

A Study to Assess The Effect of E-Learning on Learning Interest Among University Graduates

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ABSTRACT

In an effort to improve student performance and make learning more accessible to a vast number of learners around the world, higher learning institutions have used e-learning platforms. Electronic learning refers to the process of imparting knowledge using digital mediums. Some colleges' e-learning students have reportedly performed poorly, which has led to concerns about student performance overall. The effectiveness of online education in higher education has been ensured by the use of several methods, one of which is the enhancement of students' academic performance. This survey aimed to determine how recent college grads felt about online education and how interested they were in trying out new approaches to education. In this quantitative study, 225 recent college grads filled out a standardised questionnaire to provide their information. The twenty-item test measured factors like degree of motivation, proficiency with technology, ability to manage time effectively, and study abilities. With Cronbach's alpha values between 0.74 and 0.83 and an overall reliability of 0.81, the questionnaire demonstrated good reliability. According to the one-sample t-test, all aspects of e-learning were somewhat better than neutral ($p < 0.001$). According to the results, college grads are open to new forms of education and have a positive outlook on online courses.

Keywords: University Graduates, Interest, Techniques, Technology, Skills, Motivation.

I. INTRODUCTION

Education serves as a crucial element for enduring growth. The importance of education, particularly in emerging nations, is rising due to the escalating need to align with the developed world in terms of global competitiveness. Annually, an increasing number of individuals globally get access to the network, resulting in enhanced bandwidth and a deeper integration of its usage into global events. Access to this network has become essential for opportunity, achievement, and personal satisfaction for individuals. Similar to how technology has transformed the globe, it is currently altering the educational landscape. A diverse array of educational methodologies is currently available, such as e-learning, blended learning, and distant learning, which leverage information and communication

technology (ICT). The application of ICT can advantage students in remote regions by enabling them to participate in courses as distance learners and inspiring them to engage in learning, similar to the "Group Learning Sets" (GLS) project. In this context, the promise of e-learning appears rather promising; nevertheless, due to disparities in information transfer between developed and poor nations, it is not only challenging but also expensive.

E-learning refers to the use of information and communication technology by educators and students. E-learning encompasses traditional training methods, including courses, impromptu instruction, curated learning materials, organization through document compilations, and community development facilitated by social software. The expansion of e-learning initiatives is propelled by the need for and capability of delivering education more affordably, enhanced access to information, efficient learning, and improved flexibility.

The advancement of communication and information technologies has influenced human existence. The advancement of ICT has led to the definition of "e-learning" as the process of acquiring, using, disseminating, and distributing knowledge via electronic means. E-learning is sometimes referred to as dispersed learning, web-based education, internet-based instruction, online education, or computer-assisted learning. Essentially, it is a digital education platform that grants users or learners access to information. In online education, physical distance is irrelevant.

Conventional in-person training has been profoundly adversely affected by the widespread coronavirus (COVID-19) pandemic. Countries have been compelled to employ many strategies in reaction to the COVID-19 epidemic, such as prohibiting large assemblies and maintaining social distancing. Consequently, officials swiftly transitioned to remote education facilitated by diverse digital platforms in place of traditional in-person teaching. For example, the majority of colleges recommend that students utilise social media platforms such as Facebook, Twitter, and Microsoft Teams, as well as complimentary interactive online technologies like Zoom and Google Classroom for virtual education.

E-learning may adversely impact a university student's ethics, academic success, and social interactions. The educational framework is prone to pirate or plagiarism due to the difficulty in overseeing unethical conduct, such as student dishonesty, which directly leads to worse academic outcomes and wasted educational resources. Moreover, the use of e-learning methodologies by universities renders it unfeasible for students to engage in several scientific disciplines that need physical attendance, such as conducting laboratory research or participating in rigorous training.

E-learning is seeing significant popularity in the nation owing to diverse socio-economic factors and the increasing need for education. The traditional campus-based educational framework is unable to meet the heightened demand for training, education, and knowledge enhancement. E-learning serves as a foundational alternative for continuous education and as a mechanism for human capital advancement globally. The significance of e-learning is being acknowledged by educators and policymakers worldwide due to its capacity to facilitate access to higher education. It is a significant motivation from education that provides benefits to individuals across society. It involves the attainment of knowledge and abilities via facilitated information and teaching. It encompasses all technology and facilitates the quest for continuous education for everyone.

II. REVIEW OF LITERATURE

Hidayat, Vinny et al., (2024). The impacts of online learning on students' academic achievement are the primary research foci here. Virtual classrooms are quickly becoming the norm in all types of schools, including colleges. The purpose of this study is to examine one private university in Bandung, Indonesia, to find out how online education has affected the perspectives and performance of its students. Everyone participating in the Accounting research program at the present time is considered a part of the population in this study. Students enrolling in or having completed the Auditing course from the Accounting Research Program's 2018–2022, specifically, will be chosen to participate in this study. Explanatory study is the research technique used, while intentional sampling is the method used to choose the samples. Tests of the study's hypothesis are conducted using SPSS, survey data, multiple regression analysis, T and F tests. The survey method relied on a random sampling of 113 pupils. Furthermore, in order to gauge students' positive and negative perspectives of online learning, interviews were conducted. The findings indicate that students' performance in the classroom is impacted by online education. Online education is generally well-received by students, with just a few holding negative opinions. The school, however, has the power to alter people's perceptions by rectifying the errors that led to these negative perceptions.

Akpen, Catherine et al., (2024). There was a quick shift to online education and a meteoric surge in the use of online learning platforms due to the COVID-19 pandemic. This systematic review delves into the effects of online education on student engagement and performance by reviewing prior research in great detail. An exhaustive search was conducted across databases (PubMed, ScienceDirect, and JSTOR) for articles published between 2019 and 2024, using the Preferred Reporting Items for Systematic review and Meta-Analysis (PRISMA) standard. Included in the review were studies that assessed participation in and achievement in online courses. A set of inclusion and exclusion criteria led to the selection of eighteen publications for further investigation. Students' engagement and performance were affected differently by online learning, according to the data. Online learning allows students greater flexibility and the ability to study at their own pace, which, according to some research, leads to better academic performance. However, some studies have indicated issues, such as students not caring as much, experiencing more isolation, and reducing their interaction with instructors and peers. Students' intrinsic motivation, access to high-quality digital tools, and stable internet all play a part in the success of online courses, according to the findings. Improving engagement and performance required effective strategies to boost student involvement, such as the use of discussion forums and multimedia tools, in conjunction with appropriate interactions between instructors and students. Nevertheless, it is challenging to keep students' attention.

Zhang, Dizhi. (2023) From its humble beginnings as a postal service, online education has come a long way in the fifty years since it began. The COVID-19 pandemic has increased students' access to higher education and increased their prospects of finding gainful employment, which has contributed to the recent boom in online learning. Developing the skills necessary for effective communication and support in digital contexts is known as interactional competence, and it is a crucial component of online learning. Improving one's interpersonal skills has a multiplicative effect on one's ability to

learn, participate actively, work in a team, and be present in social situations. Online education has the potential to change classroom dynamics for the better or for the worse. Online learning possibilities welcome students from all walks of life and all corners of the globe, which fosters diversity and allows for a wide range of learning styles to be met. Unfortunately, without nonverbal cues and face-to-face exchanges, it is difficult to assess learning in real-time and help students connect with their instructors. Recognising these repercussions is crucial for overcoming these limits and improving the quality of online education. The development of online learning has presented both opportunities and threats to traditional classroom instruction. Communication skills and resilience in the face of adversity are becoming more important in today's online classrooms as a result of the continuous digital transformation of education.

Vandana, Akella & Singh, Preetvanti. (2023). The proliferation of online education is one recent trend in the sector. This is a realistic approach to education for those who face several challenges inside the traditional educational system. Since online learning has become more widespread, there has been an increase in statistics pertaining to online learning. There has been a recent uptick in research on learning analytics using data culled from online courses. With the rise of learning analytics and data modelling, fascinating new research directions in online education have become available. While many studies have examined online learning generally, few have focused on specific challenges students encounter and how they work to overcome them. Finding out how online learning environments affect student performance is the driving force behind this research, which aims to weigh the pros and cons of these settings. Using structural equation modelling in Jamovi software, this study aims to characterise and assess the impact of students' online learning environment on their performance. The results confirm the validity of the model's assumption. A well-built model is shown by fit indices with p-values that are statistically significant. The research shows that the primary challenges to online college courses include issues like desired learning method, language ease, device capabilities, and internet connection. To further integrate this information into the educational system, future studies should investigate what factors affect students' outcomes in online learning. This study sets the framework for such future studies.

Nurhikmah, Nurhikmah et al., (2022). The objective of this study is to determine if students participating in the Elementary School Teacher Education (PGSD) program exhibit increased or decreased motivation to learn social studies in an online format. This investigation employs ex post facto quantitative research. A total of 316 students from the Primary School Teacher Education (PGSD) program at Ahmad Dahlan University in Yogyakarta took part in the study. A sum of 118 students participated in the research. Data collected through questionnaires and discussions. Descriptive and inferential statistics were employed to analyse the survey data. Employing the Sigα (0.05) threshold, the regression analysis via a simple linear test yielded a significance value of 0.827, suggesting that variable X (online learning) did not affect variable Y (learning motivation). Consequently, the findings of this study suggest that students' motivation to learn is not substantially influenced by online education. They are highly regarded among the four traits that signify a willingness to learn: accountability, enthusiasm, autonomy, and conviction. Student engagement in lectures and flexible learning were domains where the majority exhibited significant interest and zeal

during the instructional period. Enhanced adaptability in education, unbound by location or temporal limitations, alongside the cultivation of pupils' autonomous learning, are only a few of the myriad advantages of online education that can invigorate the enthusiasm for studying.

Patra, Kshiptimayee. (2021). The current educational framework incorporates online learning modules; nevertheless, due to the ongoing COVID-19 pandemic, students are exhibiting a significant rise in their inclination for virtual education. Throughout the pandemic, the Ministry of Human Resource Development permitted students to pursue their studies using online courses instead than attending in-person classes. From the viewpoint of students, online education may provide both beneficial and detrimental outcomes. The primary focus of the current research is the impact of online education on students. The scholarly achievements of students were adversely impacted since, although the advantages of online classes, they could not complete all their additional coursework and tasks punctually.

Mandasari, Berlinda. (2020) The global dissemination of the COVID-19 epidemic has impacted every sector, particularly the school system. The Indonesian Minister of Education and Culture has adopted a program to supplant conventional classroom teaching with online courses universally. A minimum of one private institution in Lampung has demonstrated robust endorsement for this concept. A researcher conducted an investigation to examine this policy. This research is motivated by the need to ascertain the impact of online education on students' grades in the Business Correspondence course. A total of forty students from the English Education program at Universitas Teknokrat Indonesia, including fourteen men and twenty-six females, are registered in the Business Correspondence course. A qualitative descriptive methodology was employed in this research. A qualitative interview and a survey with 22 items were employed to collect information. The results indicated that students' educational outcomes are enhanced by online learning regarding their motivation to study, their success in learning, and their involvement in the learning process. Furthermore, participants illustrated the significance of virtual education amid a pandemic. Moreover, the benefits of online education encompass its flexibility, availability, independence in learning, and capacity to enhance student achievement. Regrettably, online education is impeded by challenges such as inadequate internet access and financial limitations.

III. RESEARCH METHODOLOGY

Research Approach

The study adopted a quantitative research approach.

Sources of Data Collection

The research relied on a mix of primary and secondary resources. A standardised questionnaire was used to gather primary data from the students themselves. Secondary data was culled from scholarly works on the topics of online education and higher learning, including books, papers, journals, publications, and websites.

Sampling Technique

A simple random sampling technique was used to select students from the study population.

Sample Size

A total of 225 university students were selected for the study.

Research Tool

Data were collected using a standardised questionnaire. Twenty questions measuring technological proficiency, academic prowess, time management abilities, and intrinsic motivation made up the survey. Using a five-point Likert scale that extended from Strongly Agree to Strongly Disagree, the questionnaire items were assessed. In order to determine the questionnaire's reliability, Cronbach's alpha was used. The study instrument demonstrated acceptable internal consistency, as shown by reliability coefficients ranging from 0.74 to 0.83.

Data Analysis

For demographic analysis, we utilized percentages and frequencies, and for student replies, we used means and standard deviations. The reliability of the questionnaire was tested using Cronbach's Alpha, and the significance of the e-learning characteristics was determined using the One-Sample t-test.

IV. DATA ANALYSIS AND INTERPRETATION

Table 1: Gender of University Students

Category	Frequency	Percentage
Male	118	52.4
Female	107	47.6
Total	225	100.0

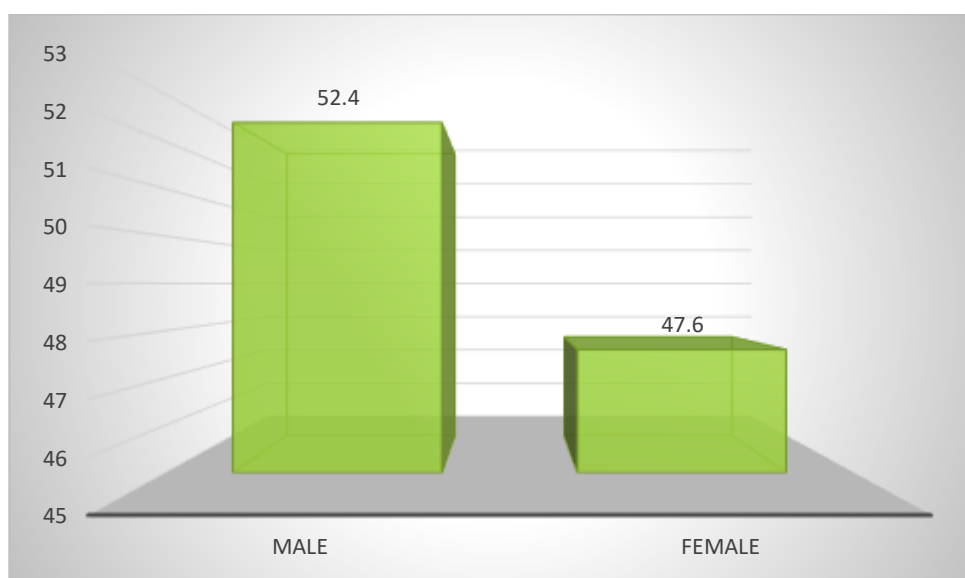
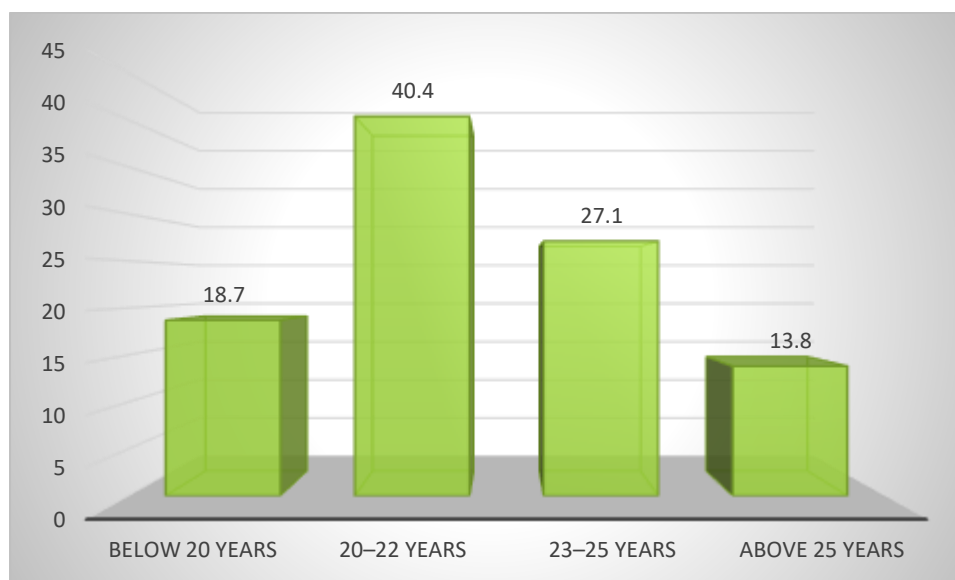


Figure 1: Gender of University Students

Of the 225 college students that took part in the survey, the table below shows the breakdown by gender. The gender breakdown of the participants was as follows: 107 females (47.6% of the total) and 118 males (52.4%).

Table 2: Age of University Students

Category	Frequency	Percentage
Below 20 years	42	18.7
20–22 years	91	40.4
23–25 years	61	27.1
Above 25 years	31	13.8
Total	225	100.0

**Figure 2: Age of University Students**

The age distribution of the 225 college students who took part in the survey is shown in the table. Among the participants, 91 students (40.4%) were between the ages of 20 and 22. Next came 61 students (27.1%) in the age bracket of 23–25. There were 42 students (or 18.7%) whose ages were 20 or younger, and 31 students (13.8%) whose ages were 25 or older.

Table 3: E-learning Experience of University Students

Category	Frequency	Percentage
Less than 1 year	38	16.9
1–2 years	78	34.7
3–4 years	69	30.7
More than 4 years	40	17.8
Total	225	100.0

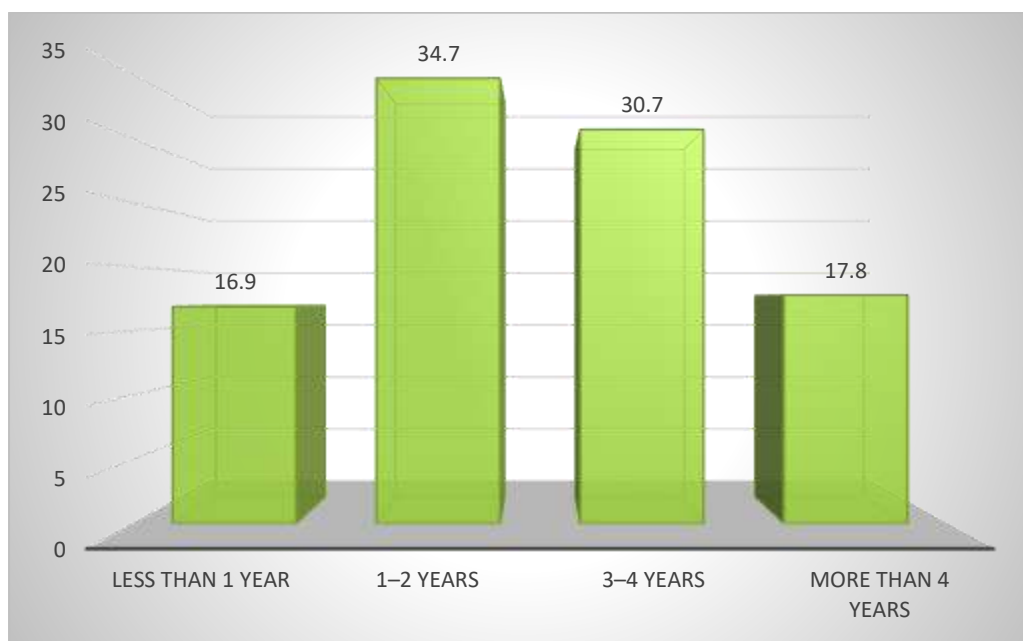


Figure 3: E-learning Experience of University Students

The table below shows the distribution of college students by level of familiarity with online education. As a proportion of the total sample size, the biggest group, consisting of 78 students (34.7%), had experience with online learning for one to two years. After that, 69 students (30.7%) have three to four years of relevant work experience. Of the students surveyed, 38 (16.9%) had less than a year of experience with online learning, while 40 (17.8%) had more than four years.

Table 4: Reliability of the Questionnaire

Category	Item	Cronbach's alpha
Technology skills	5	0.83
Study skills	5	0.74
Time management	5	0.83
Level of Motivation	5	0.77
Total	20	

There was adequate internal consistency, as shown by Cronbach's alpha values ranging from 0.74 to 0.83. The 20-item survey was deemed reliable enough for the research with an overall reliability value of 0.81.

Table 5: Mean and Standard Deviation of E-Learning Dimensions

Dimension	Mean	SD
Technology Skills	3.62	0.71
Study Skills	3.74	0.68
Time Management	3.69	0.73
Level of Motivation	3.57	0.76
Overall E-Learning	3.66	0.72

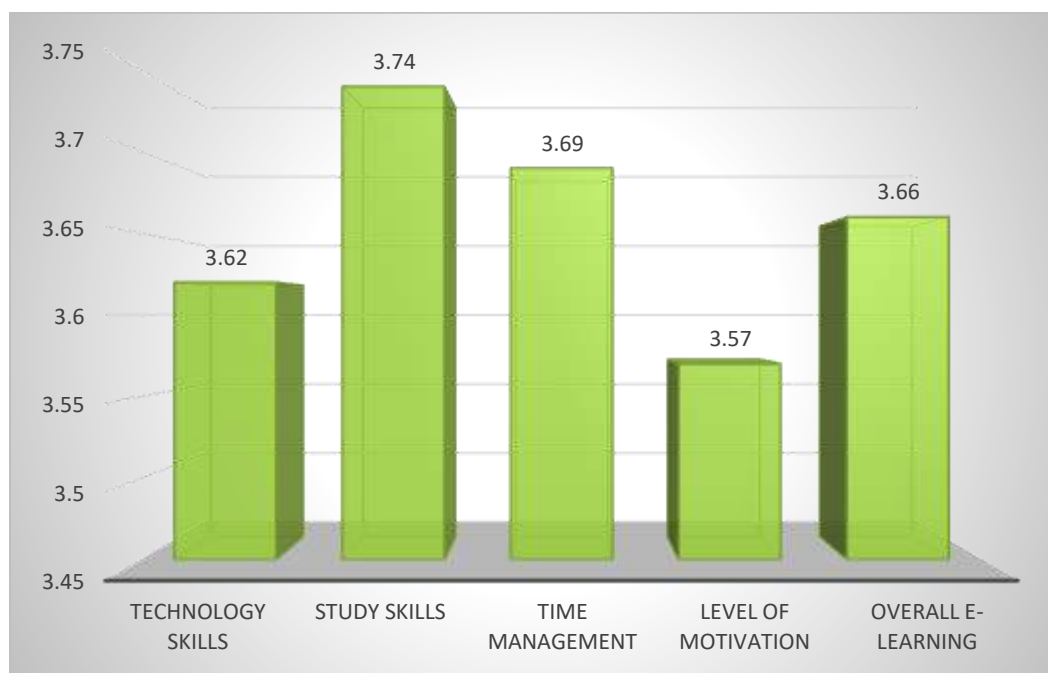


Figure 4: Mean of E-Learning Dimensions

The average score for e-learning was 3.66 (SD = 0.72), reflecting a relatively favourable attitude toward e-learning among university students. Study Skills had the highest average (M = 3.74, SD = 0.68), succeeded by Time Management (M = 3.69, SD = 0.73) and Technology Skills (M = 3.62, SD = 0.71). The reported mean for Level of Motivation was the lowest at M = 3.57, SD = 0.76.

Table 6: One-Sample t-Test of E-Learning Dimensions

Dimension	N	Mean	SD	t-value	Sig. (2-tailed)
Technology Skills	225	3.62	0.71	13.11	<0.001
Study Skills	225	3.74	0.68	16.32	<0.001
Time Management	225	3.69	0.73	14.18	<0.001
Level of Motivation	225	3.57	0.76	11.24	<0.001
Overall E-Learning	225	3.66	0.72	13.73	<0.001

The One-Sample t-test was performed in comparison to the neutral test result of 3.00. The findings revealed statistically significant disparities in Technology Skills ($t = 13.11$, $p < 0.001$), Study Skills ($t = 16.32$, $p < 0.001$), Time Management ($t = 14.18$, $p < 0.001$), and Level of Motivation ($t = 11.24$, $p < 0.001$). The comprehensive e-learning score was statistically significant ($t = 13.73$, $p < 0.001$). Consequently, the results demonstrated that university students' views on e-learning were markedly higher than the neutral point.

V. CONCLUSION

Globally, the landscape of higher education is changing. Institutions of higher learning are reevaluating their approaches to teaching and learning in light of growing expenses, decreasing funding, and the growing demand for online courses. At light of these shifts, online courses are becoming more common at universities, opening up fascinating new possibilities for students and

faculty alike. The term "e-learning" refers to the usage of various online resources for the purpose of education. Training, information delivery, student interaction motivation, and the exchange and appreciation of diverse viewpoints are all part of it. In order to set up e-learning, higher education institutions in developing nations already have the fundamental information and communication technology (ICT) infrastructures in place, including LANs, computers, internet, video, audio, CDs, DVDs, and mobile technology capabilities. When incorporating ICTs into pedagogical practices, it is important to consider the pedagogical, technical, and financial aspects of each technology individually.

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