG → Learning Engagement (Path c, direct)	0.178	0.051	3.490	.001

Table: 7-Sobel Test For Indirect Effects Via Learning Self-Efficacy

Mediation Path	Path a	Path b	Indirect Effect (a×b)	Sobel Z	p-value	Mediation Type
AS → LSE → LE	0.286	0.402	0.115	4.057	.000	Partial Mediation
MS → LSE → LE	0.268	0.402	0.108	3.776	.000	Partial Mediation
DLS → LSE → LE	0.201	0.402	0.081	3.179	.001	Partial Mediation
MG → LSE → LE	0.224	0.402	0.090	3.416	.001	Partial Mediation

Interpretation:(Table: 6&7) The mediation analysis indicates that Learning Self-Efficacy significantly mediates the relationship between all dimensions of Parental Support in E-Learning (Academic Support, Motivational Support, Digital Literacy Support, and Monitoring & Guidance) and Learning Engagement among school students. The results show that all Path *a* (IV → Mediator), Path *b* (Mediator → DV), and direct Path *c* (IV → DV) coefficients were positive and statistically significant ($p < .05$). In addition, the Sobel test confirmed significant indirect effects for all mediation paths, with Sobel Z values greater than 1.96 and p-values below .05. Since both the direct and indirect effects remained significant after including the mediator, Learning Self-Efficacy partially mediates the relationship between parental support and learning engagement. Hence, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted.

DISCUSSION

The findings showed that 51.7% of the respondents were male and 48.3% were female as respondents and the majority of respondents were belonged to age group of 18-22 years and 30% were preparing for TNPSC and UPSC. The most respondents select online and hybrid mode and 33.3% of respondents had been preparing for 1-2 years were preparation duration for competitive examinations. The correlation result showed that parental support in e-learning have a positive significant relationship with both learning self-efficacy and learning engagement. The coefficient of determination in structural model which is 54.3% variance of learning engagement is explained by parental support, learning self-efficacy and the adjusted R square value is 0.538 and the significant value on the parental support is $(0.00 > 0.01)$, the hypothesis is accepted and the parental support has an influence on learning engagement and F calculated on the parental support amounted to $(111.297 > 0.01)$ hypothesis accepted and parental support had an influence on learning engagement and the learning self-efficacy partially and significantly mediates between the parental support and e-learning platforms with learning engagement. The mediation analysis using Sobel test revealed that learning self-efficacy significantly mediates the relationship between parental support and learning engagement. These findings suggest that parental support not only directly enhances learning engagement but also indirectly strengthens engagement by improving learning self-efficacy. Parental support is very important for the students that should be strengthened through regular academic encouragement, motivational support, effective monitoring and assistance in accessing digital learning resources and easy flexibility for both in e-learning platforms. Educational institution should improve the quality of training and coaching centres and e-learning providers should design programs that actively involve both parents and students in learning process. Students should be encouraged to develop their own confidence level in their abilities and self-motivation, actively participate in online learning activities. Workshops on digital literacy may furtherly improve learning engagement and self-efficacy among competitive examination aspirants.

CONCLUSION

Learning engagement is the key success in e-learning platforms. E-learning platforms provide students with the flexibility to study at their own pace and convenience. This flexibility is particularly beneficial for students preparing for competitive exams, as it allows students to balance their exam preparation with other commitments, such as schoolwork and extracurricular activities etc. Parental support has a positive impact on learning engagement and the statement is that social support (Academic Support, Motivational Support, Digital Literacy Support, Monitoring and Guidance) is decisive in increasing learning self-efficacy and the student engagement is increasingly. During e-learning platforms directly interact with students and parents and the statistically analysis shows positive impact of parental support in e-learning and highlight the importance of learning self-efficacy to improve learners engagement. Further research can be done with large sample size and considering different geographical area for the study. It may also extend this by using mixed method or experimental research designs to gain deeper insights into mechanisms through other groups influencing self-efficacy of e-learning platforms.

FUTURE SCOPE

The study can be extended in larger level for competitive examination aspirants across different countries, regions, states and compare these studies among aspirants of different competitive examinations such as UPSC, NEET, JEE, CAT and GATE. Advanced analytical techniques can be used such as (SEM) Structural Equation Modeling can be employed to validate the mediating role of learning self-efficacy and learning engagement and the longitudinal studies can examine changes in self-efficacy and engagement over different stages of examination preparation. Additional variables such as academic stress, learning motivation, and resilience can be incorporated into the model. In future researcher may compare the online, offline and hybrid learning modes

in relation to parental learning support.

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