

Effectiveness of Teaching and Learning from Home (TLFH) in Indian Context

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Abstract: This research investigation tends to find out the effectiveness of teaching and learning from home, in short TLFH in Indian context. TLFH is meant for both educators and learners is a exemplary, adaptive, and especially transformative challenge for learners. Especially in Indian context, the investigator needs to study the TLFH situations in multidimentiaonal aspects to focus the effectiveness. Multinational aspects denote the TLFH situations in the view of tutors, learners, parents, educationalist, and trainers and so on. Destined for these constraints, this study procedure focuses the learners and also the teachers, those both of them are involved in the process of teaching learning program. Initially some data explains about the teaching and learning conditions from home and the assisting online tools are elaborated to get a brief idea for clear understanding of the current context. Convenient sample is used in the study since the sample consists of both teachers and learners (high school level, higher secondary level and undergraduate level). Data is collected using google form and it is tabulate with SPSS software to arrive the result. The effectiveness is discussed in the conclusion part also the follow up activities should be discussed.

Keywords: *Teaching-learning, learners, education, online tools and technology.*

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Introduction

It is a universally accepted truth that education is the most vital necessity for learners right now. For all aspects of learners, the present education system seems to be the pertinent condition and it should be slightly in non-assessable mode for some learners beyond the personal consequences. Whatever may be the traits, the educationalist, teachers, learners, and practitioners, experts and other teaching professionals should not worry about this condition until the education should not be undertaken from home or learners' living places. But in the Indian context, the way that teaching and learning can be taught from home makes them the above listed persons to be worried about the effectiveness of teaching and learning practices that occurred in spite of institutions. On this occasion MHRD Ministry of Human Resources and Development emphasized that, most remote parts in India and the learners from these areas can be accessible with the teaching learning process and also got the learning materials there is no doubt within these. But the question is what percentage of learners can access this? How many learners are left out? What are the barriers? What kind of support do the learners and parents are looking for? Like these there are many questions raised without appropriate answers. This study has to focus teachers and learners as samples, since it correlates with the efficacy of teaching and learning process. As a domain, continence type of samples and random samples are used in the study. Wang et al., (2020) stressed that teaching and learning from home through online poses multiple confrontations due to insufficient experiences in conducting or attending live classes from home by the faculty and learners. But on the contrary, from this domain of learning the individual those who are all involved in the process of teaching and

learning home can acquire cognition of utilizing distinct online tools and methods, and focusing on recorded live conversation, and get stabilized with their promptness of their own working module. Crawford et al., (2020) made a quote in their study that this sudden transition of the methods of teaching from home made some learners and also faculties in a confused mode. Certainly there is a question raised that these online teaching methods from home can ensure the quality of teaching and learning. To address these kinds of questions the current investigation especially focused on the tutors and the learners, those who are involved in the teaching and learning process strictly at home due to some constraints. Also they are accessed with their previous working experience with a nominal educational process, which all happens in their own educational setup. This parallel assessment can be done in this study, and this is due to comparison and this focuses the effectiveness of teaching and learning from home in an Indian context. This survey can be done online and the samples can be targeted all over the state Tamil Nadu and Puducherry.

Teaching and Learning from Home

Teaching and learning from home is a typical condition that learners and the tutors are not physically in attendance in a traditional classroom setup. Information about curriculum is relayed through digital technology such as discussion boards, video conferencing and through online assessments. These types of teaching and learning in educational setup can take place over the internet from home with the use of technology, so it is also referred as e-learning or digital learning. Teaching and learning from home (TLFH) model emphasizes an interactive learning environment that automatically stimulates dialogue between learners and the instructor with nurture conditions. Often, the instructor acts as a

facilitator, or organizing the activities that engage learners directly rather than relying totally on lecture series and memorization. Online options for communicating with learners are available at massive numbers, and these options are also adopted for teaching, collecting the assignments and distributing the educational materials in the learner's surroundings. The one and only thing is learners experienced comfort in this digital platform that takes place at home for smooth occurrence of TLFH. Nowadays teaching and learning from home makes the learning process simple and it leads to a good educational setup that evolves students learning from home. This undertaken topic focuses and addresses some queries and tries to find out the fact and effectiveness of teaching and learning process at home in the Indian context.

Marwa et al., [1] in his investigation, they reported that learners committed with online technology from home could be an additional challenge for them because of technological constraints, delayed interaction, feedback. Also there are some chances of inability of the instructor to maintain the formal ongoing of instruction with relevant supporting materials correlated with information and communication technology. To overcome these kinds of discomfort on the part of learners, the tutors should be unlocking, concerned, sincere and flexible. Instructors facilitated with online lectures must be able to compensate for the lack of physical presence in the virtual classroom facilitated from home by creating a compassionate environment where all the learners experience comfort during TLFH. Failure can lead to trouble and an instructor can lead to a weak learning environment. For this the instructor needs to be sensitive, open and also be flexible for success for the teaching and learning conditions from home.

Review of Literature

Marwa et al., [1] reported that 80% of the staff members, learners agreed that technological skills of giving online teaching learning from home increases the value of education. In addition, this study highlights the factors and challenges that influence the acceptance of teaching-learning from the home environment in use of e-learning as a teaching learning tool to integrate education. Muthuprasad et al., [2] suggesting from his findings as majority of the learners evidenced positive attitudes towards online classes that conducted from their own place. They also indicated that there is a need for interactive session, assignments and quizzes at the end of each session to optimize the learning experience that takes place from home through online. As a conclusion, majority of the respondents (70%) are geared up to apt with online classes to manage the curriculum from home. Preponderance of the learners favored using smartphones as a tool to access learning. Girisha Lakshman Naik et al., [3] reported that more than 60% of students are not geared up for the online classes. The authors highlighted the factors behind this as lack of technical support, interruption of power supply in living places, pause in high-speed internet services, and also limited network data per day. Also learners feel that some portions that are already covered online from home need to redo again in nominal classrooms. At last the authors suggested and recommended to improve the effectiveness of teaching and learning processes that are manipulated in home.

Raja and Lakshmi Priya [4] in their studies "Sentiments and emotions extraction on teaching-learning from home (TLFH) and impact of online academic activities in India", they mainly focused on educational setup in the home environment. They revealed that most of the professions nowadays perform their work activities from home. Also in the education sector, the universities and

higher educational institutes deliver their online sessions through various digital platforms like Google classrooms, Google meet, Zoom, Microsoft and so on. They analyzed rigorous use of online platforms from home for e-classes and they accessed mixed responses from the learners. Analysis emphasizes the learner's sentiments and emotions, and this helps the educators to understand the new normal situation and guide researchers for further studies.

Need for the Study

The primary purpose of this investigation is to access the effectiveness of teaching and learning from home in the Indian context

- To strengthen online learning from home when institutions are closed.
- Reducing burden on learners and parents.
- Making the learning system most digital from home.
- To make teachers to incorporate technology effectively into their teaching practices
- To impel learners to overcome their digital learning difficulties that are associated with teaching and learning from home.

To find the effectiveness of the undertaken topic the study strives to identify the needs of learners, teachers and parents, and also the situational barriers that happen during the virtual session and answer for these data can be focused on the appropriate side.

Methodology

This investigation tends to focus on the effectiveness of teaching and learning from home in an Indian context, so the investigator needs to focus learners and also tutors those who are working from home. A web based survey has been conducted from learners and tutors from various educational institutions. A structured and unstructured questionnaire was designed to assess the current teaching learning condition from and the previous traditional methods from their own educational institutions. Overall the sample size is 50. Convenience type sample method as adopted to finalize this process by the researcher. The sample is cracked with 20 tutors, 10 learners from secondary level, 10 learners from higher secondary level, 10 learners from undergraduate. This split-up of samples is planned in the manner to capture the accuracy of data and also to grasp the data from multiple levels in terms of education type.

Hypothesis

1. There exists a significant difference in the mean scores of satisfactory level of teachers and learners among virtual platforms from home in Indian context.
2. There exists a significant difference between tutors and learners on assisting online tools that organize from home in an Indian context.
3. There exists no significant difference in the mean scores of accessibility of virtual programs on behalf of learners from home due to personal variables.
4. There is a significant effect between offline and online mode in teaching-learning conditions performed from home in the Indian context.

Results and Discussions

The objective was to compute the statistical invariables such as Mean, Median, Mode, Standard Deviation, Skewness, Kurtosis and t value of Satisfactory level and assisting tools for tutors and learners. The statistical aspects are summed up in table 1.

Hypothesis

Table 1: Summary of Mean, Median, Mode, Standard Deviation, Skewness, Kurtosis and 't'-value of Learners and Tutors of focusing the defined variables

Variables	Category	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis	't' value
Satisfactory Level	Learners	50	6.26	7.25	9.00	2.67	-0.75	2.64	9.44*
	Tutors		19.60	18.0	18.00	7.26	0.65	3.24	
Assisting Tools	Learners	50	6.78	6.50	6.50	1.72	-0.04	2.09	0.89@
	Tutors		8.30	8.00	6.00	2.52	0.93	4.30	

Note: @ Not significant at 0.05 level, * Significant at 0.05 level

From table 1, the statistical constants of measures of central tendencies such as mean, median and mode of learners in the satisfactory level is 6.26, 7.25, 9.00 respectively and the measure of dispersion i.e. standard deviation is 2.67. From this data, it seems that there is slight variation between the values of the measure of central tendencies and the value of skewness is -0.75. It indicates that the distribution is moderately skewed. The value of kurtosis is 2.64, which suggests that the distribution is platykurtic.

The mean, median and mode of tutors in the same variable are 19.60, 18.00, 18.00 respectively and the S.D. is 7.26. The value of skewness and kurtosis is 0.65 and 3.24. The value of skewness shows that the distribution is positively skewed i.e. majority of the scores of the post-assessment lie towards the lower end of the distribution and the value of kurtosis shows that the distribution is leptokurtic. The mean, median and mode of learners in the assisting tools are 6.78, 6.50, 6.50 respectively and the S.D. is 1.72. The value of skewness and kurtosis is -0.04 and 2.09. The value of skewness shows that the distribution is negatively skewed and the value of kurtosis shows that the distribution is platykurtic. The mean, median and mode of tutors in the same variable are 8.30, 8.00, 6.00 respectively and the S.D. is 2.52. The value of skewness and kurtosis is 0.93 and 4.30. The value of skewness shows that the distribution is positively skewed and the value of kurtosis shows that the distribution is leptokurtic. The indices further suggest that the distributions are not badly skewed or not much deviation from normality. So we can apply the parametric tests for these distributions.

It is observed that the obtained 't' value (9.44) is significant at 0.05 level. It shows that the satisfactory level of tutors and learners differs. Therefore, the hypothesis "there exists a significant difference in the mean scores of satisfactory level of teachers and learners among virtual platforms from home in Indian context" is accepted. Also it is observed that the obtained 't' value (0.89) is not significant at 0.05 level. It shows that the level of assisting tools were similar in tutors and learners. Therefore, the hypothesis "there exists a significant difference between tutors and learners on

- There exists a significant difference in the mean scores of satisfactory level of teachers and learners among virtual platforms from home in Indian context.
- There exists a significant difference between tutors and learners on assisting online tools that organize from home in an Indian context.

assisting online tools that organize from home in an Indian context" is rejected.

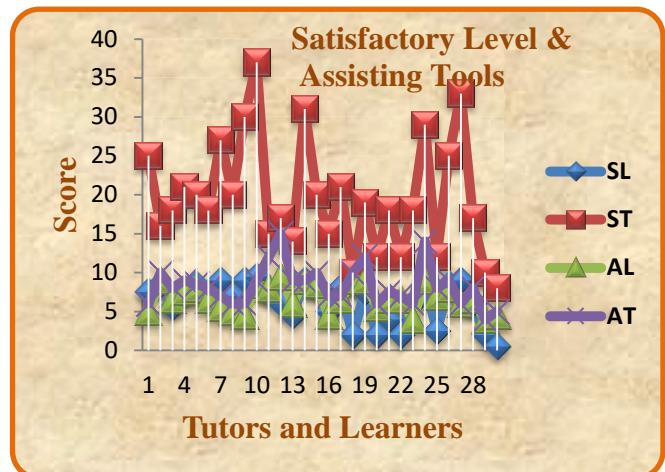


Figure: 1 Graphical Representation of Tutors and Learners Scores at Satisfactory level and assisting tools

Note: SL- Satisfactory level of Learners, ST- Satisfactory level of Tutors, AL-Level of Assisting tools on Learners, AT- Level of assisting tools on Tutors

Comparison of Mean Scores of Learners due to Variation in the Personal Variables.

The objective was to compare the mean scores of learners with reference to their personal variables such as locality and medium of instructions respectively. The calculated values are represented in table 2.

Hypothesis

There exists no significant difference in the mean scores of accessibility of virtual programs on behalf of learners from home due to personal variables.

Table 2: Mean, Standard Deviation and 't' value of Learners Due to Variation in the Personal Variables

Category	Personal Variables		N	Mean	SD	Calculated t-value
Learners	Locality	Rural	13	7.81	1.23	3.16*
		Urban	17	5.09	2.89	
	Medium of Instruction	Tamil	07	22.57	8.98	1.25@
		English	23	18.7	6.62	

Note: @ Not significant at 0.05 level, * Significant at 0.05 level

Concerning the personal variable locality on the learners, the obtained t value (3.16) is significant at 0.05 level. This indicates that, there exists a significant difference in the level of mean scores of learners due to variation in the personal variable locality.

Further analyzing the personal variable medium of instruction, the obtained t value (1.25) is not significant at 0.05 level. This

indicates that, there exists no significant difference in their mean scores of learners due to variation in their medium of instruction. Thus the stated hypothesis “There exists no significant difference in the mean scores of accessibilities of virtual programs on behalf of learners from home due to personal variables” is accepted with regard to medium of instruction and the same is rejected with regard to locality.

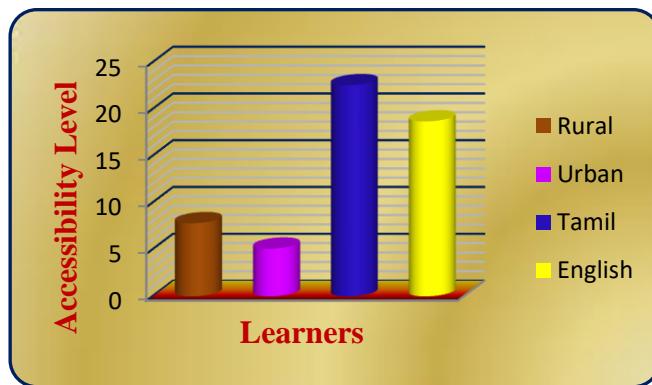


Figure: 2 Graphical Representation of Personal Variables in Accessibility level of Learners

Effect of Interaction between Online and Offline Mode in Teaching-Learning

The objective was to study the effect of interaction between online and offline mode in teaching-learning. There are two levels of mode, namely virtual teaching and actual method of teaching. 2X2 factorial design ANCOVA was used for analyzing the data and the results are given in table 3.

Table 3: Summary of 2X2 Factorial Design ANCOVA of Teaching-Learning Conditions

Source of Variance	Sum of Squares ($SS_{y.x}$)	df	Mean Squares of Variation($MSS_{y.x}$)	$F_{y.x}$	p
Online Mode (A)	49.22	1	49.22	12.95**	0.0005
Offline Mode (B)	5042.26	1	5042.26	1326.81**	< 0.0001
A X B	2.17	1	2.17	0.57@	0.4518

Note: ** Significant at 0.01 level, @ Not Significant at 0.05 level

➤ Effect of Online and Offline Mode for Learners

From the table 3, it can be seen that adjusted F values are 12.95 and 1326.81 which are significant at 0.01 levels. It clearly indicates that the adjusted mean scores of online mode teaching and offline mode teaching differ significantly. So there was a significant effect in online and offline mode.

Hypothesis

There is a significant effect between offline and online mode in teaching-learning conditions performed from home in the Indian context.

➤ Effect of Interaction between Online and Offline Mode for Learners

From the table 3, it can be seen that the adjusted F value for interaction between treatment and academic achievement is 0.57 which is not significant at 0.05 levels. Thus there was no significant effect of interaction between online and offline mode on teaching-learning. Thus the hypothesis “There is a significant

effect between offline and online mode in teaching-learning conditions performed from home in Indian context” is rejected. The result revealed that the teaching and learning were found to be independent of interaction between online and offline mode.

Conclusion

In general, teaching-learning conditions that occur from home through online have many advantages and disadvantages in view of tutors and learners. These advantages and disadvantages are based on availability of network during online sessions, coverage of content in a short span of time, long time usage of mobile, laptop or desktop computer etc determines a lot. This current investigation focuses satisfactory level of teachers and learners among virtual platform, assessing online tools, assessing virtual program by only learners and effect between offline and online mode in teaching-learning conditions in Indian context is particularly studies. The results are mostly arrived in favor of the undertaken topic. As the first hypothesis is accepted, it shows that the satisfactory level of assisting online tools were similar in part of tutors and learners are equal.

Initially this condition favors the effectiveness in online teaching-learning process. But by the rejection of second hypothesis reveals that assisting online tools by tutors and learners shows some modulation. For these the learners are planned with some bridge course program that focuses the online program. The output of the third hypothesis reveals that there is no problem in accessing virtual programs by learners, with medium of instruction and with locality of learners further follow up is needed. The final hypothesis status, tends that the teaching and learning were found to be independent of interaction between online and offline mode. Ultimately teaching and learning from home (TLFH) was considerable effective in the Indian context, but there is some follow-up needed in case of some of the variables such as coverage issues, follow-up etc.

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