



The Role Of Teachers In Virtual Classrooms And Online Learning Environments To Improve Students' Educational Skills

Ms Swatti Chowdhary^{1*}, Dr Manju Sharma²

^{1*}Research Scholar, School Of Education Lingaya's Vidhyapeeth Nahchauli Faridabad.

²(Supervisor), Professor, School Of Education Lingaya's Vidhyapeeth Nahchauli Faridabad.

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ABSTRACT

Introduction: There are mainly two types of establishments in order of the eminence of the education arrangement one is the Asynchronous or the self-paced instruction institute and the other is the Synchronous or the real-time instruction institute.

Literature Review: The distraction is the reason for the lack of understanding of a particular topic. The scarcity of training among the teachers is one of the most common reasons for the facing of difficulties in the processing of the OL education system through the Internet.

Methodology: Primary Quantitative method has been applied in the study for the analysis of the role of the teacher for the OL and the virtual learning process. The SPSS software has been used in the study with using 10 questions in the questionnaire to analysis the reviews that are collected from the 55 respondents.

Findings and Analysis: The value of both the R and the R square of the IV3.1 is less than the value 1 and this specifies the less number of the success of the application of the simulated learning system.

Discussion: The factors play an eclectic role in highlighting the importance of open communication that creates opportunities for teachers to practice these skills.

Conclusion: The consistency between the student an equal adversary and the teacher has appraised the idea of mitigating the trials and generating productive approaches to guarantee that all the students have an equal occasion toward success.

Keywords: online learning, Asynchronous, self-paced education, re-enrollment, virtual classroom

Introduction

Presently, online learning has become one of the most effective and essential learning methods by which the level of understanding of the study has increased. As per the recommendation of Manegre, & Sabiri (2022), the web platform and the digitalization in the mode of learning increased the learning capacity of the students. There are mainly two types of institutions in order of the quality of the education system one is the Asynchronous or the self-paced education institute and the other is the Synchronous or the real-time education institute. According to Khlaisang, & Songkram (2019), the facility of the internet system is one of the most essential and important for the improvement of the quality of learning in the classroom. Therefore, online learning affects the capacity of the understanding level of students in many ways.

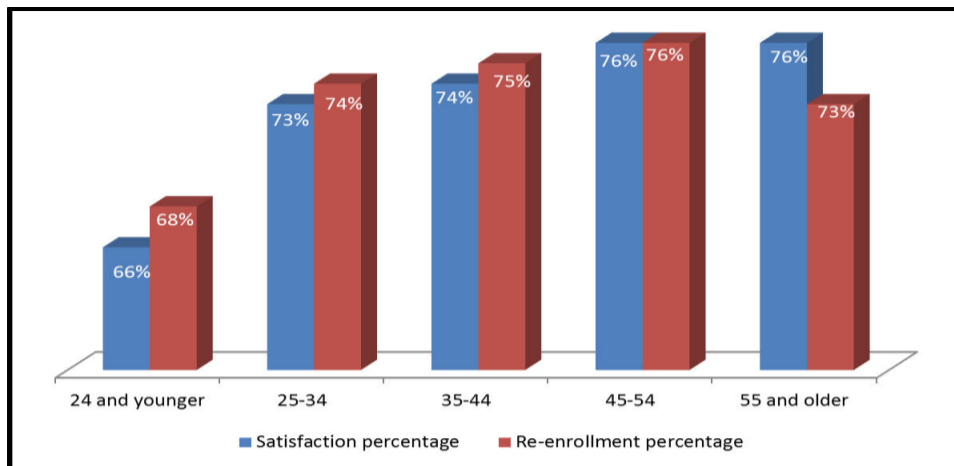


Figure 1: Impact of the online learning (Source: Khlaisang, & Songkram, 2019)

From the above figure, it can be shown that the level of the satisfaction of the people in the different age groups and the percentage of the enrollment of the people in the online learning or the OL. This can be said that the percentage of satisfaction level of people aged 24 and younger is 66% whereas the re-enrollment percentage of the people is 68%. According to Alam (2022), the likelihood of the use of the OL is the highest among the new generation and the people of the young age. The percentage of the re-enrolment of people of the age group 35-44 is 75% and the percentage of the satisfaction level of the use of the OL is 74%. Therefore, from the above analysis, it can be said that there are great importance OL among people of all age group.

Virtual learning is another mode of learning in the modern day and the importance of the learning system has increased after the COVID-19 pandemic. As per the opinion of Bawaneh (2021), the application of the virtual classroom in the learning system had both positive and negative impacts on the understanding and the level of efficiency of the students. There are also some drawbacks to the mode of virtual learning. One of the most common and effective issues is the technical problems at the time of the learning process. Most of the students in the learning process get distracted from the topic of the lack of eye contact and proper attention in the classroom (Elzainy, El Sadik, & Al Abdulmonem, 2020). On the other hand, the scarcity of proper productivity in the learning process is an issue of the learning system. Thus, the above issues and problems decrease the quality of the learning process.

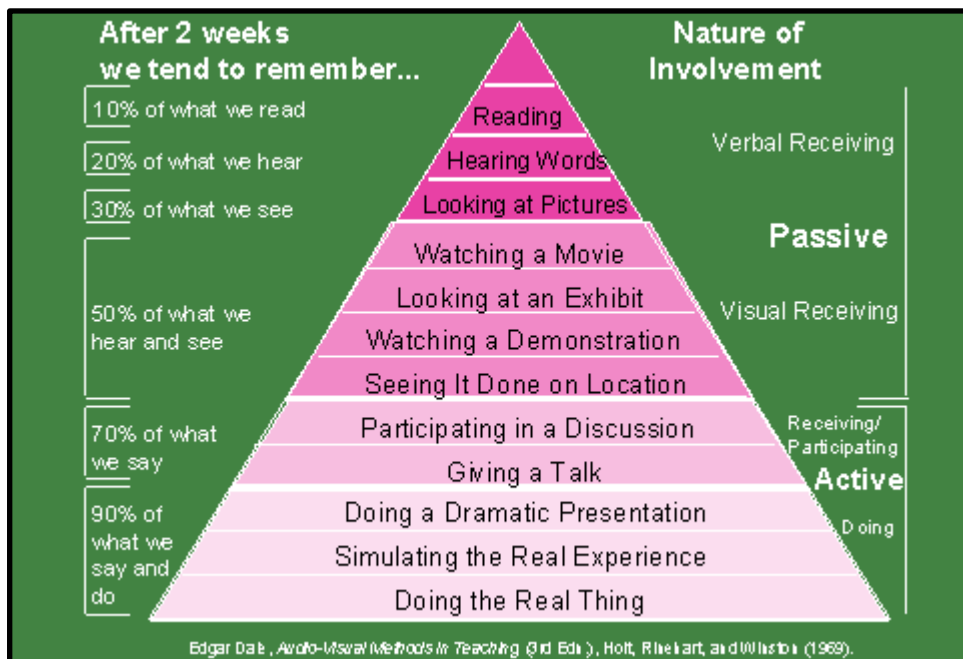


Figure 2: Problems in the online or the virtual classroom (Source: Elzainy, El Sadik, & Al Abdulmonem, 2021)

The above figure indicates the issues and the problems of online or virtual learning for the progress of the students. From the total amount of the learning and the reading process, the students get 10% of the amount

for reading and 50% of the quantity they got hear in the process. Therefore, the issues and the problems have to be reduced for the better quality of the learning through the virtual process.

Research aim

The focus of the study is to find the issues and the problems in the online or virtual classroom and determine the role of the trainers and the teacher for the improvement of the educational skills of the students.

Research objectives

The research objectives are:

- To determine the exact issues and challenges of the use of online or virtual learning
- To access the importance of the teachers in minimizing the issues of OL
- To analyze the strategies for the improvement of the quality of the OL
- To find the future scope of the application of virtual learning in the education system

Research questions

The arise questions from the research are:

- What are the exact issues and challenges of the use of online or virtual learning?
- What is the importance of the teachers in minimizing the issues of OL?
- What are the strategies for the improvement of the quality of the OL?
- What is the future scope of the application of virtual learning in the education system?

Hypothesis

H1: There is a relationship between the application of the proper method of the OL and the growth of the students

H2: The role of the teachers and the educational development of the students are interrelated

H3: The relationship between the infrastructure of the online system and the increment in the quality of education are related to each other

This gives significant value to the role of the teachers and the mentors for the improvement of the quality of the learning and the increment of the understanding level of the students through the OL. Proper determination of the issues and the challenges helps to improve the effectiveness of the positivity of the OL on the better life of the students.

Literature Review

Issues and challenges of the use of online or virtual learning

Besides the advantages of the application of the online education system in the various kinds of educational institutions, there are some drawbacks and challenges of the system. The lack of motivation of the teacher and the students is one of the most effective for the betterment of the virtual education system. As per the view of Hamouda (2020), the use of the online mode of education is somehow loss the contact between the teachers and the students in the classroom. The distraction is the reason for the lack of understanding of a particular topic. On the other hand, Torres et al. (2021) said that each and every student in the classroom is unable to manage the proper network system and facility for various problems like financial issues. Therefore, the education process faced some difficulties and challenges in order to the proper engagement of the students.

Another big problem in virtual or online education is the lack of the proper technical skills of the teachers and the trainers in the institution. The scarcity of training among the teachers is one of the most common reasons for the facing of difficulties in the processing of the OL education system through the Internet. As per the view of Archambault, Leary, & Rice (2022), increment of the cybercrime in the present days is one of the most effective and common issues from which teachers and students have to suffer.

Importance of the teachers in minimizing the issues of OL

Teachers play an important role in order to minimize of the issues and problems in the virtual education system or VES. For the reduction of the lack of attraction for a topic among the students, the teacher has to be more careful and effortless to grab the attention of the students. As per the recommendation of Esra, & Sevilen (2021), the using of 2D and 3D pictures can play an important role in the increment of the attention of the students towards the education process. The use of the digital board and the project machine in the mode of the education process is helpful for the better understanding of the students through the online system. On the recommendation of Salas-Pilco, Yang, & Zhang (2022), the use of innovative teaching methods like facilitating learning is the one of the best options for the improvement of the quality of OL.

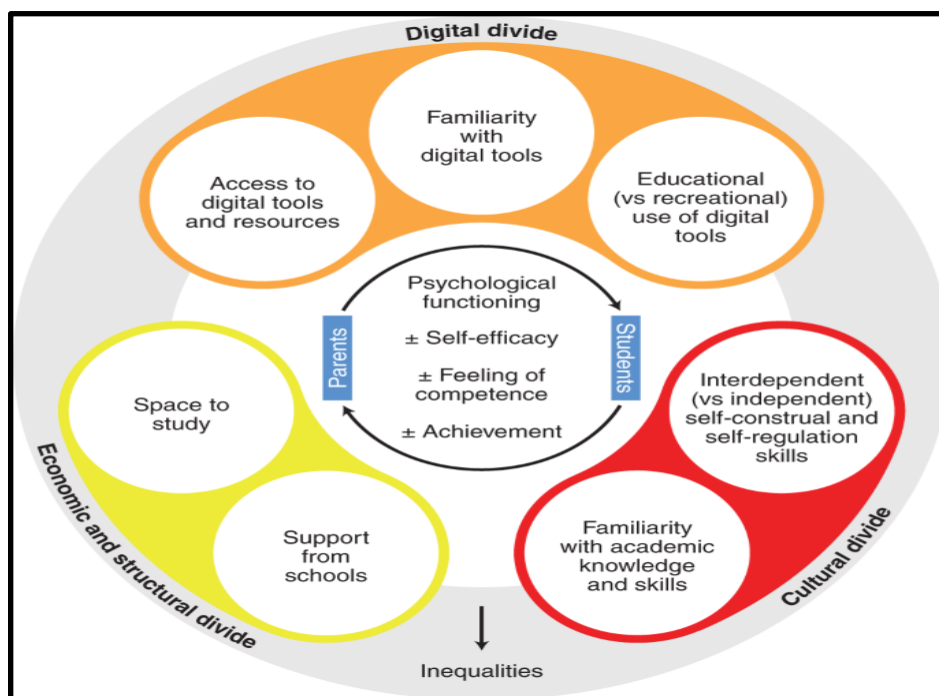


Figure 3: The factors of the virtual learning
(Source: Barari et al. 2022)

From Figure 3, it can be concluded that the psychological function and the self-efficacy played a great and important role in the OL. As per the view of Barari et al. (2022), the lack of self-efficacy made the quality of the learning less convincing and helpful for the growth and development of the students. To get into the learning capacity, the teachers must have to be fully acquainted with the terminal practices of online teaching. Proper accessibility to tools and resources that are digitally driven are to be measured sincerely to develop the outlook of the teachers which will eventually bring a progress in their pattern of teaching. Teachers can solve the issues of online learning by showcasing all the familiarities that are associated with teaching. As a matter of fact, the credibility of online teaching eventually gets better. As opined by Blaine (2019), electronic medium have evaluated the academic practices and has marked a distinctive central to the enterprises. Giving students the space to study by befitting them with all the technical qualities such as clearing the doubts by showing them real life examples through animations makes them feel more genuine and competent in their field. Therefore, making the right choice and functioning the system of technology can be well established by making the tough lessons simple and interesting.

Strategies for the improvement of the quality of the OL

The use of the OL in the educational system required some strategies and planning for the improvement of education quality. Maximizing the contribution of teachers has been examined as beneficial for students as it has helped them to manage most of the difficult problems. The section of the literature review has highlighted certain aspects that have helped in determining the progress of the study. As mentioned by Elfeky & Elbaly (2023), the value of virtual learning has evaluated the progress that shows the ideal aspects of the self-regulation skills which have the accessibility towards functional learning.

However, the discussion of issues and challenges has predicted a lack of understanding of the subjects. Students coming from different backgrounds are not able to cope up with the new technology which is implemented in classroom teachings. As commented by Fulton (2020), the significance of learning gets affected the discrimination rises. The brief discussion states that identifying the various learning aspects is rated as the changing aid to a few social and psychological prodigies. The implication of statistical data and analysis has evaluated the importance of teaching in various ways.

Methodology

In the following study, the researcher is capable of utilising the statistical functionings for the data collection method by applying the "Primary Quantitative method". Based on 3 demographic questions and 7 variables, the researcher is allowed to collect the data. The total of 10 survey questions is sufficient to measure the collected data on online teaching. As opined by Chowdhury (2023), positivist research philosophy has been used in the study that helps to provide a significant outcome that stands up to real-time investigation. The conduction of research is based on reliable, generalized, and standardized factors that are capable of finding the exact information regarding the benefits of online teaching (Chua & Bong, 2022). The analysis was put forth by using the SPSS software that included a demographic test, correlational test, descriptive statistic test,

ANOVA, regression, and reliability test respectively. After the hypothesis testing, the research got a significant platform for verification of the obtained results.

Findings and Analysis Demographic analysis Gender

Table 1: Table of gender frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	22	40.0	40.0	40.0
	Male	11	20.0	20.0	60.0
	Other	11	20.0	20.0	80.0
	Prefer not to say	11	20.0	20.0	100.0
	Total	55	100.0	100.0	

(Source: IBM SPSS)

From the above table 1, it can be defined the percentage of females among all people who participated in the survey is 40% and the cumulative percentage of females is 40%. The reasonable percentage of the people who do not want to represent their gender is 20% and for the people of male gender is 20%. Thus, it can be extrapolated that among all of the participants of the survey, the highest number of people is of the gender female who share the interest.

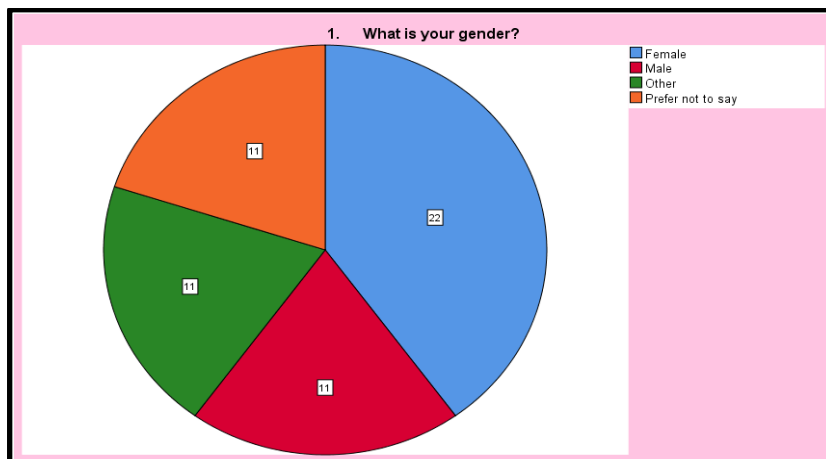


Figure 4: Frequency of Gender
(Source: IBM SPSS)

From Figure 4, the outcomes that can be found about the role of the different people from the different genders give the reviews about the role of OL. The number of those who are male and participated in the survey is 11% among the other people who take an important role in the survey and the quota of the people of female is 22%. The percentage of people who do not prefer to say their gender is 11% also the percentage of the people who are in the category of other is 11%. Therefore, it is precise that all of the people who take part in the survey are highly activated.

Age

Table 2: Frequency of age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 to 35 years	22	40.0	40.0	40.0
	35 to 45 years	22	40.0	40.0	80.0
	45 to 55 years	11	20.0	20.0	100.0
	Total	55	100.0	100.0	

(Source: IBM SPSS)

From Table 2, it can be clearly determined the cumulative percentage and the valid percentage of the frequency of the age of the parties. It can be transmitted from the above table that the rate of the cumulateness of the people between the age group 45 to 45 years is 100% and that for the age group between 25 to 35 years is 40%. The bargain of the valid percentage of individual in the age group between 45 to 55 years is 20% and the number people of between 35 to 45 years are 22. Therefore, it is can be clearly said that most oft he people of the 45 to the age 55 have taken the participated.

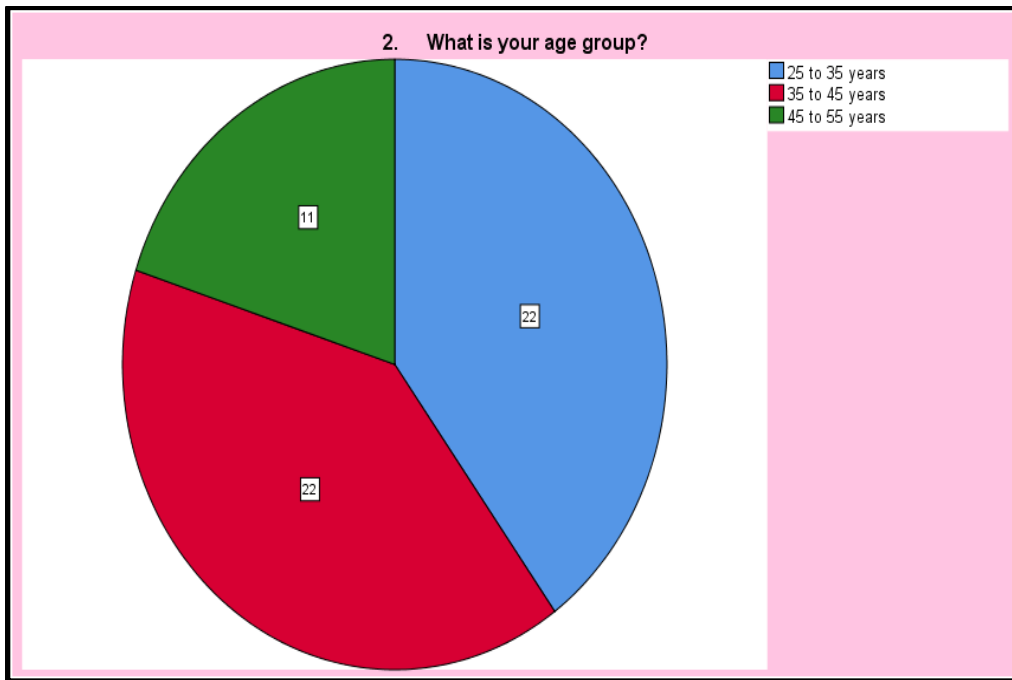


Figure 5: Frequency of age
(Source: IBM SPSS)

Figure 4 states the number of the age of representative that has experienced in the survey. The ratio of samples from the age group 25 to 35 years is 22% and the consonance of the people of the age group 45 to 55 is 11%. Therefore, from the analysis of the percentage of the age of the people in the survey, it can be said that most of the people of the age group 35 to 45 years.

Profession

Table 3: Frequency of Profession

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business man	11	20.0	20.0	20.0
	Doctor	11	20.0	20.0	40.0
	Professor	22	40.0	40.0	80.0
	Students	11	20.0	20.0	100.0
	Total	55	100.0	100.0	

(Source: IBM SPSS)

The above table shows the frequency of the people of different professions and occupations. The number of people who are professor and participated in the survey are 22 and the students are 11. The value of percentage of the people who are businessmen is 20%. The total number of people who participated in the survey is 55.

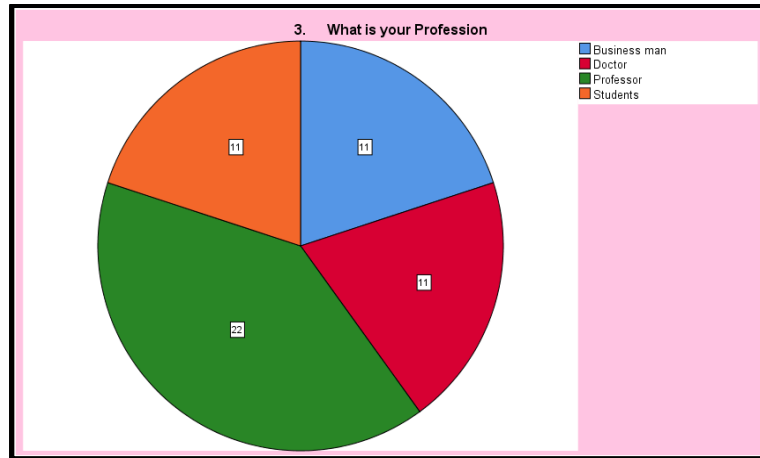


Figure 6: Frequency of Profession (Source: IBM SPSS)

The percentage of the people who are doctors by profession that can be evaluated from the survey is 11% and the people who are professors is 22%. The participants of the survey who are students is 11%.

Descriptive analysis

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
IV1.1	55	2	5	3.40	1.029	.279	.322	-1.028	.634
IV1.2	55	1	4	3.40	1.211	-1.542	.322	.392	.634
DV	55	1	4	2.40	1.029	.279	.322	-1.028	.634
IV2.2	55	2	5	3.40	1.211	-.114	.322	-1.640	.634
IV3.1	55	2	5	3.60	1.369	-.218	.322	-1.825	.634
IV4.1	55	1	4	3.40	1.211	-1.542	.322	.392	.634
Valid N (listwise)	55								

Figure 4: Descriptive statistics (Source: IBM SPSS)

The above table 4 of the descriptive analysis shows the effect of the virtual classroom and the OL on the improvement of the studnets. The value of the standard deviation or std. of the survey is 1.029 of IV1.1 for the application of the OL on the teaching system for the better educational improvement of the students. As per the view of Yu (2020), the greater value of the standard deviation in the relation of the IV and DV indicates the relationship and the dependency. The value of the Std. error for the improvement in the understanding level of the students is 0.322.

Hypothesis 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin-Watson
						F Change	df1	df2		
1	.231 ^a	.053	.035	1.011	.053	2.981	1	53	.090	2.557

a. Predictors: (Constant), IV1.1
b. Dependent Variable: DV

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.046	1	3.046	2.981	.090 ^b
	Residual	54.154	53	1.022		
	Total	57.200	54			

a. Dependent Variable: DV
b. Predictors: (Constant), IV1.1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	1.615	.474		3.405	.001
	IV1.1	.231	.134	.231	1.727	.090

a. Dependent Variable: DV

Figure 8: Regression of Hypothesis 1 (Source: IBM SPSS)

From the above figure 8 of the deterioration analysis of a survey of the research, it can be expressed that the importance of the R is 0.231, and thus the immediate value of R square is 0.053. As per the recommendation of Abuhmaid (2020), the nearest regression value of the IV and DV of a study determines the correlation among them. The academic growth and development of the scholars in the present days are more or less dependent on the capacity of the trainers over the OL. The value of the mean square of IV1.1 is 3.048 and the standard error is 1.011. The more subordinate value of the traditional error shows that there is a meaningful role of teacher effectiveness in virtual learning.

Hypothesis 2

Model Summary ^b											
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin-Watson	
						F Change	df1	df2			
1	.196 ^a	.038	.020	1.019	.038	2.120	1	53	.151	2.665	
a. Predictors: (Constant), IV2.2											
b. Dependent Variable: DV											
ANOVA ^a											
Model		Sum of Squares	df	Mean Square	F	Sig.					
1	Regression	2.200	1	2.200	2.120	.151 ^b					
	Residual	55.000	53	1.038							
	Total	57.200	54								
a. Dependent Variable: DV											
b. Predictors: (Constant), IV2.2											
Coefficients ^a											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.					
		B	Std. Error				Beta				
1	(Constant)	1.833	.413		4.442	.000					
	IV2.2	.167	.114	.196	1.456	.151					
a. Dependent Variable: DV											

Figure 9: Regression of Hypothesis 2 (Source: IBM SPSS)

From the above figure 9, it can be concluded that the mean of the value of the coefficients of the standardized factors of the OL study is 2.200. The value of the Std. the error of the IV2.2 of the study is 0.413. This value of the standard error is not greater than 1 and this shows that there is an optimistic relationship between the effect of the OL system and the growth of the agility of the educators in an education system. The value of the sum of the squares is 66.00 and this is a high value.

Hypothesis 3

Model Summary ^b											
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin-Watson	
						F Change	df1	df2			
1	.029 ^a	.001	-.018	1.038	.001	.044	1	53	.834	2.923	
a. Predictors: (Constant), IV3.1											
b. Dependent Variable: DV											
ANOVA ^a											
Model		Sum of Squares	df	Mean Square	F	Sig.					
1	Regression	.048	1	.048	.044	.834 ^b					
	Residual	57.152	53	1.078							
	Total	57.200	54								
a. Dependent Variable: DV											
b. Predictors: (Constant), IV3.1											
Coefficients ^a											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.					
		B	Std. Error				Beta				
1	(Constant)	2.478	.397		6.241	.000					
	IV3.1	-.022	.103	-.029	-.211	.834					
a. Dependent Variable: DV											

Figure 10: Regression of Hypothesis 3 (Source: IBM SPSS)

The above figure 10 of hypothesis 3 of the research shows that the capacity of the changeable of the matter of the R squares that is the DV of the research and IV3.1 is 0.001 and the value of the R is 0.029. The value of both the R and the R square of the IV3.1 is less than the value 1 and this indicates the less number of the effectiveness of the application of the virtual learning system in the online classroom and the development of the cognitivity of the students. The rate of the sum of the residual value is 67.162. The value of the standardized coefficients of the independent variable IV3.1 is 0.029.

Correlation test

		Correlations				
		IV1.1	DV	IV2.2	IV3.1	IV4.1
IV1.1	Pearson Correlation	1	.231	-.131	.549**	-.784**
	Sig. (2-tailed)		.090	.341	.000	.000
	N	55	55	55	55	55
DV	Pearson Correlation	.231	1	.196	-.029	-.294*
	Sig. (2-tailed)	.090		.151	.834	.029
	N	55	55	55	55	55
IV2.2	Pearson Correlation	-.131	.196	1	-.639**	.583**
	Sig. (2-tailed)	.341	.151		.000	.000
	N	55	55	55	55	55
IV3.1	Pearson Correlation	.549**	-.029	-.639**	1	-.516**
	Sig. (2-tailed)	.000	.834	.000		.000
	N	55	55	55	55	55
IV4.1	Pearson Correlation	-.784**	-.294*	.583**	-.516**	1
	Sig. (2-tailed)	.000	.029	.000	.000	
	N	55	55	55	55	55

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

**Figure 11: Correlation
(Source: IBM SPSS)**

The table of the correlation values of the IV 1.1, IV2.2, IV3.1, and IV4.1 and the DV are shown above. The correlation value of IV3.1 and DV is -0.294 and the negative value of the correlation indicates of the less amount of consequence of the implementation of the OL process for the betterment of the schooling infrastructure and the knowledge of the students.. The significant value of the IV4.1 and the DV is 0.029 and the positive value between the two variables shows the high relationship of the DV on the IV4.1.

Discussion

From the overall research analysis, it can be discussed that the study is capable of meeting the research aim and objectives. In addition to that, the concept of online learning has been cleared up signifying the complete demonstration of student and teacher engagement that is facilitated in terms of addressing the educational challenges. As per the critical analysis by Doz et al. (2023), a teacher's role has been stated as the most effective aspect that gives rise to care and offerings and to understand the critical conditions of the students when they need it. The study has focused on the benefits of online teaching as well a the credibility factor which is adopted by teachers to make learning smoother and easier. The ideas associated with learning practices have been cleared up by analyzing the roles and responsibilities of the teacher. The criteria of effective problem solving have helped teachers to address innovative solutions and to make proper implications in curriculum development.

Descriptive statistics have initiated the common factors and the values that are associated with effective teaching. This was followed by correlation which generated the idea that there is a positive relationship between teachers' collaboration and students' learning outcomes. As per the critical analysis by Hussain Al-Qahtani (2019), the hypothesis analysis has basically stated the precision of learning in the module of collaborative approaches. The study has developed the idea of a decision-making process in collaboration with the planning and instructional practices to develop interdisciplinary units. Accordingly, the factors play an

eclectic role in highlighting the importance of open communication that creates opportunities for teachers to practice these skills. As per the views by Ibanga et al. (2023), the use of SPSS software has certain predictable outcomes that generate ideas to manage and support peer learning which has been calculated to determine the correlation and descriptive outcomes. This was followed by ANOVA and regression analysis in support of the primary quantitative data collection method. Therefore, it can be stated that, the following results regarding the concept of teaching have gained utmost insight through the conduction of the study.

Conclusion

In conclusion, the collaboration between the teacher and students has fostered student achievements as well as enhanced the teachers in their professional development. The coherence between the student an equal opponent and the teacher has evaluated the idea of mitigating the challenges and generating productive approaches to ensure that all the students have an equal opportunity toward success. Application of educational tools and by taking the help of technology, teachers have managed to play a vital role in modifying the future of the students. However, the challenges such as a lack of consistency, lack of communication, and effective leadership were resolved by the enormous participation of the teachers.

The statistical resources have collaborated on the idea of deep learning theory that is based on the active participation of students. Development of higher-level thinking, oral communication, and management skills were enhanced by the collaborative teaching practices. Teachers play a unique role in measuring the growth rate of the student's academic performance thereby dedicating their own time to managing the potential values in a significant manner. It has been derived that, the social and psychological factors have impacted the learning practices of the students as well as the infrastructure of the online system. Therefore, there is an important role of the teacher for the implementation of OL.

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Appendices

Appendix 1: Survey questions

Survey link: <https://forms.gle/wdebDhUoNi1RvP6i8>

1. What is your gender?

- Male
- Female
- Prefer not to say

2. What is your age group?

- 25 to 35 years
- 35 to 45 years
- 45 to 55 years
- 55 year and above

3. What is your Profession

- Business man
- Doctor

- Professor
- Students

- 4. Teacher must treat learning problems particular to a virtual environment**
- 5. Teachers facilitate the learning by helping, guiding, and providing a conducive environment**
- 6. The teacher gives knowledge and information, appropriate to the level of students**
- 7. Teachers should continually be assessing students' learning, diagnosing learning needs**
- 8. Online education plays is as a time saver for students and teachers alike**
- 9. Classes may be better suited to the traditional lecture-style format**
- 10. Revolutionizing the way we learn and paving the way for a more efficient**