PARADIGM SHIFT IN TEACHING-LEARNING PROCESS: AN EXPLORATORY RESEARCH

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Abstract

The new normal has transformed educational practices with the enforcement of digitalization. Though learning through technology already exists, the maximum utilization has happened during this pandemic. The online learning has brought in lot of discipline issues among students in terms of their etiquette, involvement and motivation. Therefore, the present study intends to explore the factors involved in online learning process among school students. Due to lack of face-to-face interaction, teachers and students may find difficult to clarify each other's thought process. The study also intends to understand the clarity of learning and retention capacity of the students. Exploratory survey research used. And 167 students participated in the study. The data were collected through questionnaire developed especially for this study. The results of the study reveal that students have high score on all the factors expect wellbeing. And also, the study spells out major challenges faced by the students in online learning. Thus, study has identified the factors that are less explored in the research area of online learning. Moreover, the study highlights the required modifications need to be incorporated in the online mode of teaching.

Keywords: online classes, online learning, traditional learning, motivation, clarity, challenges in online learning.

Introduction

The COVID-19 has resulted in closure of educational institutions in many countries. In this situation, technology have become a boon in continuing the process of teaching and learning. Winograd, and Kalmon (2004) defined online learning as "education in which instruction and content are delivered primarily via the Internet" (p. 95).Though online learning offers a better replacement of traditional classroom learning at this point of time, readiness to accept and learn school subjects through online classes, online homework submissions and online exams might bring changes in both teaching and learning processes such as change in interaction pattern, study habits, number of hours spent in studying and less of physical activity, etc. Along with this there are major hindrance in bringing online learning in India like the 'Digital divide'. The internet penetration rate in the country is 50 percent (Statistica Research Department), yet there are still 50 percent of population who do not have access to the internet. The online learning might also influence the enrolment rate' of students in school, since many children in rural India are sent to school for the Mid-day meal scheme. Also, without proper regulation there is a possibility that students can misuse the data like online games, social media etc.

When a traditional classroom setting is replaced with the online mode, there can be various changes in the behaviour and attitude of the students. Some hyperactive students might be bored to listen to the classes in online mode. Another major problem in online learning is that the teacher might not even know whether all students are listening to the online class. Only when a student is intrinsically motivated to learn he/she might listen to the classes. There is a difference between motivation level of students in online classes versus tradition learning (Balan et.al, 2020). Few studies also found that there

was no significant difference between online and face to face learning (Ferdig et.al (2005) and Hughes et al. (2005)).

Traditional Classroom learning provides a stimulating environment through group activities, friends, peer interaction, socialization, cooperative learning, and physical presence of a teacher which will be difficult to bring in online learning. Moreover, online learning creates a psychological distance between the learner and the teacher. Not all students are self-motivated to learn, therefore the physical presence of teachers and stimulating classroom learning is very important in the early years of education of an individual.

Significance of the study

As the educational sector is facing lot of challenges in the arena of teaching and learning process, the online learning has become the 'new normal' forcing both teachers and the students to adapt to the new way of learning. The traditional classroom teaching helps students not only to learn the subject, but also help them to mold their behavior as well as discipline themselves. Due to lack of face-to-face interaction, teachers and students may find difficult to clarify each other's thought process. The complete transformation to online mode of teaching and learning is entirely new to the teaching-learning community, the research in this area is very scant. In this scenario, the present study is an attempt to understand the intricacies of the online learning process. Keeping this in mind the study explores the factors involved in online learning among school students. The major factors explored in this study are the motivation of students to learn online, the clarity of learning and their perception about the learning process through online. Since, this is an exploratory study, qualitative data were also collected in order to substantiate the quantitative data.

Objectives

1)   To develop a semi-structured questionnaire to explore the aspects in online learning process.

2)   To explore the level of motivation, amount of clarity in content, attention level, retention capacity, perception of teacher effectiveness, perception of parental support, wellbeing and perception of learning process among school students learning through online classes.

3)   To find out the association between gender and the factors of online learning.

4)   To explore the challenges faced by the students in online learning process.

Method

The present study is an exploratory research. This method of investigation was adopted as it helps to reveal the factors less explored previously. A semi structure questionnaire was designed based on the previous studies and focus group discussion with 10 school students who were attending online classes. The questionnaire consisted of 8 dimensions: Motivation, Content clarity, Sustaining attention, Retention capacity, Perception of teacher effectiveness, perception of parent's support, wellbeing and the perception of learning process. The questionnaire was circulated through emails by the respective class teachers to their students.

Participants

School students from class VI to XII standard in the age group of 11 to 17 years were the participants of the study. Two schools in Madurai district were approached and the data were collected from 167 (boys= 78 and girls= 89) students from both the schools.

Content Validity

Content validity was carried out to find the extent to which each items represent the dimensions it intends to measure. The subject matter experts such as school teachers, psychologists and research scholars were asked to examine each item and provide suggestions. Based on their suggestions a total of 56 items with eight-dimension questionnaire was used for the data collection.

Results   and   Discussion   Split-Half Reliability

The split half reliability was established and the item with reliability score of above 0.5 were included. The item number 47 and 48 were

removed and the questionnaire with total of 53 items were subjected to further analysis.

Percentage Analysis

The results of percentage analysis indicate that a greater number of students (64.07%) are motivated to study their school subjects through online mode of classes. A study conducted by Kellogg and Politoski, (2002) also found that students are more motivated to learn in online classes. And also, 52.1% of students reported high clarity in the content of teaching through online classes, and many were able to sustain their attention (62.88%) during online classes. Though nearly half of the participants reported high clarity in the content, the percentage of students reporting less clarity is quite high (47.90%).

Also, the students have reported higher retention capacity (70.66%) in online classes. Further, the perception of teacher effectiveness (70.66%) and parental support (52.1%) is also found to be positive among the participants. Whereas, the results indicate a low level of wellbeing reported by the students. On the whole, majority of the students have reported a positive perception of their learning process (56.89%) through online mode. Though, students find the online learning to be facilitative and practical, they don't find it more engaging as traditional method of learning, which is supported by the finding of the study by Lowe et.al (2010).

Gender Difference

Chi square analysis was carried out to find out the association between the gender and eight dimensions. The results revealed that there is a significant association between gender and content clarity, sustaining attention and perception of learning process compared to other dimensions. The girls have reported high content clarity, sustaining attention, and positive perception of the learning process through online mode.

Thematic Analysis

The thematic analysis throws light on the various challenges faced by the students during online classes. Majority of the students have reported that they faced lot of technical issues such as internet connectivity, app-based issues, device compatibility etc. Also, many students have opined that they do not have conducive environment in their home to attend online classes. Moreover, students have reported that they felt emotional distress which is also

substantiated by the finding from the quantitative data. Thus, though online learning is helping students to continue their studies, it poses lot of challenges which are required to be addressed by teachers, parents, institutions and the government.

Table 1 *Represents the split-half reliability score for each dimension.*

Dimensions	No. of items	Split-half Reliability Score
Motivation	9	0.78
Content Clarity	8	0.88
Sustaining Attention	3	0.64
Retention Capacity	6	0.77
Perception of Teacher Effectiveness	12	0.91
Perception of Parent's Support	6	0.68
Wellbeing	3	0.69
Learning Process	6	0.85
Total No. of Items	**53**	

Table 2 *Represents the percentage analysis of eight dimensions.*

Dimensions	Low (in percentage)	High (in percentage)
Motivation	35.93	64.07
Content Clarity	47.90	52.1
Sustaining Attention	37.12	62.88
Retention Capacity	29.34	70.66
Perception of Teacher effectiveness	29.34	70.66
Perception of Parental Support	47.90	52.1
Wellbeing	55.69	44.31
Perception of Learning Process	43.11	56.89

Table 3 *Association between gender and eight dimensions of online learning.*

Dimension		Low	High	Total	x^2	df	p
Motivation	Girls	28	61	89	1.652	1	0.19
	Boys	32	46	78			

Content Clarity	Girls	35	54	89	5.619	1	0.02*
	Boys	45	33	78			
Sustaining Attention	Girls	25	64	89	6.665	1	0.01*
	Boys	37	41	78			
Retention Capacity	Girls	24	65	89	0.518	1	0.47
	Boys	25	53	78			
Perception of Teacher effectiveness	Girls	22	67	89	1.964	1	0.16
	Boys	27	51	78			
Perception of Parental Support	Girls	42	47	89	0.39	1	0.84
	Boys	38	40	78			
Wellbeing	Girls	48	41	89	0.238	1	0.62
	Boys	45	33	78			
Perception of Learning Process	Girls	32	57	89	3.982	1	0.04*
	Boys	40	38	78			

* $p = < 0.05$

Table 4 *Challenges faced by students in online classes*

Categories	Description	Examples
Technical hurdles	The disruption during the class due to technical glitches.	➢ Voice will break very often. (K.H, Male, 18years). ➢ I dislike online classes, so many network problems cannot interact with my mam. (A.T, female, 14 years)
Economical barriers	The financial constraints to afford the gadgets to attend online classes.	➢ I prefer only regular teaching, because some students have no smart phones and it might be too difficult to study (R.P, Female, 17 years) ➢ My father only has phone, he is going to work in that time how can we listen online class. (R.B, Female, 14 years)

Physiological Constraints	The physical difficulties faced as a result of attending online classes.	➤ Because of online class i had headache, eye pain. I am not unable attend the regularly. (H.E, F, 15years) ➤ Severe headache because of watching phone. (T. J, Female, 12 years)
Interpersonal Communication	Relating to the people and communication with teacher and friends.	➤ My opinion is Regular classes in my school because it is direct interaction between my teacher and myself. Doubt clarification is difficult. Carelessness in my studies due to online classes. (H.A, F, 15 years).
Home Environment	The place of domestic live and the aspects of living environment where the students live and attend the online classes.	➤ While online class house issues got distract me more.so I can't connect at all. (H.A, Male, 17years) ➤ Sometimes the class atmosphere not be felt. (P.R, Female, 16years) ➤ Family problem, disturbance (A.R, Female, 14 years)
Understanding of concepts	The ability to grasp the information delivered in online classes.	➤ Not interested in online because anything not understanding. (N.I, Female, 15years) ➤ Hard to recall the subject. (A.M, Male, 15 years)
Emotional Wellbeing	The emotional investment made during the online classes and the ability to adapt to the change & overcome the stressors.	➤ Lots of homework stress, don't have time to spent with my family. On online class we wouldn't have time play, do our hobbies .For eating also we don't have time. (R.B, F, 14 years) ➤ As a student I get disappointed by online class. Teachers want to just complete their portions and not about the mentality of a student. I want school atmosphere even in my house. That joyful moment in between the classes and coming back to lessons. (H.A, 15years)

Major Findings of the study

The study found that students have high level of motivation to learn in online classes. Whereas, students have shown low level of wellbeing though they have shown high attention level, clarity, retention capacity, and positive perception about teacher effectiveness, parental support and learning process in learning through online classes. Female students tend to have more clarity, attention and positive perception of learning process compared to male students.

Educational Implications

1.   Schools should take into account of the emotional wellbeing of the students and equip them through psychological techniques like relaxation, stress management, yoga and life skill classes as many students have reported poor wellbeing in this mode of learning.

2.   Teachers can adopt various new teaching methods to help students to improve the clarity of the content delivered through online mode.

3.   Teachers can create an online classroom environment that is more engaging and interactive, as students perceive a lack of interpersonal communication in online learning.

4.   Parents can spend more time with students to understand their difficulties, and how they are adapting to the new way of learning. As teachers cannot be there physically, parents need to take the role of both teacher a parent at home.

5.   Educational institutions and the government can address the difficulties pointed out in order to make the online learning more conducive and engaging for the students.

Acknowledgment

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