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Teachers' Attitude Towards Usage of QR Code Linked Text Books

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Abstract:

The objective of this study is to find out the Teachers' state of Attitude towards usage of QR Code linked Text books.For the present study, Normative survey method has been adopted and the investigation was conducted in the area of Thiruvannamalai, Cuddalore, Vellore and Villupuram Districts of Tamil Nadu, India.Random sampling technique was used in the selection of the sample of 520 Teachers. Teachers' attitude towards usage of QR Code linked Text books Scale - constructed and validated by Kumaran B and TamizhselvanT (2020) used for this study. The findings shows that the sample is having favourable attitude towards QR Code linked Text books and the demographic variables are having significant difference between them with regard to the attitude.

Key Points: Teachers, Attitude, QR Code, Text books

Introduction

The infrastructure and components that enable modern computing are referred to as ICT (Information and Communications Technology). ICT is widely considered to refer to all devices, networking components, applications, and systems that, when integrated, allow people and organisations (i.e., businesses, non-profits, governments, and criminal enterprises) to communicate in the digital world.

Teachers and Information and Communication Technology

Teachers that are tech-savvy and understand how to incorporate ICT into the curriculum might help pupils study more successfully. To communicate, generate, transfer, save, and manage information, schools use a variety of ICT tools (Blurton, C, 2000). ICT has become an integral part of the teaching-learning interaction in some cases, as evidenced by strategies such as replacing chalkboards with interactive digital whiteboards, using students' own smartphones or other devices for learning during class time, and the "flipped classroom" model, in which students watch lectures on a computer at home and use class time for more interactive exercises. These approaches can lead to higher order thinking skills, provide creative and individualised options for students to express their understandings, and leave students better prepared to deal with ongoing technological change in society and the workplace when teachers are digitally literate and trained to use ICT (Goodwin, K, 2012).

QR codes - Quick Response Codes

QR codes can be investigated in the perspective of mobile learning in education. QR codes are square-shaped barcodes that can be scanned with mobile devices and stand for "Quick Response." Everything from showing a restaurant menu to sending them to a podcast can be done with them. A QR code is a two-dimensional barcode that can hold up to 4,296 characters or 7,089 digits.

Using a QR code generator or the "Share" feature in the Google Chrome mobile app, we may build a QR code. QR codes can be used for both personal and professional purposes. QR codes can guide people to a specific website, as well as an image or document that has been uploaded.

Teachers' attitudetowards the use of QR Codes used Books for students

Teachers' attitudes have an impact on projected accomplishment in each new effort. In this electronic age, everything is becoming digitalized, including education. Information, knowledge, and the ability to create new ideas are becoming increasingly crucial parts of effective development, and education will surely shape the future. Teachers are critical in bringing technology into classrooms and schools.

The mindset of an individual has a significant impact on their ability to think and perform. It is critical since one's capacity to navigate through the world is influenced by one's attitude. Keeping a positive attitude can help you achieve measurable success in both your personal and professional life.

Review of related studies

Traser C.J., et al., (2015) examined student perceptions on the usefulness of QR codes as learning aids in a medical gross anatomy course, statistically analyzed whether this learning aid impacted student performance, and evaluated whether performance could be explained by the frequency of QR code usage. Overall, students responded positively to the use of QR codes in the gross anatomy laboratory and agreed the codes augmented their learning of anatomy. Nagla Ali (2017) investigated the integration of the QR code in classroom activities and the perceptions of the integration by pre-service teachers. The main results suggested that the pre-service teachers perceived the use of QR codes to be easy and useful in learning activities. Vinotha J and William D.R.B (2019) examined the attitude of primary school teachers working in Tirunelveli district towards using digital links in the textbooks of standard I. The findings of the study revealed that there was no significant difference in the attitude of primary teachers towards using digital links in the textbooks with regard to personal and institutional variables.Mohamed R and Renuga A (2019) measured the attitude of teachers towards usage of e-content integrated in new textbooks using QR codes. The results showed that most of the teachers had positive attitude towards the usage of E-Content. There is no significant difference in the attitude of teachers towards usage of E-Content with respect to gender and level of teaching.

Objectives of the Study

The following are the objectives for the present study:
1. To find out the Teachers' state of Attitude towards usage of QR Code linked Text books.
2. To find out whether there is any significant difference in the Teachers' state of Attitude towards usage of QR Code linked Text with respect to the sub samples
   i. Gender (Male /Female)
   ii. Locality (Urban /Rural)
   iii. Type of School (Government/Private)
   iv. Level of Teaching (Secondary / Higher Secondary)

Method of Study

For the present study, Normative survey method has been adopted.

Location of this Study

The present investigation was conducted in the area of Thiruvannamalai, Cuddalore, Vellore and Villupuram Districts of Tamil Nadu, India.

Sample

Random sampling technique was used in the selection of the sample of 520 Teachers.

Tool Used

Teachers' attitude towards usage of QR Code linked Text books - constructed and validated by Kumaran B and TamizhselvanT (2020)

Descriptive Analysis

The Teachers' Attitude towards usage of QR Code linked Text books scale has been administered to 520 Teachers. The mean and Standard Deviation were calculated for the entire sample and its sub-sample and are given in Table No. 1.

Table No 1.

The Mean and Standard Deviation of Teachers' Attitude towards usage of QR Code linked Text books Scores

S.No.	Demographic Variables	Sub sample	N	Mean	SD
1	Gender	Male	232	106.89	18.811
		Female	288	115.85	19.646
2	Locality	Urban	275	114.72	20.875
		Rural	245	108.64	17.952
3	Type of School	Government	403	109.91	18.289
		Private	117	118.55	23.043
4	Level of Teaching	Secondary	376	110.30	18.913
		Higher Secondary	144	115.92	21.384

The Teachers' Attitude towards usage of QR Code linked Text books of entire sample is favourable (M=111.5).

The mean value for the sub sample of gender of Teachers indicates that female Teachers (M=115.85) are having more favourable Attitude towards usage of QR Code linked Text books than Male Teachers (M=106.89).

The mean value for the sub sample of locality of Teachers indicates that urban (M=114.72) Teachers are having more favourable Attitude towards usage of QR Code linked Text books than rural (M=108.64) Teachers.

The mean value for the sub sample of Type of School of Teachers indicates that Private school (M=118.55) Teachers are having more favourable Attitude towards usage of QR Code linked Text books than Government school (M=109.91) Teachers.

The mean value for the sub sample of Level of Teaching of Teachers indicates that Higher Secondary level (M=115.92) Teachers are having more favourable Attitude towards usage of QR Code linked Text books than Secondary level (M=110.30) Teachers.

Differential Analysis
Null Hypothesis

There is no significant difference between male and female Teachers with respect to their Attitude towards usage of QR Code linked Text books.

In order to test the above null hypothesis 't' value is calculated.

Table No. 2

The significance of difference between male and female Teachers with respect to their Attitude towards usage of QR Code linked Text books

Gender	N	Mean	Standard Deviation	t-value	Significance at 0.05 level
Male	232	106.89	18.811	5.292	Significant

| Female | 288 | 115.85 | 19.646 | | |

It is found from the above Table No. 4.5, that the calculated 't' value (5.292) is greater than the critical value (1.96) at 0.05 level of significance. Hence the null hypothesis is rejected and it is concluded that there is significant difference between male and female Teachers with respect to their Attitude towards usage of QR Code linked Text books.

Null Hypothesis

There is no significant difference between rural and urban Teachers with respect to their Attitude towards usage of QR Code linked Text books.

In order to test the above null hypothesis 't' value is calculated.

Table No. 3
The significance of difference between urban and rural Teachers with respect to their Attitude towards usage of QR Code linked Text books

Locality	N	Mean	Standard Deviation	t-value	Significance at 0.05 level
Urban	275	114.72	20.875	3.568	Significant
rual	245	108.64	17.952		

It is found from the Table No. 3, that the calculated 't' value (3.568) is greater than the critical value (1.96) at 0.05 level of significance. Hence the null hypothesis is rejected and it is concluded that there is significant difference between rural and urban Teachers with respect to their Attitude towards usage of QR Code linked Text books.

Null Hypothesis

There is no significant difference between Government and Private Teachers with respect to their Attitude towards usage of QR Code linked Text books.

In order to test the above null hypothesis 't' value is calculated.

Table No. 4
The significance of difference between Government and Private Teachers with respect to their Attitude towards usage of QR Code linked Text books

Type of School	N	Mean	Standard Deviation	t-value	Significance at 0.05 level
Government	403	109.91	18.289	3.728	Significant
Private	117	118.55	23.043		

It is found from the Table No. 4.7, that the calculated 't' value (3.728) is greater than the critical value (1.96) at 0.05 level of significance. Hence the null hypothesis is rejected and it is concluded that there is significant difference between Government and Private Teachers with respect to their Attitude towards usage of QR Code linked Text books.

Null Hypothesis

There is no significant difference between Secondary and Higher Secondary level Teachers with respect to their Attitude towards usage of QR Code linked Text books.

In order to test the above null hypothesis 't' value is calculated

Table No. 5

The significance of difference between Secondary and Higher Secondary level Teachers with respect to their Attitude towards usage of QR Code linked Text books

Level of Teaching	N	Mean	Standard Deviation	t-value	Significance at 0.05 level
Secondary	376	110.30	18.913	2.766	Significant
Higher Secondary	144	115.92	21.384		

It is found from the Table No. 5, that the calculated 't' value (2.766) is greater than the critical value (1.96) at 0.05 level of significance. Hence the null hypothesis is rejected and it is concluded that there is significant difference between Secondary and Higher Secondary level Teachers with respect to their Attitude towards usage of QR Code linked Text books.

Conclusion

This study shows that the Teachers' Attitude towards usage of QR Code linked Text books of entire sample is favourable. Further, the selected demographic variables recorded significant difference between them with regard to the Attitude towards usage of QR Code linked Text books. Hence, the curriculum frame workers, and institutional heads should keep this state in mind and should come out with suitable strategy to use the available technology successfully.

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