

Internet and Communication Technology (ICT) in Teaching in Schools in Tamilnadu: Prospects and Challenges

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Abstract

Education is the process of learning or getting knowledge , skills values and habits of essential needs of life . Education system differs from one country to another country, not all countries are following a common education system. Uniform system of school education was implemented by Tamil Nadu uniform system of school education Act 2010 which paves way for quality education to all children without any discrimination and purely based on their economic, social or cultural background. The new system of Samacheerkalvi a uniform syllabus was introduced in Tamil Nadu for class I to VI in the year 2010. For the first time text books of Tamil Nadu government under the new syllabus will have QR(Quick response) code near pictures, using which students can learn more about the topics. This year, new curriculum is being launched for classes 1,6,9, and 11 books are being printed in multi – colour and QR codes are being printed near diagrams and photos. In this study about Prospects And Challenges of Qr Code System – School Teaching in Tamil Nadu with special reference to government and private school teachers in Thiruvanaikoil at Trichy.

KEYWORDS: Teacher, Q.R code, Tamil Nadu, Education system.

Introduction:

The system of education in India has conformed to the ideals and objectives that the people have set before themselves. These ideals and objectives have changed from time to time to fit the new world in which people are influenced by Vedas, the Upanishads, the Gita purana and also by the orthodox and unorthodox schools of philosophy. Tagore said “The widest road leading to the solution of all our problems is education”.¹ Man without education would still be living just like an animal.

1. Prof. Ramesh Ghanta, B.N.Dash, Foundations of education, Neelkamal publications Pvt.ltd., 1stedition, 2005,ISBN No:81 – 8316 – 012 – 3.

It is education, which transferred man from mere ‘two legged animal into human. It helps him to behave like a man and prevents him from behaving like an animal. For the first time text books of Tamil Nadu government under the new syllabus will have QR code near pictures, using which students can learn more about the topics. This year, new curriculum is being launched for classes 1,6,9, and 11 books are being printed in multi – colour and QR codes are being printed near diagrams and photos. QR codes will allow a student to access information immediately about particular topic by simply using smart phone and placing it above the code using a code reader or scanner app. QR code will link students to animation , e –books , audio visuals illustrations and video lessons that will be carried out by teachers in Tamil Nadu online.¹

1.3 Objectives of this study:

The primary objective of the study is:

- ✍ To know the level of acceptance QR code System in School education
- ✍ Secondary objective of the study:
- ✍ To analyse the understanding level of QR code system.
- ✍ To find out the level of usage in QR code system both students as well as teachers.
- ✍ To find out the satisfaction level of satisfaction in QR code system.

1.4 Scope of this study:

QR (quick response) code will allow a student to access information immediately about a particular topic by simply using smart phone and Placing it above the code using a code reader or scanner app. QR codes will link students to animations, e-books audio-visual illustrates and video lessons that will be carried out by teachers in Tamil Nadu. It helps to equip students of TN state board to tackle various competitive entrance exams like NEET, JEE among others. At the same time one drawback off QR code and perhaps the biggest problem is lack of familiarity of QR code among students as well as teachers.

<https://m.timesofindia.com/city/Chennai/tn-takes-to-concputual-learining-63436420>, 10.50 P.m, 20.12.18

1.5 Related Literature:

Education:¹

Education of man does not begin at school, it begins at birth. Education is life time process.” Any modification brought about in the behavior of an individual as a result of his interaction with the environment constitutes learning”

Reform in Higher education:²

Four things appear necessary in higher education. 1. The internal functioning of academic institutions be made democratic. 2. Talent needs to be attracted into the profession through appropriate remuneration and career prospects.3. Community facilities need to substantially augmented. 4. The quantitative nature of their work needs to be recognized

Nature of Education:³

1) Education as a process: Education of man does not begin at school, it begins at birth. J.S. Makenzie says, “ Education is a process that goes on throughout life’ and is promoted by almost every experience in life”.

2) Education as a product: Education may also considered as a product. A person is said to be educated, when he acquires knowledge, skills, attitude, etc., which are the product of group life at a great cost of time and suffering.

3) Education as growth: For Dewey education must be based on and applied experience. “ If life implies growth and if education is necessary to the full and continued growth of human being, then education cannot be simply a prelude to adult life or attainment of some narrow vocation”

1.Prof. Ramesh Ghanta, B.N.Dash, Foundations of education, Neelkamal publications Pvt.ltd., 1steditiom, 2005,ISBN No:81 – 8316 – 012 – 3. P.No :6

2.Amrik singh.GD Sharma., Higher education in India, Konark publishers., 1989,P.no: 148, ISBN 81 – 220 – 0116 - 5

3. Prof. Ramesh Ghanta, B.N.Dash, Foundations of education, Neelkamal publications Pvt.ltd., 1steditiom, 2005,ISBN No:81 – 8316 – 012 – 3, P.no: 24

Aims of Education :¹

Tagore emphasized moral, spiritual, intellectual and physical development as the aims of education.

i) Moral and spiritual: He emphasized the development of good character and discipline leading to satisfaction for the mind as well as soul.

ii) Intellectual :According to him, education should inculcate in the child independent and free thinking.

iii) Physical: Man cannot act wisely without the co – operation of his body and mind.

Teacher:²

“ A person is a person helps other to acquire knowledge competences or values”

Role of Teacher :³

The teacher is a person is an observer of the child’s development rather than giver of information , ideals, ideas and willpower or a mouldier of character.

Importance of an effective teacher:⁴

Ryans said, “ If competent teacher can be obtained the likelihood of attaining desirable educational outcomes is substantial. On the other hand although schools may have excellent material resources in the form of equipment buildings and text books and although curricula may be appropriately adopted to community requirements , if the teacher misfits or indifferent to their responsibilities.”

Competency based teacher education:

When an innovation introduced various thought processes and procedures are used. If the innovative process is looked from the point of view of school system the following steps are likely to be used:1. Established goals 2. Determine where changes need to be made 3. Develop model for an innovative programme 4. Test the model in pilot programme

1. S. Lakshmi, Innovation in education., Sterling Publishers Private Limited.,P.NO: 39., ISBN 81 207 1007.

2.:<https://en.m.wikipedia.org/wiki/teacher> @ 4.45 p.m, 20.12.18

3.Prof. Ramesh Ghanta, B.N.Dash, Foundations of education, Neelkamal publications Pvt.ltd., 1st edition, 2005,ISBN No:81 – 8316 – 012 – 3. P.No :82.

4. Kamala Arora., Difference between effective and ineffective teachers, S. Chand & company ltd., 1978.

Competency based teacher education:¹

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Meaning of QR code ²:

QR code can contain text , links (to websites, videos, files)and much more. QR code is very similar barcode. The image consist of square dots in a unique configuration that provides information for the user

How to get connected to QR code?³

- Download the QR code scanner from the google play store
- Open the QR code scanner application
- Once Scanner button in the application is clicked, camera opens and then bring it closer to the QR code , Click URL and go to the content Page.



1.6 Hypothesis:

- a) There is no relationship between sex andAccepting level of QR code system
- b) There is no relationship between sex and understanding level of Q.R code system
- c) There is no relationship between usage level of teachers and sex
- d) There is no relationship between sex and satisfaction level of Q.R code system
- e) There is no relationship between working experience and satisfaction level of Q.R code system

1.S. Lakshmi, Innovation in education., Sterling Publishers Private Limited.,P.NO: 39., ISBN 81 207 1007.

2. <https://www.whatihavelearnedteaching.com/using-qr-code-in-the-classroom/> @ 8.00 a.m, 21.12.18

3. State council of education research and training, 1st edition, 2018Tamil Nadu text book and educational services corporation

1.7 Methodology:

Research methodology is a way to systematically solve the research problem. This area includes different aspects like research design, sampling method, statistical tool

used, and method of data collection . The detailed information of data collection and analysis of data are given below.

1.7.1 Research design:-

A plan of proposed study prepared by a researcher stating the research activities to be performed in her proposed study before she undertakes her research work is called a research design.

1.7.2 sample of the study:

The aggregate of all the units pertaining to a study is called universe. In this study, the researcher under take Private , government and aided school teachers in Trichy city.

1.7.3 Statistical tool used:-

Percentage Analysis, Frequency table are applied in the study. Hypothesis is framed and Chi – square, is applied to test the hypothesis with the help of SPSS Package.

1.7.4 Method of data collection:-

Data are the bricks with which the researcher has to make a house. While the quality of research findings depends on data, the adequacy of appropriate data in turn depends upon proper method of data collection. A number of methods are at the disposal of the researcher of which one has to select the most appropriate one for visualizing the research objective.

a) Primary Data : Data which are collected fresh and for the first time and thus happens to be original in character. Primary data are gathered for specific purpose. The researcher is collect primary data through Questionnaire Method. Questions, which were asked, by giving multiple choice in nature and where of closed ended.

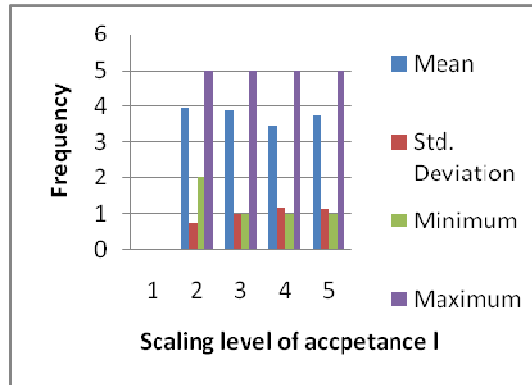
b) Secondary data: Secondary data are those data which are not new and original in nature. These data are obtained from published or unpublished resources. Secondary data collected through Books, Magazines, Journals, and web sites.

1.8 Analysis:

1.8.1 Table showing Acceptance level of respondents in Q.R code system

Statistics					
		Accept QR code	Benefit to students	Cover syllabus	Conventional teaching are better Than QR code
N	Valid	50	50	50	50

Missing	0	0	0	0
Mean	3.94	3.90	3.48	3.74
Std. Deviation	.712	1.015	1.165	1.157
Minimum	2	1	1	1
Maximum	5	5	5	5

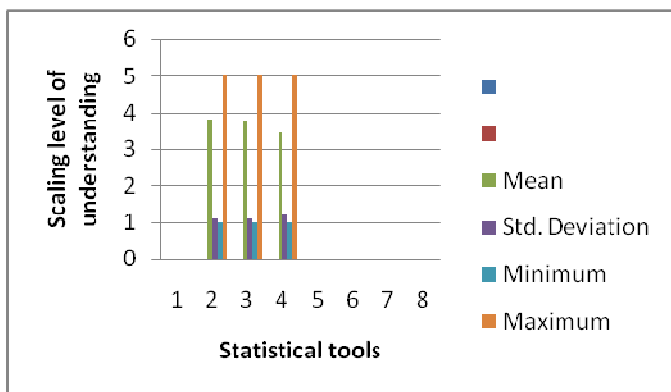


Source : Primary data

1.8.2 Table showing understanding level of respondents in Q.R code system

Statistics

	Frequentvisit throughQR	Reflectinterest	usage in class hrs
N Valid	50	50	50
Missing	0	0	0
Mean	3.82	3.76	3.44
Std. Deviation	1.082	1.080	1.232
Minimum	1	1	1
Maximum	5	5	5

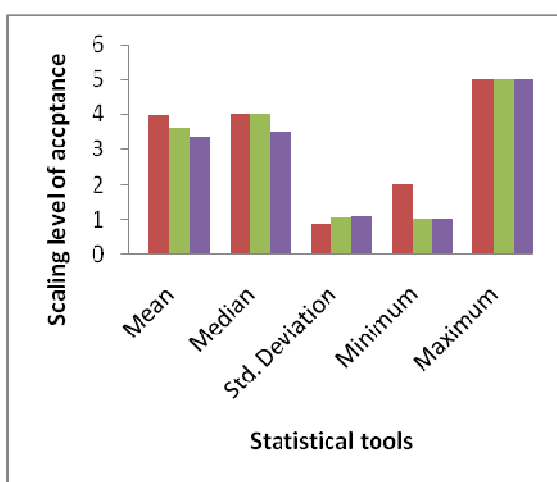


Source : Primary data

1.8.3 Table showing usage level of respondents in Q.R code system

Statistics

	Optimumutilization	Clarificationdoubts	AssignprojectwithQRcode
N Valid	50	50	50
Missing	0	0	0
Mean	3.98	3.60	3.36
Median	4.00	4.00	3.50
Std. Deviation	.845	1.030	1.083
Minimum	2	1	1
Maximum	5	5	5



1.8.4 Relationship Between Sex And Accepting Level Of QR Code System

Crosstable

			sex		Total
			male	female	
AcceptQRcode	Disagree	Count	2	1	3
		% of Total	4.0%	2.0%	6.0%
	No option /Neutral	Count	2	3	5
		% of Total	4.0%	6.0%	10.0%
	Agree	Count	12	22	34
		% of Total	24.0%	44.0%	68.0%
	Highly Agree	Count	3	5	8
		% of Total	6.0%	10.0%	16.0%
Total	Count	19	31	50	
	% of Total	38.0%	62.0%	100.0%	

Source : Primary data

Null hypothesis:

“ There is no relationship between sex and Accepting level of QR codeSystem “

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.161 ^a	3	.762
Likelihood Ratio	1.123	3	.771
Linear-by-Linear Association	.580	1	.446
N of Valid Cases	50		

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is 1.14.

Pearson’s Chi –square significance value is more than 0.05.

RESULT:

Hence, Null hypothesis accepted. There is norelationship between sex and Accepting level of QR codeSystem

1.8.5 Relationship Between Sex And Understanding Level Of Q.R Code System

Ability to Understand with sex - Crosstabulation

			sex		Total
			male	female	
Ability to Understand Q.Rcode	Highly Disagree	Count	1	0	1
		% of Total	2.0%	.0%	2.0%
	Dis agree	Count	1	2	3
		% of Total	2.0%	4.0%	6.0%
	No option / Neutral	Count	2	7	9
		% of Total	4.0%	14.0%	18.0%
	Agree	Count	9	13	22
		% of Total	18.0%	26.0%	44.0%
	Highly agree	Count	6	9	15
		% of Total	12.0%	18.0%	30.0%
	Total	Count	19	31	50
		% of Total	38.0%	62.0%	100.0%

Source: Primary Data

Null hypothesis:

“ There is no relationship between sex and Understanding level of QR codeSystem “

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.715 ^a	4	.607
Likelihood Ratio	3.095	4	.542
Linear-by-Linear Association	.002	1	.966
N of Valid Cases	50		

a. 5 cells (50.0%) have expected count less than 5. The minimum expected count is .38.

Pearson’s Chi –square significance value is more than 0.05.

RESULT:

Hence, Null hypothesis accepted. There is no relationship between sex and understanding level of QR codeSystem

1.8.6 Relationship Between Sex And Usage Level Of Q.R Code System

Clarification doubts with sex Crosstabulation

			sex		Total
			male	female	
Clarificationdoubts	Highly Disagree	Count	1	1	2
		% of Total	2.0%	2.0%	4.0%
	Dis agree	Count	1	5	6
		% of Total	2.0%	10.0%	12.0%
	No option/ Neutral	Count	5	5	10
		% of Total	10.0%	10.0%	20.0%
	Agree	Count	8	16	24
		% of Total	16.0%	32.0%	48.0%
	Highly agree	Count	4	4	8
		% of Total	8.0%	8.0%	16.0%
Total		Count	19	31	50
		% of Total	38.0%	62.0%	100.0%

Source: Primary data

Null hypothesis:

“ There is no relationship between sex and Usage level of QR codeSystem “

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.603 ^a	4	.626
Likelihood Ratio	2.721	4	.606
Linear-by-Linear Association	.205	1	.651
N of Valid Cases	50		

a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .76.

Pearson’s Chi –square significance value is more than 0.05.

RESULT:

Hence, Null hypothesis accepted. There is no relationship between sex and usage level of QR code System

1.8.7 Relationship between Sex and satisfaction Level Of Q.R Code System

Satisfied level QR codefor teaching with sex Crosstabulation

			sex		Total
			male	female	
Satisfied level QR codefor teaching	Highly disagree	Count	1	2	3
		% of Total	2.0%	4.0%	6.0%
	Disagree	Count	2	1	3
		% of Total	4.0%	2.0%	6.0%
	No option /neutral	Count	4	7	11
		% of Total	8.0%	14.0%	22.0%
	Agree	Count	7	12	19
		% of Total	14.0%	24.0%	38.0%
	Highly Agree	Count	5	9	14
		% of Total	10.0%	18.0%	28.0%
Total	Count	19	31	50	
	% of Total	38.0%	62.0%	100.0%	

Null hypothesis:

“ There is no relationship between sex and satisfaction level of QR codeSystem “

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.128 ^a	4	.890
Likelihood Ratio	1.090	4	.896
Linear-by-Linear Association	.141	1	.707
N of Valid Cases	50		

a. 5 cells (50.0%) have expected count less than 5. The minimum expected count is 1.14.

Pearson’s Chi –square significance value is more than 0.05.

RESULT:

Hence, Null hypothesis accepted. There is norelationship between sex and usage level of QR codeSystem

1.8.8 Relationship between working experience and satisfaction level of Q.R code system

**Satisfied QR code for teaching with working experience
Crosstabulation**

			workingexperience				Total
			below 5 yrs	5 - 10 yrs	10 - 15 yrs	above 15 yrs	
Satisfied QR code for teaching	Highly disagree	Count % of Total	3 6.0%	0 .0%	0 .0%	0 .0%	3 6.0%
	Disagree	Count % of Total	1 2.0%	1 2.0%	1 2.0%	0 .0%	3 6.0%
	No option /neutral	Count % of Total	1 2.0%	6 12.0%	1 2.0%	3 6.0%	11 22.0%
	Agree	Count % of Total	3 6.0%	6 12.0%	6 12.0%	4 8.0%	19 38.0%
	Highly Agree	Count % of Total	3 6.0%	6 12.0%	4 8.0%	1 2.0%	14 28.0%
Total		Count % of Total	11 22.0%	19 38.0%	12 24.0%	8 16.0%	50 100.0%

Source: Primary data

Null hypothesis:

“ There is no relationship between Working experience and satisfaction level of QR codeSystem “

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.130 ^a	12	.145
Likelihood Ratio	16.484	12	.170
Linear-by-Linear Association	1.655	1	.198
N of Valid Cases	50		

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.130 ^a	12	.145
Likelihood Ratio	16.484	12	.170
Linear-by-Linear Association	1.655	1	.198

a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .48.

Pearson's Chi -square significance value is more than 0.05.

RESULT:

Hence, Null hypothesis accepted. There is norelationship between Working and satisfaction level of QR codeSystem.

1.9 Findings :

- In the **level of acceptance** mean value is 3.91, standard deviation is 0.712. Maximum respondents are female (62%), and they were indicate the scaling level is agree(44%)
- In the **level of understanding** mean value is 3.82, standard deviation is 1.082. Maximum respondents are female (62%), and they were indicate the scaling level is agree(26%)
- In the **level of usage** mean value is 3.98 and standard deviation is 0.845. Maximum respondents are female (62%), and they were indicate the scaling level is agree(32%)
- In the **level of satisfaction** mean value is 3.94 and standard deviation is 0.956. Maximum respondents are female (62%), and they were indicate the scaling level is agree(24%)
- There is norelationship between sex and Accepting level of QR code System
- There is norelationship between sex and understanding level of QR code System
- There is norelationship between sex and usage level of QR code System
- There is norelationship between sex and satisfaction level of QR code System
- There is norelationship between Working experience and satisfaction level of QR code System

1.10 Limitations of the study:

- ☞ The survey was limited only 50 teachers at Trichy city.
- ☞ Few respondents were reluctant while answering the questions due to their busy schedule. Respondents are concentrated only teachers not in students' point of view.
- ☞ Since the researcher uses the questionnaire schedule for data collection, the information given by the respondents is depends upon the honesty.
- ☞ The researcher findings the results based on the response from the teachers only.

Conclusion:

The Q.R code Facilitates learning and exchange of knowledge, the prepare the young people for the future and offer the teacher , pupils and students opportunities which should be wasted, but used to their full potential. Just as student technology to enhance their learning process, and productivity and to promote creativity, teachers should use technology to support the instructive practice and in order to improve productivity.

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- 10.<https://www.whatihavelearnedteaching.com/using-qr-code-in-the-classroom/> @ 8.00 a.m, 21.12.18