Digitalization in Pedagogical Practices: A Study on Students and Teachers Attitudes With Reference To Himachal Pradesh

By

Indranil Ganguly
Research Scholar, APG Shimla University

Poonam Rehal
Research Scholar, APG Shimla University

Dr. Anil Kumar Pal
Associate Professor, Dept. of SOMC and Dean of Academics, APG Shimla University

Afzal Ahmad Khan
Controller of Examination, APG Shimla University

Abstract

21st Century is a Digital Age. All Developed Countries adopted Digital Technologies in their day-to- day life. Developing countries, like India, is also implementing Digital Technology. In today world mostly, every work has been done online. Just one click and problem solve. Paper work is not required. 'Digital India' is a dream of the Prime Minister of India, named Sri. Narendra Modi. Education sector is a prime sector. Education creates foot for an individual. Education gives us good life. Education provides us courage to take right decision when required. Education Sector is divided in some parts, i.e., primary education, secondary education, higher secondary education and higher education. Generally, we all are used to with traditional teaching. In present days, education has no limits. Any time, any where people can learn anything due to digitalization. Attitude is a behavior or feelings of people. It might be positive or negative. Attitude is varied with individual to individual. This is the reason, there are many papers available for measuring attitude. There is no paper found on particularly in APG Shimla University. The study examined the Digitalization in Pedagogy Practice of Teachers and Students.

Key Words: Digital Tools, Teaching Pedagogy, Teachers Attitude and Students Attitude.

Introduction

India has become Digital today. In Modern Era, Digitalization became a part of Education. There are many digital tools easily available in the market, such as, learning management systems, Kahoot, Facebook, YouTube, TechSmith etc. Some of the particular tools are used in teaching practice, i.e., learning management systems, Kahoot (student activating tools), Zoom (video calling) etc. Teaching with technology provides a positive application of knowledges in higher education (Englund et al., 2017). Use of insufficient knowledge of digital technology among teachers is providing inadequate teaching (Koehler et al., 2013).

Change is part of human nature. Human like or dislike is changed every time. According to their preference society transforms itself. Attitude is an emotional tendency that is stated by assessing a particular object with roughly notch of favour or dis-favour. Attitude is of two types, i.e., positive attitude and negative attitude. Positive attitude is a state of mind that

imagines and assumes a valuableoutcome. Negative attitude is feeling that is not useful and supportive. The attitude of an individual is depends on his or her background, Social Factors, Family, Personal Experience, Media, Educational and Religious Institutions etc.

Literature Reviews

Ndibalema, P. (2014) investigate the teachers' attitudes regarding the usage of ICT as a pedagogical tool among secondary schools in Tanzania. Through simple random sampling and purposive samplingtechnique 80 teachers were selected from 10 schools. Result showed that teachers had positive attitudes towards the usage of ICT as a pedagogical tool among secondary schools in Tanzania.

Kumar, S. and Rani, M. (2016) found that the value of education is changed by the excellence of teachers and teachers process in the class room. The study examined the role of ICT to add invention and creativeness in teaching. Information and Communication Technology (ICT) is a digital communication technology. The finding revealed that use of digital communication technology improved education more exciting. So, it is a positive attitude.

Boulden, D. C. et al. (2017) examined the impact of digital web-based tools to improve student questioning aptitudes. The digital tools were used by the students, i.e., Kahoot, Quizizz, Socrative. The result showed that the questioning ability of student improved but very little. Digital tools were suitable for this learning environment framework. Students had a positive attitude towards the use of digital tools in Education.

Paula et al. (2018) investigated two objectives, i.e., 1) the impact of information and communication technology on education of service teachers and 2) the study examined the ICT fulfil students' needsand interest. 178 female teachers and 22 male teachers were selected. The result disclosed that there was a positive impact of ICT on education and ITC fulfil the needs and interests of the students.

Mei, X. et al. (2019) examined the used of digital tools by the teachers for teaching in higher education,Norway. The study had two objectives, i.e., 1) Effect of Digital Tools in Teaching. 2) To explore the route to share the pedagogy of teachers through digital tools. The study conducted in qualitative research design. Through purposive sampling technique 5 respondents were selected. The data were analysed through Technology, Pedagogy, And Content Knowledge thematic approach and Professional Learning Communities thematic approach. The result revealed that digital tools improveteaching. With the help of digital tools teachers shared their experience and culture among students. So, positive attitude was found.

Amhag, L. et al. (2019) investigated that the teacher used digital tools to evaluate their teaching. 405 data collected from two Swedish University through e-mailed. The study used quantitative and qualitative research design. The data were analysed through Technology, Pedagogy, And Content Knowledge thematic approach and computer self-efficacy. The result showed that teachers did not use digital tools for teaching. Negative attitude was found.

Ovcharuk, O. et al. (2020) studied the use of digital tools by European teachers to build the digital atmosphere, digital skill, and knowledge. Council of Europe tailed the Theoretical Model of Digital Teaching through the use of digital tools and ICT in teaching. The result showed that digital tool improves knowledge and skill. Positive attitude was found

Bader, M. et al (2021) studied the students' attitude towards the use of digital tools in teaching. 40 students were selected from two different Institution in Norway. The result showed that the students'attitudes towards the new tool diverse much. But few students were aware of the digital tool for enhancing key calculation. Positive attitude was found among students' behaviour.

Research Gap

The attitude of an individual is depends on his or her background, Social Factors, Family, Personal Experience, Media, Educational and Religious Institutions etc. Therefore, all individuals have different attitude. No study found on this population. Even the literature reviews shows that a positiveattitude is found among teachers and students' behaviour regarding the use of digital tools in educationsector but no study revealed the level of attitude. Very few studies focused on the relationship betweendemographic factors and attitude.

Therefore, the study investigates the level of Attitude found among the APG Shimla students and teachers regarding the use of Digital Tools in Education Sector. And also examine the relationship ofdemographics factors and attitude.

Research Methodology

Objective
- To identify the level of Attitude among the Students regarding the use of Digital Tools in EducationSector
- To identify the level of Attitude among the Teachers regarding the use of Digital Tools in EducationSector
- To examine the relationship of demographic factors and attitude of the Students usage of DigitalTools in Education Sector
- To examine the relationship of demographic factors and attitude of the Teachers usage of DigitalTools in Education Sector

Sampling:
The total population is 75. As per the formula, the sample size is 63. Where, the confidence Level is 95%, margin of error 5%, population proportion 50% and population size is 75. 5 Teachers and 70 students from all semester are considered. Through stratified sampling technique, the data was collected from BBA, MBA, B.Com and M.com. students of APG Shimla University. Semistructured questionnaire is used to collect primary data from the respondents. Google Form was created and shared to the departments group. The questionnaire was divided into two parts, i.e., part A is usedfor demographic data and part B is used for questions regarding their attitude.

Research Design
In this study descriptive research design is conducted. Because the study only describes the phenomenon. The aim of this investigation is to find out Level of Attitude of Teachers and Students of APG Shimla University and examine the impact of demographic factors on Attitude. Semi- structured questionnaire is used to collect primary data through stratified sampling technique. The questionnaire was divided into two parts, i.e., part A used for demographic data and part B used for questions regarding their attitude. The semi- structured Questionnaire consists of 26 items. The data collected in 5-point Likert Scale. 5 Point Likert Scale, i.e., from 1) Strongly disagree to 5) Strongly agree. After Pilot Study, some questions

are edited. Reliability and Validity of the instruments are checked. The IBM SPSS version 23 is used to analyses the data. The descriptive statistics and Pearson Correlation analysis is conducted to get the result.

Data Collection Procedure:

The Teachers and Students of APG Shimla University in Himachal Pradesh are itself considered as primary data. The study considers BBA, MBA, B.Com and M.Com students. The primary data is collected from 5 Teachers and 70 students from all semester. The study has collected primary data through Google Form. 5-point Likert Scale is used. Pilot study is done with 30 sample. The Reliability and Validity of the instruments are checked.

Result

Descriptive Statistics
Table 1: *Students have Positive Attitude to use digital tools in education sector*

	N	Minimum	Maximum	Mean	Std. Deviation
Digital Tools enhancethe knowledge level"	59	3	5	4.31	.623
Digitalization in education is effectivethan Lecture based classroom teaching	59	1	5	3.41	1.131
Digitalization makes teaching -learning more interesting"	59	1	5	3.85	.962
Digitalization enhanceseducation quality"	59	1	5	3.78	.872
Digitalization in education is increasedmore opportunity "	59	1	5	3.95	.797
Due to Digitalization ineducation, Opportunityof interaction between teachers and students isenhanced"	59	1	5	3.49	1.104
Digitalization increased attention towardslecture	59	1	5	3.41	1.116
Digitalization in education lacks practical learning"	59	1	5	3.59	1.146
Digitalization in education, create gapbetween teachers and students' relationship	59	1	5	3.53	1.194
Digitalization increasedworkloads"	59	1	5	2.97	1.017
No much learning takes place in DigitalizationEra	59	1	5	2.97	.999
Digital tools help to getefficient productivity"	59	2	5	3.78	.811
Digital tools are easy touse now"	59	2	5	4.14	.601
Availability of manyonline teaching toolscreates confusion	59	1	5	3.68	.990
Possibility to improve teaching -learning skills through Digitalization in education	59	1	5	3.69	.915
Progress can be tracked more efficiently and	59	1	5	3.81	.798

quickly in digitalization					
Digitalization madelearning easy	59	2	5	3.93	.828
Knowledge is notimproved	59	1	5	2.63	1.113
Digitalization in education is not much effectiveness in terms ofcoping up with missed lectures	59	1	5	2.86	1.025
Digital tools are veryeconomical"	59	2	5	3.51	.898
Classroom teaching is better than digitalization"	59	1	5	3.63	1.128
Digital tools are very challenging and difficult to use	59	1	5	2.81	1.025
Digital Tools are userfriendly and easy to access					
Digitalization in	59	1	5	3.81	.730
education create stress	59	1	5	2.76	.953
Digital tools create innovations in Educationby Digitalization "	59	1	5	3.75	.843
Digitalization in Education are flexible for teachers and students	59	2	5	3.95	.729
Valid N (listwise)	59				

From the table 1, it is found that Students Attitude towards using Digital Tool in Education is Positive.

Attitude1
Table 2: *Level of Positive Attitude of Students*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Low Positive Attitude	19	32.2	32.2	32.2
Medium Positive Attitude	26	44.1	44.1	76.3
High Positive AttitudeTotal	14	23.7	23.7	100.0
	59	100.0	100.0	

From the table 2, it is found that 19 Students' Attitude towards using Digital Tool in Education is LowPositive, 26 Students' Attitude towards using Digital Tool in Education is Medium Positive and 14 Students' Attitude towards using Digital Tool in Education is High Positive.

Before go to apply the inferential statistics, the data normal distribution is checked in table 3.

Tests of Normality
Table 3: *Normal Distribution of Data*

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Attitude	.127	59	.020	.966	59	.094

a. Lilliefors Significance Correction

From the table 3, it is found that sig. value is more than 0.05. So, the data is normally distributed. When the data size is less than 50 then we used Shapiro-Wilk test. But when the data size is greater than 50 then we used Kolmogorov-Smirnov Test. In this study, the data size is greater than 50. So, the study considers Kolmogorov-Smirnov Test for tasting Normal Distribution.

Now the study can use Pearson Correlation analysis to measure the relationship between DemographicFactors and Students attitude.

Correlations
Table 4: *Relationship between Gender and Students Attitude*

		Gender	Attitude
Gender	**Pearson Correlation**	**1**	**.140**
	Sig. (2-tailed)		.290
	N	59	59
Attitude	Pearson Correlation	.140	1
	Sig. (2-tailed)	.290	
	N	59	59

From the table 4, it is found that there is a weak positive relationship found between Gender and Students Attitude. The Pearson Correlation test is applied to measure the relationship between Independent Variable and Dependent Variable. Here, Independent Variable is Gender and DependentVariable is Attitude of Students regarding the use of digital tools in education. The Pearson Correlation test result revealed that the Pearson Correlation value is .140. The value indicates that there is a Positive Weak Correlation exist between Independent and Dependent Variable. And the P value is .290 which is greater than 0.05. So, the Null Hypothesis is accepted. There is no statistically significant difference between Gender and Students Attitude.

Correlations
Table 5: *Relationship between Age and Students Attitude*

		Your age	Attitude
Your age	Pearson Correlation	1	-.084
	Sig. (2-tailed)		.527
	N	59	59
Attitude	Pearson Correlation	-.084	1
	Sig. (2-tailed)	.527	
	N	59	59

From the table 5, it is found that there is a weak Negative relationship found between Age and Students Attitude. The Pearson Correlation test is applied to measure the relationship between Independent Variable and Dependent Variable. Here, Independent Variable is Age and Dependent Variable is Attitude of Students regarding the use of digital tools in education. The Pearson Correlation test result revealed that the Pearson Correlation value is -.084. The value indicates that there is a Negative Weak Correlation exist between Independent and Dependent Variable. And the P value is .527 which is greater than 0.05. So, the Null

Hypothesis is accepted. There is no statistically significant difference between Age and Students Attitude.

Descriptive Statistics

Table 6: *Students have Positive Attitude to use digital tools in education sector*

	N	Minimum	Maximum	Mean	Std. Deviation
Knowledge	5	4.00	5.00	4.4000	.54772
Digital_Classroom	5	4.00	5.00	4.6000	.54772
Interesting	5	4.00	5.00	4.6000	.54772
Education_quality	5	4.00	5.00	4.4000	.54772
Opportunity	5	4.00	5.00	4.6000	.54772
Interaction	5	2.00	5.00	3.6000	1.51658
Attention	5	3.00	5.00	4.0000	.70711
Licks	5	2.00	5.00	3.0000	1.22474
Gap	5	2.00	5.00	3.8000	1.09545
Workload	5	1.00	5.00	3.0000	1.58114
No_learning	5	2.00	4.00	2.4000	.89443
Productivity	5	4.00	5.00	4.2000	.44721
Easy	5	3.00	5.00	4.0000	1.00000
Confusion	5	2.00	4.00	3.2000	.83666
Improve	5	3.00	5.00	4.0000	.70711
Progress	5	2.00	5.00	3.8000	1.09545
Learning	5	4.00	5.00	4.2000	.44721
Knowledge2	5	1.00	4.00	2.0000	1.22474
Missed_Lectures	5	2.00	5.00	3.0000	1.41421
Economical	5	4.00	4.00	4.0000	.00000
Classroom	5	2.00	4.00	2.8000	.83666
Challenging	5	2.00	4.00	2.6000	.89443
Friendly	5	2.00	5.00	3.8000	1.09545
Stress	5	2.00	3.00	2.4000	.54772
Innovation	5	4.00	5.00	4.4000	.54772
Flexible	5	3.00	5.00	4.2000	.83666
Valid N (listwise)	5				

From the table 6, it is found that Students Attitude towards using Digital Tool in Education is Positive.

Attitude_Teachers

Table 7: *Level of Positive Attitude of Teachers*

		Frequency	Percent	Valid Percent	Cumulative Percen
Valid	Low	1	20.0	20.0	20.0
	Medium	2	40.0	40.0	60.0
	High Total	2	40.0	40.0	100.0
		5	100.0	100.0	

From the table 7, it is found that 1 Teacher Attitude towards using Digital Tool in Education is Low Positive, 2 Teacher Attitude towards using Digital Tool in Education is Medium Positive and 2 Teachers' Attitude towards using Digital Tool in Education is High Positive.

Before go to apply the inferential statistics, the data normal distribution is checked in table 3.

Correlations

Table 8: *Relationship between Gender and Students Attitude*

		Gender	**Attitude_Teachers**
Gender	Pearson Correlation	1	-.327
	Sig. (2-tailed)		.591
	N	5	5
Attitude_Teachers	Pearson Correlation	-.327	1
	Sig. (2-tailed)	.591	
	N	5	5

From the table 8, it is found that there is a weak Negative relationship found between Gender and Teachers Attitude. The Pearson Correlation test is applied to measure the relationship between Independent Variable and Dependent Variable. Here, Independent Variable is Age and Dependent Variable is Attitude of Students regarding the use of digital tools in education. The Pearson Correlation test result revealed that the Pearson Correlation value is -.327. The value indicates that there is a Negative Weak Correlation exist between Independent and Dependent Variable. And the P value is .591 which is greater than 0.05. So, the Null Hypothesis is accepted. There is no statistically significant difference between Gender and Teachers Attitude.

Correlations

Table 9: *Relationship between Age and Students Attitude*

		Age	**Attitude_Teachers**
Age	Pearson Correlation	1	.535
	Sig. (2-tailed)		.353
	N	5	5
Attitude_Teachers	Pearson Correlation	.535	1
	Sig. (2-tailed)	.353	
	N	5	5

From the table 9, it is found that there is a Moderate Positive relationship found between Age and Teachers Attitude. The Pearson Correlation test is applied to measure the relationship between Independent Variable and Dependent Variable. Here, Independent Variable is Age and Dependent Variable is Attitude of Students regarding the use of digital tools in education. The Pearson Correlation test result revealed that the Pearson Correlation value is .535. The value indicates that there is a Positive Correlation exist between Independent and Dependent Variable. And the P value is.353 which is greater than 0.05. So, the Null Hypothesis is accepted. There is no statistically significantdifference between Age and Teachers Attitude.

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