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Study of Online Learning Among Adolescents in Relation to Home Environment During Covid-19

Dr. Navkiran Kaur

Assistant Professor
Baba Mangal Singh Institute of Education, Moga

ABSTRACT

The present study analyses the relationship between online learning and home environment during Covid 19. The total sample of 100 adolescents of senior secondary schools of Moga district were taken. Sample was collected through random sampling technique. The study test of online learning and home environment (developed by investigator) were administered. The major findings of the study revealed that there exist no significant correlation between Online Learning and Home Environment of Adolescents. Adolescents of Urban areas had showed more effectiveness in Online Learning and home environment as compared to Adolescents of Rural areas. Adolescents of Private Schools had showed more effectiveness in Online Learning and home environment as compared to Adolescents of Government Schools.

Key Words: Online learning, Home environment, Adolescents.

Introduction

Although the most recent respiratory viral pandemic, COVID-19 disease, SARS-CoV-2 has swept the globe, the way science operates and responds to current events has experienced a paradigm shift in the interim. - Nicholas Fraser(2021)

A novel corona virus, known as COVID-19, was discovered in the last month of the year 2019, in a seafood market in Wuhan, China. Clinical analysis results of the virus showed person-to-person transmission. Researchers first identified a corona virus in 1937. They isolated one that was responsible for a type of bronchitis in birds and had the potential to devastate poultry stocks. Scientists found evidence of human corona viruses in the 1960s, in the noses of people with the common cold. Several human corona viruses cause mild illnesses, including colds. The name "corona virus" refers to the "crown-like projections" on the pathogen's surface. In humans, corona virus infections most often occur in the winter and early spring, but they can happen at any time. The Director General of WHO in March 2020 declared Covid-19 as a pandemic after assessment of the rapid spread and severity of the deadly virus across the globe with additional announcement of social distancing as a means of curbing the spread of the pandemic. Merriam-Webster Online Dictionary (2020) referred to pandemic as "an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population". Social distancing is conscious increment in the physical gap between people in order to curb dissemination of disease. This pandemic has forced global physical closure of businesses, sport activities and schools by pushing all institutions to migrate to online platforms. Hrastinski (2008) stated that the pandemic has struck more than 200 countries in the world and has given its own challenges for educational institutions, especially higher education. India, which has the second-largest population in the world is suffering severely from COVID-19 disease. By May 18th, 2020 India investigated 1 lakh (0.1million) infected cases from COVID-19, and as of 11th July the cases equalled 8 lakhs. Anticipating the transmission of the virus, the government has issued various policies, from isolation, social and physical distancing to Large-Scale Social Restrictions (PSBB), which however had an additional impact on the economy, human living, and environment.

ONLINE LEARNING

Online learning, undoubtedly, is a flexible instructional delivery system that encompasses any kind of learning that takes place via the Internet. Online learning gives educators an opportunity to reach students who may not be able to enrol in a traditional classroom course and supports students who need to work on their own schedule and at their own pace.

The quantity of distance learning and online degrees in most disciplines is large and increasing rapidly. Schools and institutions that offer online learning are also increasing in number. Students pursuing degrees via the online approach must be selective to ensure that their coursework is done through a respected and credentialed institution. Online education has become a viable and exciting method for instructional delivery in the global business society that runs on a 24/7 schedule because it provides students with great flexibility. With the increased availability of the Internet and computer technology,

students are able to access information anytime and anyplace that would normally be available only through a traditional classroom. Studies have shown that students learn just as effectively in an online classroom as they do in the traditional classroom.

Definitions

Machet (2006) defines “E-learning is an on-line education defined as the self-paced or real-time delivery of training and education over the internet to an end-user device”.

Online learning and the pandemic

Online Teaching Is No More an Option, It Is a Necessity. During this tough time, the concern is not about whether online teaching–learning methods can provide quality education, it is rather how academic institutions will be able to adopt online learning in such a massive manner. Hence, fast forward to 2020, various educational innovations have occurred to make the universal adoption of remote learning a possibility. One key challenge is access. Here, extensive problems remain, including the lack of Internet connectivity in some locations, especially rural ones, and the competing needs among family members for the use of home technology. However, creative solutions have emerged to provide students and families with the facilities and resources needed to engage in and successfully complete coursework. The year 2020 has also seen increased availability and adoption of electronic resources and activities that can now be integrated into online learning experiences. Synchronous online conferencing systems, such as Zoom and Google Meet, have allowed experts from anywhere in the world to join online classrooms and have allowed presentations to be recorded for individual learners to watch at a time most convenient for them. Furthermore, the importance of hands-on, experiential learning has led to innovations such as virtual field trips and virtual labs. A capacity to serve learners of all ages has thus now been effectively established, and the next generation of online education can move from an enterprise that largely serves adult learners and higher education to one that increasingly serves younger learners, in primary and secondary education and from ages 5 to 18. The COVID-19 pandemic is also likely to have a lasting effect on lesson design. The constraints of the pandemic provided an opportunity for educators to consider new strategies to teach targeted concepts. Though rethinking of instructional approaches was forced and hurried, the experience has served as a rare chance to reconsider strategies that best facilitate learning within the affordances and constraints of the online context. Distance, scale, and personalized teaching and learning are the three biggest challenges for online teaching. Innovative solutions by institutions can only help us deal with this pandemic. There is a requirement of a quick shift to online learning mode; therefore, the products by Google can be really useful under such problematic situations; they are (a) Gmail, (b) Google Forms, (c) Calendars, (d) G-Drive, (e) Google Hangouts, (f) Google Jam board and Drawings, (g) Google Classroom, and (h) Open Board Software (not a Google product, helps in recording meetings in the form of files). These tools can successfully be used as an alternative for face-to-face classes. The well-established best practices of hybrid or blended teaching and learning have served as a guide for new combinations of instructional delivery that have developed in response to the shift to virtual learning. The use of multiple delivery modes is likely to remain, and will be a feature employed with learners of all ages. Future iterations of online education will no longer be bound to the traditions of single teaching modes, as educators can support pedagogical approaches from a menu of instructional delivery options, a mix that has been supported by previous generations of online educators. Also significant are the changes to how learning outcomes are determined in online settings. Many educators have altered the ways in which student achievement is measured, eliminating assignments and changing assessment strategies altogether. Such alterations include determining learning through strategies that leverage the online delivery mode, such as interactive discussions, student-led teaching and the use of games to increase motivation and attention. Specific changes that are likely to continue include flexible or extended deadlines for assignment completion, more student choice regarding measures of learning, and more authentic experiences that involve the meaningful application of newly learned skills and knowledge, for example, team-based projects that involve multiple creative and social media tools in support of collaborative problem solving. Outlook In response to the COVID-19 pandemic, technological and administrative systems for implementing online learning, and the infrastructure that supports its access and delivery, had to adapt quickly. While access remains a significant issue for many, extensive resources have been allocated and processes developed to connect learners with course activities and materials, to facilitate communication between instructors and students, and to manage the administration of online learning. Paths for greater access and opportunities to online education have now been forged, and there is a clear route for the next generation of adopters of online education. Before the pandemic, the primary purpose of distance and online education was providing access to instruction for those otherwise unable to participate in a traditional, place-based academic programme. As its purpose has shifted to supporting continuity of instruction, its audience, as well as the wider learning ecosystem, has changed. It will be interesting to see which aspects of emergency remote teaching remain in the next generation of education, when the threat of COVID-19 is no longer a factor. But online education will undoubtedly find new audiences. And the flexibility and learning possibilities that have emerged from necessity are likely to shift the expectations of students and educators, diminishing further the line between classroom-based instruction and virtual learning.

HOME ENVIRONMENT

Home environment is the first institution where a child starts to learn. It is the combination of both physical and psychological environment. The former includes rooms, basic facilities such as water, shelter, clothes, food and other physical needs of the individuals; while the latter incorporates the mutual interactions of family members, respect, say in family matters and such other things. Both the aspect has a direct and noticeable influence on the overall development of students.

Definitions

Duan (2020) defines “Home environment refers to aspects of people’s domestic lives that contribute to their living conditions. These factors may be physical ([poverty](#), psychological conditions due to [parenting](#); social circumstances”.

Home Environment and the Pandemic

“Recent research shows that measures such as confining to homes have proven to be among some of the most effective interventions, when used with other lockdown measures, to combat COVID-19 because of the age demographic they target and the message they send.”

- Donald Vinh

The SARS-CoV-2 (COVID-19) pandemic has had a tremendous global impact, with over 55 million confirmed cases worldwide (World Health Organization 2020). Due to widespread stay-at-home and social distancing mandates to prevent the spread of the virus, the psychosocial toll of this disease (including effects on mental health, academic achievement, employment, and social functioning), and the indirect morbidity and mortality associated with these effects, are likely to far outnumber infection rates. Moreover, due to the complex interactional and developmental nature of these effects, the magnitude of the psychosocial sequelae associated with COVID-19 may not be comprehended for years into the future.

While children and young people are at lower risk of contracting the novel corona virus, and from associated health complications, they may be at heightened risk of adverse psychosocial outcomes. School closures paired with restrictions on children’s social activities may have unique impacts on young people, occurring at a particularly plastic stage of brain and socio emotional development. In preliminary studies, children have reported elevated academic difficulties as a result of online schooling during COVID-19, with those who are economically disadvantaged being at greatest risk

Review of related Literature

Online Learning

Zhang et. al(2020) studied that the rapid change in the educational and environmental processes often brings anxiety to both educators and students. This further results into lack of ambiguity about the implications of online learning for educational equality in general by the educators and learners.

Home Environment

[Keeton \(2020\)](#) proposed that married women are physically and mentally tortured by husbands, husbands’ families, and their own family members. Another report showed that from January to June 2020, a total of 107 women were murdered by their husbands, but only 74 cases are filed. The husband’s family members murdered 30 women, and their own family members murdered 26 women. Among them, only 33 cases were filed.

Statement of the problem

STUDY OF ONLINE LEARNING AMONG ADOLESCENTS IN RELATION TO HOME ENVIRONMENT DURING COVID-19

Objectives of the Study

Following objectives were set in the present study:

1. To study the effectiveness in Online Learning of Adolescents.
2. To study the effectiveness of Home Environment of Adolescents.
3. To study Online Learning in relation to Home Environment of Adolescents.
4. To compare the Online Learning of Adolescents of Urban and Rural Area.
5. To compare the Home Environment of Adolescents of Urban and Rural Area.
6. To compare the Online Learning of Adolescents of Government and Private Schools.
7. To compare the Home Environment of Adolescents of Government and Private Schools.

Hypotheses of the study

In conronance with objectives, following hypotheses were framed for verification in the present study.

1. There will be no Significance of Relationship between Online Learning and Home Environment of Adolescents.
2. There will be no Significance of Difference between Online Learning of Adolescents of Rural and Urban Area.
3. There will be no Significance of Difference between Home Environment of Adolescents of Rural and Urban Area.

4. There will be no Significance of Difference between Online Learning of Adolescents of Government and Private Schools.
5. There will be no Significance of Difference between Home Environment of Adolescents of Government and Private Schools.
- 1) Psychological tool on Online Learning Scale amid COVID-19 (Prepared by the Investigator).
- 2) Psychological tool on Home Environment Scale amid COVID-19(Prepared by the Investigator).

Methodology

The study was a descriptive type, which was conducted on 10th class adolescents of senior secondary schools of Moga district. Sample was collected by random sampling technique from equally rural and urban background schools. It was further divided into equal number of private and government schools.

Result and Discussion

Objective 1: To study the effectiveness in the Online Learning of Adolescents.

The first objective is to study the effectiveness in the Online Learning among Adolescents. In order to achieve the first objective the invigilator applied the Psychological tool on *Online Learning on 100 students and the results are as follows:*

Table 1.1 Showing the percentage schedule of effectiveness in the Online Learning of among total 100 Adolescents

Sr. No.	Description of Effectiveness in Online Learning	Number of Students	Percentage Level of Effectiveness in Online Learning
1	Effective	23	23%
2	Average	71	71%
3	Non- Effective	6	6%

Table 1.1 shows the percentage schedule of effectiveness in the Online Learning of among total 100 Adolescents. 23% of the students found Online Learning quite effective, 71% found average range of effectiveness, however, 6% students stated Online Learning as a non-effective method for studying.

Figure 1.1 Pie chart showing the percentage schedule of effectiveness in the Online Learning of among total 100 Adolescents.

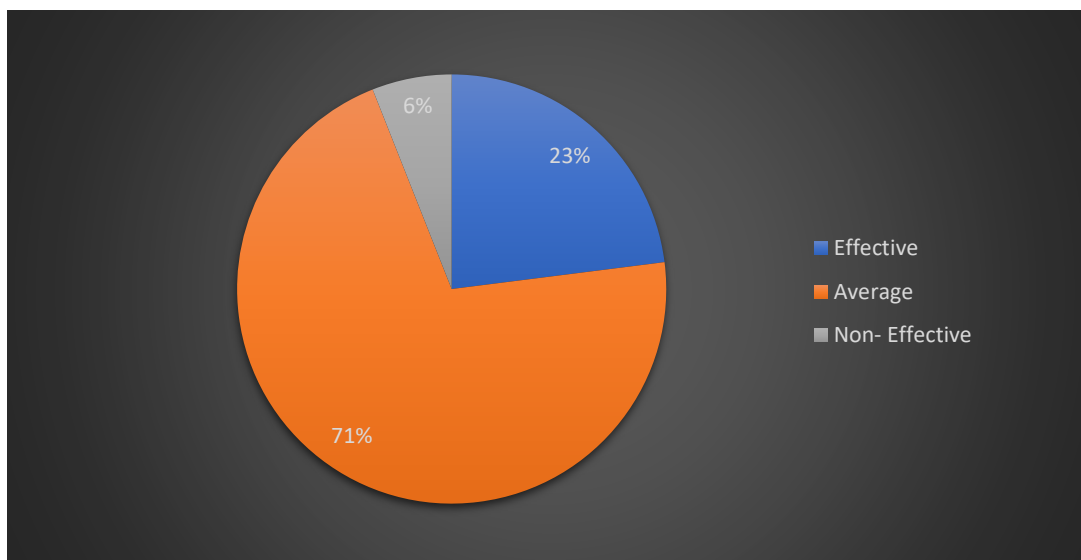


Figure 1.1 shows that 23% of the students found Online Learning quite effective, 71% found average range of effectiveness, however, 6% students stated Online Learning as a non-effective method for studying.

Objective 2: To study the effectiveness of the Home Environment among Adolescents.

The first objective is to study the effectiveness in the Home Environment among Adolescents. In order to achieve the first objective the invigilator applied the Psychological tool on *Home Environment on 100 students and the results are as follows:*

Table 1.2: Showing the percentage schedule of effectiveness of the Home Environment among total 100 Adolescents

Sr. No.	Description of Effectiveness in Online Learning	Number of Students	Percentage Level of Effectiveness in Online Learning
1	Effective	18	23%
2	Average	78	71%
3	Non- Effective	4	6%

Table 1.2 shows the percentage schedule of effectiveness in the Online Learning of among total 100 Adolescents. 18% of the students found Online Learning quite effective, 78% found average range of effectiveness, however, 4% students stated Online Learning as a non-effective method for studying.

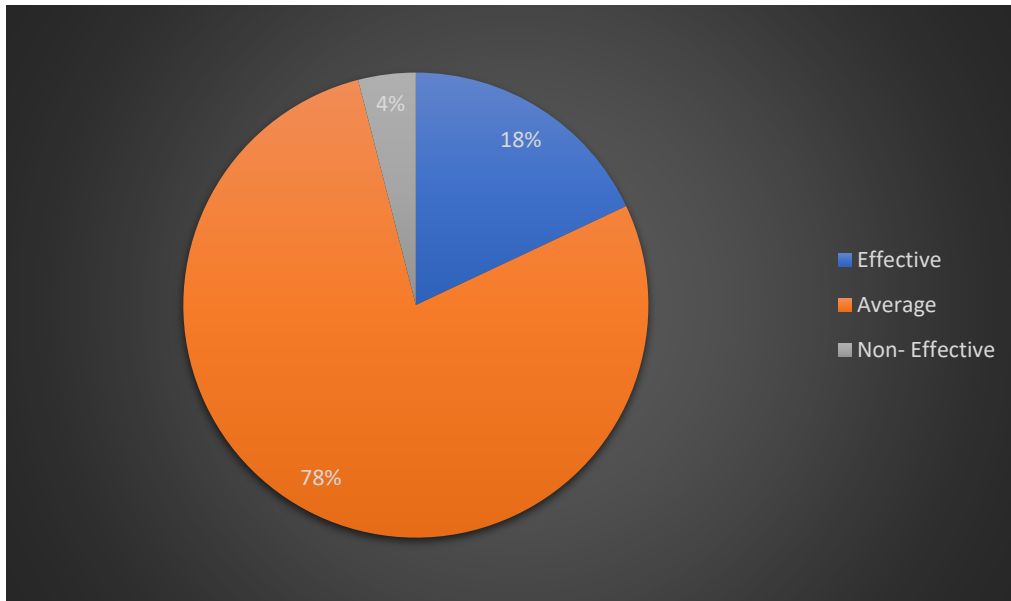
Figure 1.2 Pie chart showing the percentage schedule of effectiveness of the Home Environment of among total 100 Adolescents.

Figure 1.2 shows that 18% of the students found Home Environment quite effective, 78% found average range of effectiveness, however, 4% students stated Online Learning as a non-effective method for studying.

SECTION-B

Hypothesis 1: There will be no significant relationship between Online Learning and Home Environment of Adolescents.

Table 1.3 Showing the coefficient of correlation between Online Learning and Home Environment of Adolescents.

Group of Variables	N	r	Level of Significance 0.05 and 0.01
Online Learning	100	0.081	Non-significant
Home Environment	100		

**Non significant at 0.05 and 0.01 level of significance

Critical value of 'r' at 0.05 level = 0.138

Critical value of 'r' at 0.01 level = 0.181

Table 1.3 Represent the coefficient of correlation between Online Learning and Home Environment of Adolescents. Calculated value of 'r' is 0.081, which shows positive relationship. By referring the table of coefficient of correlation, the value at 0.05 level is 0.138 and at 0.01 level is 0.181. The tabulated value is greater than calculated value 0.081 at both level of significance. Hence, the coefficient of correlation is non-significant at both level of significance i.e., 0.05 and 0.01. Thus, it indicates that there is no significant relationship between Online Learning and Home Environment of Adolescents.

Hypothesis 1, "There will be no significant relationship between Online Learning and Home Environment of Adolescents" is thus Accepted.

So, we can infer that there is no significant relationship between Online Learning and Home Environment of Adolescents.

Figure 1.3 shows co-efficient of correlation between Online Learning and Home Environment among Adolescents

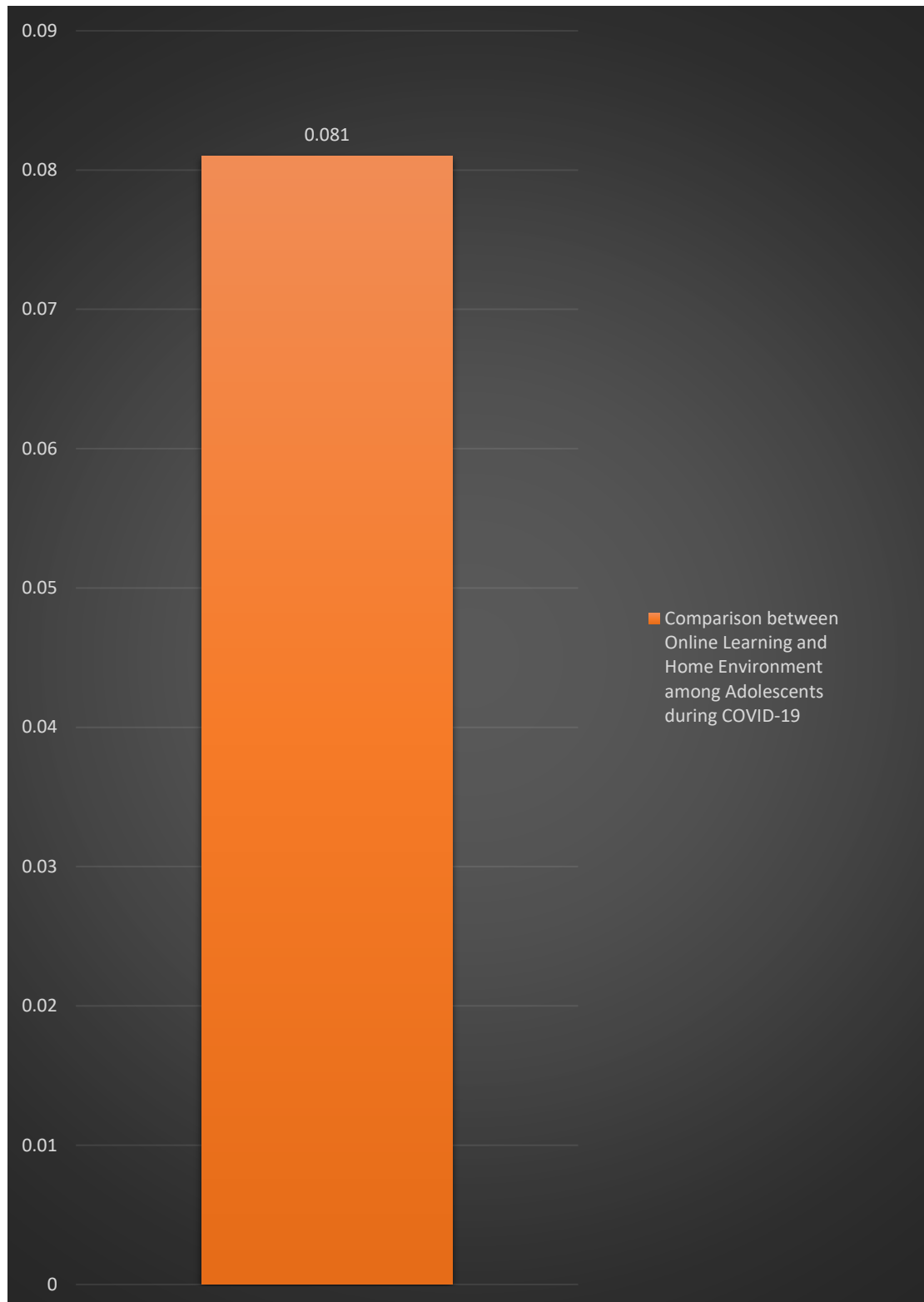


Figure 1.3 shows there is no significant relationship between Online Learning and Home Environment among Adolescents.

Hypothesis 2: There will be no Significance of Difference between Online Learning of Adolescents of Rural and Urban Area.

Table 1.4 showing values of Mean, SD, SE_D and t-ratio of Online Learning of Adolescents of Rural and Urban Area.

Groups	N	Mean	SD	SE _D	t-ratio	Level of Significance 0.05 and 0.01
Urban	50	93.52	6.185	0.656	0.062	Non-significant
Rural	50	91.14	6.446			

****Non -significant at 0.05 and 0.01 level of significance**

Critical value of 't' at 0.05 level =1.97

Critical value of 't' at 0.01 level =2.60

Table 1.4 shows Mean, SD, SE_D and 't' value of Online Learning of 50 Rural and 50 Urban Adolescents. The mean scores of Online Learning of 50 Rural Adolescents is 93.52 and SD is 6.185. The mean score of Online Learning of 50 Urban Adolescents is 91.14 and SD is 6.446. The SE_D for the two means is 0.656. The 't' value of online Learning of 50 Rural and 50 Urban Adolescents is 0.062. After consulting the table of 't' value the tabulated values are 1.97 at 0.05 level and 2.60 at 0.01 level of significance. The tabulated values, 1.97 and 2.60 are greater than the calculated value, 0.062 at 0.05 level and 0.01 level of significance. Hence, there is no significant difference between Online Learning of Adolescents of Rural and Urban Area.

Hypothesis 2, "There will be no Significance of Difference between Online Learning of Adolescents of Rural and Urban Area." is thus Accepted.

Figure 1.4 shows mean scores of Online Learning of Adolescents of Rural and Urban Area.

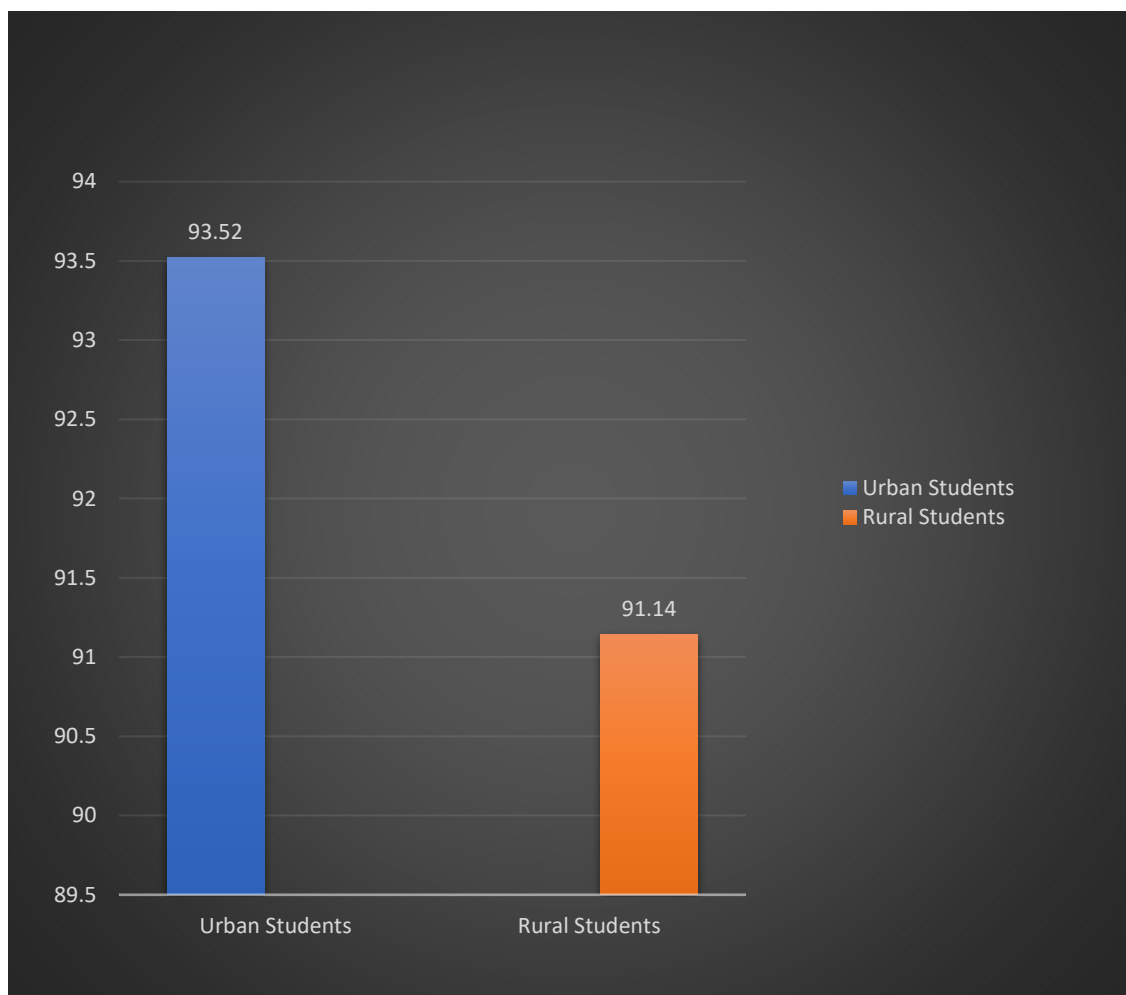


Figure 1.4 shows Adolescents of Urban Area have effective Online Learning as compared to that of Adolescents of Rural Area.

Hypothesis 3: There will be no Significance of Difference between Home Environment of Adolescents of Rural and Urban Area.

Table 1.5 showing values of Mean, SD, SE_D and t-ratio of Home Environment of Adolescents of Rural and Urban Area.

Groups	N	Mean	SD	SE _D	t-ratio	Level of Significance 0.05 and 0.01
Urban	50	96.36	9.538	1.348	0.286	Non-significant
Rural	50	94.46	8.125			

***Non-significant at 0.05 and 0.01 level of significance*

Critical value of 't' at 0.05 level =1.97

Critical value of 't' at 0.01 level =2.60

Table 1.5 shows Mean,SD,SE_D and 't' value of Home Environment of 50 Rural and 50 Urban Adolescents. The mean scores of Home Environment of 50 Urban Adolescents is 96.36 and SD is 9.538. The mean score of Home Environment of 50 Rural Adolescents is 94.46 and SD is 8.125. The SE_D for the two means is 1.348. The 't' value of Home Environment of 50 Rural and 50 Urban Adolescents is 0.286. After consulting the table of 't' value the tabulated values are 1.97 at 0.05 level and 2.60 at 0.01 level of significance. The tabulated values, 1.97 and 2.60 are greater than the calculated value, 0.286 at 0.05 level and 0.01 level of significance. Hence, there is no significant difference between Home Environment of Adolescents of Rural and Urban Area.

Hypothesis 3, "There will be no Significance of Difference between Home Environment of Adolescents of Rural and Urban Area." is thus Accepted.

Figure 1.5 shows mean scores of Home Environment of Adolescents of Rural and Urban Area.

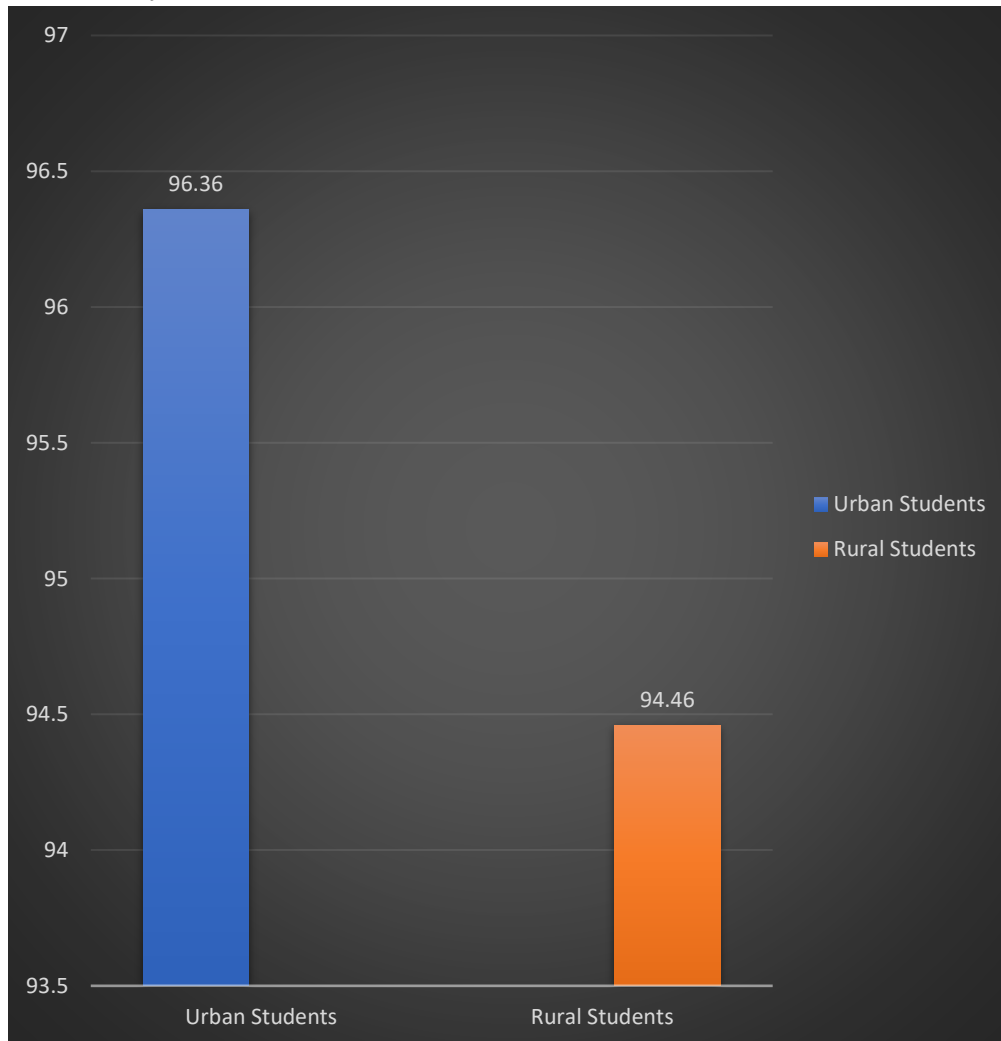


Figure 1.5 shows Adolescents of Urban Area have effective Home Environment as compared to that of Adolescents of Rural Area.

Hypothesis 4: There will be no Significance of Difference between Online Learning of Adolescents of Government and Private Schools.

Table 1.6 showing values of Mean, SD, SE_D and t-ratio of Online Learning of Adolescents of Government and Private Schools.

Groups	N	Mean	SD	SE _D	t-ratio	Level of Significance 0.05 and 0.01
Government Schools	50	92.30	5.056	1.068	0.962	Non-significant
Private Schools	50	92.36	7.559			

***Non -significant at 0.05 and 0.01 level of significance*

Critical value of 't' at 0.05 level =1.97

Critical value of 't' at 0.01 level =2.60

Table 1.6 shows Mean,SD,SE_D and 't' value of Online Learning of 50 Government and 50 Private School Adolescents. The mean scores of Online Learning of 50 Government School Adolescents is 92.30 and SD is 5.056.The mean score of 50 Private School Adolescents is 92.36and SD is 7.559. The SE_D for the two means is 1.068. The 't' value ofOnline Learning of 50 Government and 50 Private School Adolescents is 0.962. After consulting the table of 't' value the tabulated values are 1.97 at 0.05 level and 2.60 at 0.01 level of significance. The tabulated values, 1.97 and 2.60 are greater than the calculated value, 0.962 at 0.05 level and 0.01 level of significance. Hence, there is no significant difference between Online Learning of Adolescents of Government and Private Schools.

Hypothesis 4, "There will be no Significance of Difference betweenOnline Learning of Adolescents of Government and Private Schools." is thus Accepted.

Figure 1.6 shows mean scores of Online Learning of Adolescents of Government and Private Schools of Rural Area.

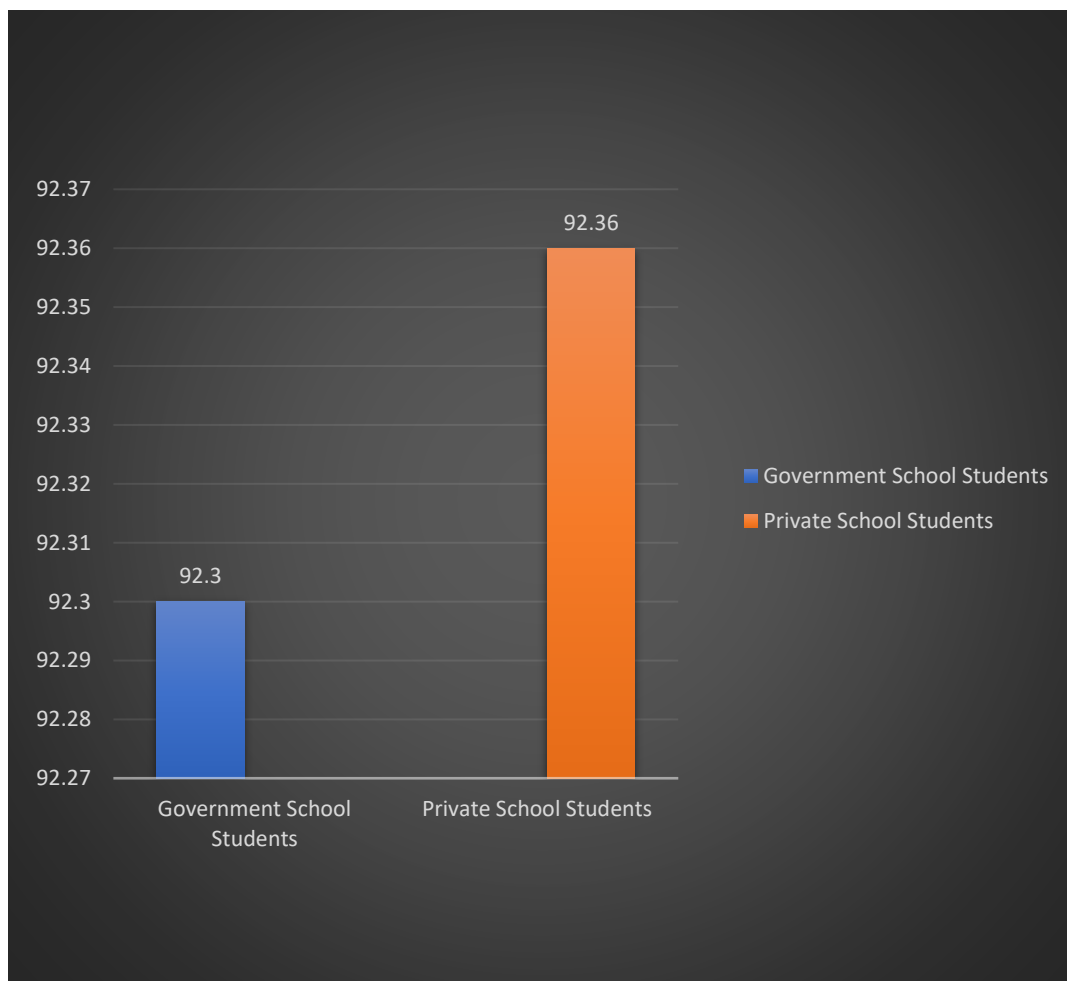


Figure 1.6 shows Adolescents of Private Schools have effective Online Learning as compared to that of Adolescents of Government Schools.

Hypothesis 5: There will be no Significance of Difference between Home Environment of Adolescents of Government and Private Schools.

Table 1.7 showing values of Mean, SD, SE_D and t-ratio of Home Environment of Adolescents of Government and Private Schools.

Groups	N	Mean	SD	SE _D	t-ratio	Level of Significance 0.05 and 0.01
Government Schools	50	93.66	5.727	0.810	0.094	Non-significant
Private Schools	50	96.16	8.730			

***Non-significant at 0.05 and 0.01 level of significance*

Critical value of 't' at 0.05 level =1.97

Critical value of 't' at 0.01 level =2.60

Table 1.7 shows Mean, SD, SE_D and 't' value of Home Environment of 50 Government and 50 Private School Adolescents. The mean scores of Home Environment of 50 Government School Adolescents is 93.66 and SD is 5.727. The mean score of 50 Private School Adolescents is 96.16 and SD is 8.730. The SE_D for the two means is 0.810. The 't' value of Home Environment of 50 Government and 50 Private School Adolescents is 0.094. After consulting the table of 't' value the tabulated values are 1.97 at 0.05 level and 2.60 at 0.01 level of significance. The tabulated values, 1.97 and 2.60 are greater than the calculated value, 0.094 at 0.05 level and 0.01 level of significance. Hence, there is no significant difference between Home Environment of Adolescents of Government and Private Schools.

Hypothesis 5, "There will be no Significance of Difference between Home Environment of Adolescents of Government and Private Schools." is thus Accepted.

Figure 1.7 shows mean scores of Home Environment of Adolescents of Government and Private Schools of Urban Area.

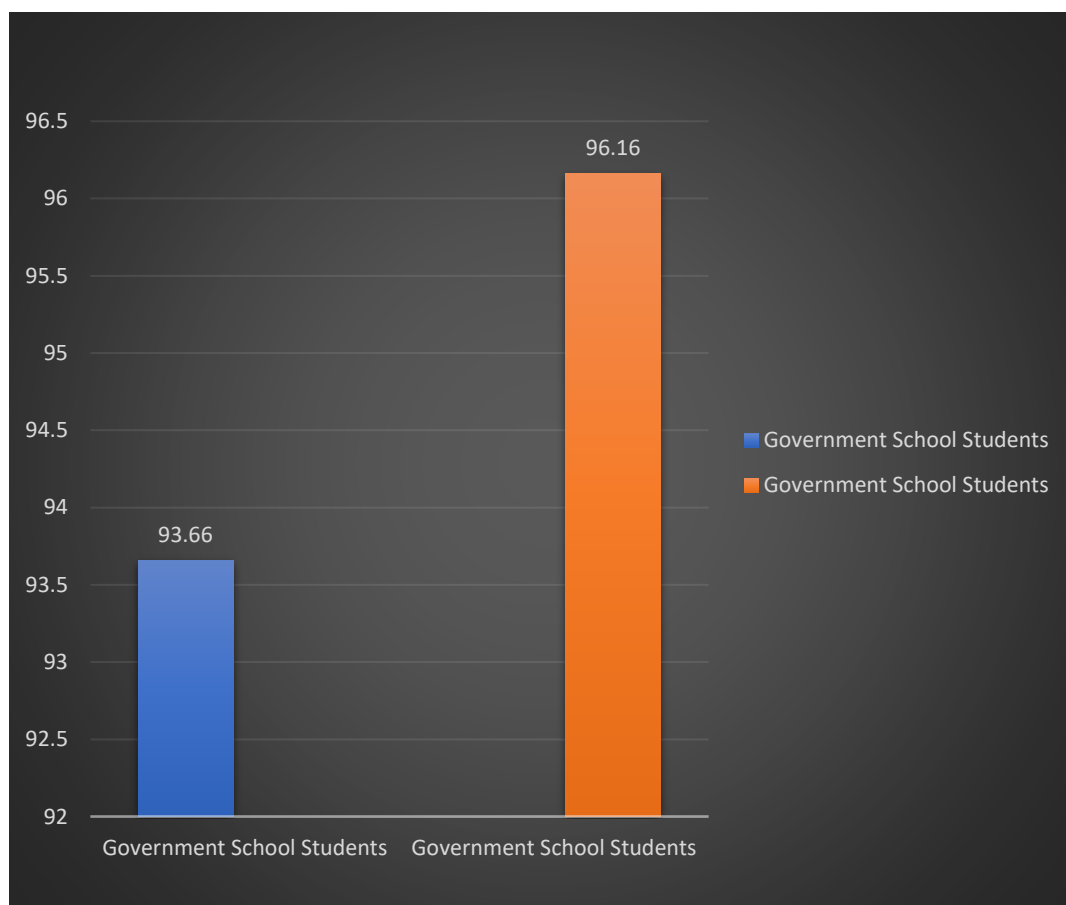


Figure 1.7 shows Adolescents of Private Schools have effective Home Environment as compared to that of Adolescents of Government Schools.

Conclusion

- 1 No significant correlation was found between Online Learning and Home Environment of Adolescents.
- 2 Adolescents of Urban areas had showed more effectiveness in Online Learning as compared to Adolescents of Rural areas.

- 3 Adolescents of Urban areas had showed more effectiveness in Home Environment as compared to Adolescents of Rural areas.
- 4 Adolescents of Private Schools had showed more effectiveness in Online Learning as compared to Adolescents of Government Schools.
- 5 Adolescents of Private Schools had showed more effectiveness in Home Environment as compared to Adolescents of Government Schools.

Educational implications

The present study illustrates that, without a shadow of doubts, COVID-19 has impacted almost all the spheres of life. When it comes to Education it has shun the pace of the academic activities. However, fortunately, Online Learning adoption process has successfully bridged this gap. By interacting via online modes teachers and students had harmoniously maintained the curricular activities. Undoubtedly, few hurdles have been encountered, the process seems effective overall. Apart from this, Home Environment also played a significant role in maintaining the education of the children. However, networking issues and lack of co-operation is seen in some cases, particularly in Rural or Remote areas. Visualizing the current needs and trends, I assert government and educational authorities must emphasize more on network accessibility and improvisation of the audio-visual aids. Parents and teachers should also be counselled keeping in mind the requirements and needs of the children, particularly in the context of epidemic.

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