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A study to assess the knowledge and attitude regarding online classes among high-school students in selected schools at Mangalore

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Abstract

Online education has a major impact throughout life on the education and development of high school students. The aim of the study is to assess the knowledge and attitude of high school students regarding online classes. A descriptive correlational research design was adopted and by using convenience sampling technique, 60 high school students were selected. A knowledge questionnaire and an attitude scale were used to collect the data. Descriptive and differential statistics was used for data analysis. The major findings of the study revealed that there was a not significant moderate positive correlation between knowledge and attitude of high school students regarding the online class.

Keywords: Online class, knowledge, attitude, high school

Introduction

Education is the process of transferring knowledge value skills and beliefs from one individual to another. Distance education originated in the United States in 1800's when teachers and learners at the University of Chicago were at different location and tried to connect through correspondence courses in the mid 1980's, the first online college courses were initiated by several universities and schools. The advent of internet was a catalyst for moving distances online education to the next level [1]. A internet is now playing a big role in our life and dictating how we live socialize teach and learn. As the internet is developing in to a main educational tool, online offers the educators and the leaners access to numerous resources. During the last decade online education of various kind often called distance education or web-based education has become a normal part of many university programmes [2].

Online teaching and learning are designed to reach and engage the modern learner on one-to-one basis anywhere, anytime. A popular one involves massive open online courses (MOOC), which have grown involving many researchers and research institutions [2]. The reason for offering online course include easy and convenient access for students' higher degree completion rates and the appeal of such courses to non-traditional students. In a similar vein barrier to the adoption of online courses include lack of faculty commitment and high cost of implementation and delivery of courses [3].

The challenges of online learning can impact children to a great extent; loss of motivation, self-discipline and the need to study are some of the biggest problems children face. Impacts include the lack of efficiency in technology, the difficulty for children to understand the concepts, taught, and online learning cause social isolation and results in pupils not developing the necessary communication skills [4].

Although online courses offer flexibility for the learner, negative effects can hinder the learning process to ensure a positive experience essential to success. Prospective students must consider the downside of online learning before making the decision to learn in a virtual classroom [5].

Online teaching and learning are relatively new. It is exploding in recent years as an option in colleges and universities both within the US and abroad. Most universities and colleges agree that online education is critical to their long-term strategy. Online courses are best taught when they are engineered to take advantage of the learning opportunities afforded by the online technologies.

As the demand for online education by those who have jobs and require lifelong education increases, there are more and more expectations on the implementation of on teaching and learning system [6]. Hence the investigator felt the need to undertake the study: Knowledge and attitude of students regarding online classes among high school students in selected schools of Mangalore.

Statement of the problem

A study to assess the knowledge and attitude regarding online classes among high-school students in selected schools of Mangalore.

Objectives

The objectives of the study are to

1. Determine the level of knowledge regarding online classes among high-school students in selected schools of Mangalore
2. Determine the attitude of high-school students towards online classes
3. To find the correlation between knowledge and attitude regarding online classes among high-school students
4. Find the association between attitude score among high-school students with their selected demographic variables
5. Find the association between knowledge score among high-school students with their selected variables

Research hypothesis

H₁: Their will be significant correlation between knowledge and attitude regarding online classes among high-school students.

H₂: Their will be association between knowledge and demographic variables regarding online classes among high-school students.

H₃: Their will be association between attitude and demographic variables regarding online classes among high-school students.

Materials and Methods

Research approach: The researcher utilized non experimental descriptive research approach

Research design: In this study, non experimental descriptive correlational Research Design.was adapted.

Research setting: The setting for the study was selected high school, Mangaluru.

Population: In this study, population consists of high-school students between age group of 13-15 years of selected selected high school, Mangaluru.

Sample: The sample would comprise of 60 high-school students between age group of 13-15 years of selected selected high school, Mangaluru.

Sampling technique: The samples were selected by using convenient sampling techniques.

Description of the final tools: The tool used in the study consists of 3 parts

Part 1: Socio Demographic proforma.

Part 2: Structured knowledge questionnaire.

Part 3: attitude scale.

Plan for data analysis

The data were analysed by using both descriptive and inferential statistics

- Organization of ungrouped data into grouped data.

- Frequencies and percentages were used for analysis of socio-demographic characteristics.
- Calculation of mean, standard deviation of knowledge and attitude score
- Chi- square test was used to find the association between socio-demographic variables with pre-test knowledge scores.
- Karl Pearson co relation test to find the co-relation between the knowledge and the attitude.

Results

Section I: Description of sample characteristics

Table 1: Frequency and percentage distribution of high-school students on the basis of demographic variables

SL. No	Demographic variables	Frequency (f)	Percentage (%)
1	Age in years		
	a. 10-13 b. 14-16	0 60	0 100
2	Educational status		
	a. 8 th standard b. 9 th standard c. 10 th standard	0 0 60	0 0 100
	Source of attending online class		
3	a. Smartphone b. Desktop c. laptop	42 0 18	70 0 30
	Previous knowledge regarding online classes and its effect		
	a. Adequate knowledge b. Inadequate knowledge	56 4	93 7

Table 1 depicts that frequency and percentage distribution of high-school students by their age, educational status, source of attending online classes and previous knowledge regarding online classes and its effect.

Table 1 shows that with regard to age, 100% of students belong to the age group of 14-16 years of age and all the high-school students (100%) studies in 10th standard.

Result shows that majority (70%) uses smartphone for attending online classes and 30% uses laptop. Result shows that majority (93%) has adequate previous knowledge and 7% had inadequate previous knowledge.

Section 2: Distribution of high-school students according to the level of knowledge regarding online classes

Table 2.1: Frequency and percentage distribution of level of knowledge regarding online classes

Knowledge	Frequency	Percentage
Poor	7	11.6
Average	21	35
Excellent	32	53.4

Table 2.1 indicates that majority (53.4%) of students were having excellent knowledge, 35% having average knowledge, and 11.6% having poor knowledge.

Table 2.2: Mean, Mean Percentage and Standard deviation of knowledge regarding online classes among high-school students

Variable	Mean	Mean Percentage	SD
Knowledge	13.08	21.8	5.3

Table 2.2 shows Mean, Mean Percentage and Standard

deviation of knowledge regarding online classes among high-school students. The Mean value of knowledge was 13.08 with Mean Percentage 21.8% and Standard deviation 5.3.

Section 3: Distribution of high-school students according to the level of attitude regarding online classes among high-school students

Table 3.1: Frequency and percentage distribution of level of attitude regarding online classes among high-school students

Level of attitude	Frequency	Percentage
Unfavourable	0	0
Neutral	56	93.3
favourable	4	7

Table 3.1 shows the level of attitude regarding online classes among high-school students. 93.3% of students had neutral attitude and 7% of students had favourable attitude.

Table 3.2: Mean, Mean Percentage and Standard deviation of level of attitude regarding online classes among high-school students

variable	Mean	Mean Percentage	SD
Attitude	43.48	80.8	6.1

Table 3.2 shows Mean, Mean Percentage and Standard

Table 5.1: Association of knowledge regarding online classes among high-school students with their selected demographic variables such as age, educational status, source of attending online classes, previous knowledge regarding online classes and its effect

SL. No	Variables	< Median (14)	>=Median (14)	Chi square value	P-Value
1	Age in years				
	a. 10-13	0	0		
	b. 14-16	29	31		
2	Educational status				
	a. 8 th standard	0	0		
	b. 9 th standard	0	0		
	c. 10 th standard	29	31		
3	Source of attending online classes			0.918	0.337
	a. Smartphone	22	20		
	b. Desktop	0	0		
	c. Laptop	7	11		
4	Previous knowledge regarding online classes and its effects			1.22	0.269
	a. Adequate knowledge	26	30		
	b. Inadequate knowledge	3	1		

Table 5.1 shows the association level of knowledge regarding online classes among high-school students with their selected demographic variables. Chi-square test and

deviation of attitude regarding online classes among high-school students. The Mean value for attitude was 43.48, with Mean Percentage 80.8% and standard deviation of 6.1.

Section 4: Correlation between knowledge and attitude regarding online classes among high-school students

Table 4: Correlation between knowledge and attitude regarding online classes among high-school students

Variable	Mean	SD	r value	p value
knowledge	13.08	5.3	0.1	0.35
Attitude	43.48	6.1		

*The result is not significant at $p < 0.05$

Table 4 shows the correlation between knowledge and attitude regarding online classes among high-school students.

It shows that there is no statistically significant moderate positive correlation between knowledge and attitude (r value 0.1, p value 0.35 i.e., $p > 0.05$). [Karl Pearson correlation coefficient analysis was used to identify significant relationship of knowledge and attitude. Research hypothesis (H_1) is not accepted.

Section 5: Association of knowledge and attitude with demographic variables

Fishers exact test is used. Since most of p value is more than 0.05, there is no significant association between knowledge score and demographic variables.

Table 5.2: Association of attitude regarding online classes among high-school students with their selected demographic variables such as age, educational status, source of attending online classes, previous knowledge regarding online classes and its effect

SL. No	Variables	<Median (43.5)	>=Median (43.5)	Chi square value	P value
1	Age in years				
	a. 10-13	0	0		
	b. 14-16	30	30		
2	Educational status				
	a. 8 th standard	0	0		
	b. 9 th standard	0	0		
	c. 10 th standard	30	30		
3	Source of attending online classes			0.153	0.695
	a. Smartphone	22	20		
	b. Desktop	0	0		
	c. Laptop	8	10		
4	Previous knowledge regarding online classes and its effects			1.071	0.300
	a. Adequate knowledge	27	29		
	b. Inadequate knowledge	3	1		

Table 5.2 shows the association level of attitude score regarding online classes among high-school students with their demographic variables. Chi-square test and Fishers exact test is used. Since most p value is more than 0.05, it proves that there is no significant association between attitude score and demographic variables.

Discussion

The results of the present study 100% of high-school students belonged to the age group of 14-16 years of age, 100% of student's studies in 10th standard, 70% uses smartphone and 30% uses laptop for attending online classes and 93% has adequate knowledge and rest 7% had inadequate previous knowledge regarding online classes and its effect.

In the present study the level of knowledge regarding online classes was assessed wherein majority 53.4% having excellent knowledge whose score range between 37-100%, 35% having average knowledge whose score range between 33-36% and 11.6% having poor knowledge whose score range between 0-33%. The Mean knowledge score obtained by the high-school students were 13.08 with SD 5.3 and Mean Percentage is 21.8%. This indicates the level of knowledge regarding online classes is already excellent among the high-school students and only very few requires more information.

In the present study, the level of attitude regarding online classes was assessed, wherein 93.3% of high-school students had neutral attitude towards online classes whose score range between 33-66% and 7% of students had favourable attitude towards online classes whose score ranges between 67-100%. The Mean value for attitude was 43.48, with Mean Percentage 80.8% and standard deviation of 6.1.

In the present study the correlation between knowledge and attitude regarding online classes shows correlation $r = 0.1$ at p level 0.35. It shows that there is no statistically significant moderate positive correlation between knowledge and attitude (R-Value 0.1, p value 0.35 i.e., $p > 0.05$). H_1 not accepted.

In the present study there is no significant association between knowledge score and attitude score regarding online classes among high-school students, since p values are greater than 0.05 ($p > 0.05$). i.e., H_2 and H_3 are not accepted.

Limitations of the study

1. Small number of students and simple random sampling limits the generalization of the study.
2. The sample size was limited to 60 only.
3. Long-time follow-ups could not be carried out due to time constraints.
4. Samples were only selected from St. Agnes high-school, Mangalore.
5. A structured knowledge questionnaire was used for data collection which restricts the amount of information that can be obtained from the respondents.
6. The generalization of the study findings was limited to the sample studied.
7. High-school students who were able to read and write English were only included in the study.

Recommendations

On the basis of the findings of the study following

recommendations have been made

1. A similar study may be conducted on a larger sample for wider generalization.
2. A similar study may be replicated with control group.
3. A similar study can be conducted among students of the rural areas.
4. A similar study can be conducted in other urban areas.
5. Health education module should be developed.
6. The comparative study can be conducted on urban and rural area.
7. Structured teaching program should be arranged to teachers and parents so that they can be instrumental in helping and supporting their high-school students.

Conclusion

This study found high school students (Aged 14-16, 10th grade) generally understood online classes. Most possessed good knowledge (93% with prior knowledge), but held mostly neutral attitudes (93.3%) towards them. Interestingly, knowledge level did not significantly influence their attitude. These findings offer valuable insights for understanding student experiences with online learning. Future research could explore reasons behind the neutral attitude.

Conflict of Interest:

Not available

Financial Support:

Not available

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