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Perception of Adolescent School Students towards Learning Mathematics and Languages through On Line Classes

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Abstract: Covid – 19 has drastically changed the world. We are now facing one of the worst crises in human history. We could never imagine of an academic year without normal schooling.Teachers, students and parents are compelled to depend on online learning platforms. This study is conducted to know the perception of adolescent school students towards learning mathematicsand languages, two common papers in School Education; through on line classes. The sample taken were 100 students who were in their final years of schooling, the data was collected in google forms, the tools used were three point perception scale, the statics used were percentage analysis, Mean,Standard deviation and test of significance to find the significance of difference between two Means.The results of the study show that students were more positive in learning languages through on line classes than learning Mathematics through on line classes.

Key Words: Perception, On line classes, Higher Secondary School Students

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I. INTRODUCTION

Covid– 19 pandemic has interrupted and changed the lives of people all over the world. Health and economic sector is getting adversely affected. Education sector is trying to cope with the changed world order. Due to soaring number of covid - 19 positive cases in the world, countries all over the world has decided to shut down universities, schools and colleges. So, the government has decided to initiate and implement alternate steps in this period of uncertainty of which major steps are related to the use of new developments in the field of information technology. To secure the public health, conventional class rooms, teaching methods and mediums were changed. In this situation, online classes were a solution. From primary to university level all Educational Institutions are adopting online classes. But online classes may not be fully compatible with all subjects. In this case, the study is undertaken to identify the possibilities of online learning based on two listed subjects. The perception of Adolescent students on the online classes on Mathematics and languages were analyzed, conclusions were drawn by comparing and analyzing the response of 100 students separately from online survey conducted by the Researchers through Google forms.

The results of the study conducted by Smart &Cappel (2006)[1] suggest that instructors should be selective in integrating online units into traditional, classroom-delivered courses and this integration should be carefully planned based on learner characteristics, course content, and the learning context.Amritesh& Subramanian (2019)[2]advocatethat it is easy to understand the concepts and experiments using virtual learning environment as compared to old way of learning.The study by Carrie, Raile, &Nan Yu (2014)[3]showsthat students do not see online classes equivalent to face-to-face classes. The findings of this study also suggest that the perception of greater flexibility may be the reason for the demand for online classes.

II. METHODOLOGY

2.1: Method -Online survey using Google forms was used for this study.

2.2: Tools - The tool used for this study was a Perception Scale with 20 itemsprepared by the investigators.Three options were given for each item. The response is marked in the column provided. Among the three options, there is one positive option, one neutral option and one negative option. The positive option carries three marks, the neutral option carries two marks and the negative option carries one mark.

2.3: Sample - A sample of 100 higher secondary school students from the state ofKerala in India was selected randomly for the study. Higher Secondary classes are classes eleven and twelve, the last two years of Schooling in India after which students can join Arts and Science or professional colleges.

2.4:Statisics - The statistics used for this studywere percentage analysis, Mean, Standard deviation and test of significance (t test) to find the significance of difference between two Means. The t-test is a type of inferential statistics used to determinewhether there is a significant difference between the means of two groups which may be related a certain features.

The equations used are given below:

(i) $\bar{x} = \frac{\sum_{i=1}^{n} x_i}{N}$

- $\bar{x}$is the arithmetic mean, $\sum_{i=1}^{n} x_i$ is the sum of all the scores and N is the number of scores.

(ii) $\sigma = \frac{\sqrt{\sum(X-x)^2}}{N}$

- $\sigma$is the standard deviation, $\sum (x-\bar{x})^2$ s the sum of squared deviation of the scores from arithmetic mean and N is the number of scores.

(ii) $t = \frac{\bar{x}-\mu}{\sigma/\sqrt{n}}$

- t is the t statistic,$\bar{x}$ is the arithmetic of sample, μ is the comparison mean, σ is the standard deviation and n is the sample size. (Gupta & Kapoor,2009)[4]

III. OBJECTIVES OF THE STUDY

- To find out the perception of adolescent school students towards learning mathematics through online classes
- To find out the perception of adolescent school students towards learning languages through online classes
- To compare the perception of adolescent school students towards learning mathematics and languages through online classes
- To compare the perception of male adolescent school students towards learning mathematics and languages through online classes.
- To compare the perception of the female adolescent school students towards learning mathematics and languages through online classes.

IV. HYPOTHESES OF THE STUDY

H1: There is a significant difference in the perception of adolescent school students towards learning mathematics and languages through online classes in the total sample.

H2: There is a significant difference in the perception of male adolescent school students towards learning mathematics and languages through online classes.

H3: There is a significant difference in the perception if female adolescent school students towards learning mathematics and languages through online classes.

V. ANALYSIS AND INTERPRETATION OF DATA

For this study, mean perception score of students towards learning mathematics and languages through online classes were calculated and these values were compared using t-test (P value is assumed to be 0.05)

Table - 1

	N	Mean	Varience	t-static	P(T<=t)
Perception of Adolescent school students towards learning mathematics through online classes.	100	46.98	32.605	5.88	1.80
Perceptionof Adolescent school students towards learning languages through online class	100	51.33	22.122		

Table - 1 show there is significant difference in the perception of adolescent school students towards learning mathematics and languages through online classes and students show much interest in learning languages through online platforms than learning mathematics through the same platform.The scores of Male and Female students were analyzed separately.These values were then compared using t-test on the basis of gender.

Table - 2

	Gender	N	Mean	Varience	t-static	P(T<=t)
Perception of Adolescent school students towards learning mathematic through online classes.	Male	55	96.4	29.8	5.639	1.48
Perceptionof Adolescent school students towards learning languages through online classes.		55	51.78	20.28		

Table - 3

	Gender	N	Mean		t-static	P(T<=t)
Perceptionof Adolescent school students towards learning mathematics through online classes.	Female	45	47.68	35.85	2.67	0.0091
Perceptionof Adolescent school students towards learning languages through online classes.		45	50.77	24.31		

Table –2 and Table - 3 shows there is significant difference in the perception of adolescent school students towards learning mathematics and languages through online classes and both male andfemale students have better perception towards languages through online classes compared to learning mathematics through online classes.

VI. CONCLUSION

The findings of the study show that 38.36%, 48.91% and 12.72% of the adolescent school students have above average, average and below average scores regarding the perception towards learning mathematics through online classes, while 64.65%, 31.91% and 3.52% of the adolescent school students have above average, average and below average scores regarding the perception towards learning languages through online classes.

The results of the study reveal that there is significant difference in the perception of adolescent school students in learning languages and mathematics through online classes.

The perception of adolescent school student (both female and male) towards learning languages through online classes are better than perception of adolescent school students towards learning mathematics through online classes.Online study of language and literature studies are more acceptable to children than onlinestudy of mathematics.(t value is 5.88).Online learning of language and literature is easier than online learning of mathematics for both gender.(For male students t value is 5.63. For female students t value is 2.67)

When the responses of students towards online class of Mathematics and Languages are analyzed, it is realized that learning mathematics is less acceptable for students through on line classes than languages and literature.The survey found that vast majority of students; regardless of gender find online classes easier to learn languages. Online classes are available for enjoyinglinguistic subjects, but for subjects like mathematics, there are difficulties in understanding effectively through online method. Such difficulties are due to differences in the nature and structure of the subjects. Such subjects may be presented in different ways usingdifferent types of soft waresto facilitate learning but students' responses reveal that understanding is more possible by learning in the physical presence of the teacher.

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