



**ACCESSIBILITY AND CHALLENGES OF TECHNOLOGICAL
 ASSISTED TEXTBOOK AS LEARNING RESOURCE IN THE
 TEACHING LEARNING PROCESS**

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Abstract

The pandemic situation has caused shutting down of schools, colleges and other educational institutions globally. More than a billion students are not able to avail the classroom boons. Ergo, education has drastically modified giving an uplift to e-Learning through the utility of digital platforms. Analysis on how the education sector responds to this pandemic, making the maximum and optimistic use of digital platforms how government and SCERT brought the Diksha app in use making education easily available. This study uncovered the accessibility, and challenges of technological assisted textbook. A sample were selected 1. On the basis of Upper Primary school and Secondary school 240 teachers, 240 students and 240 parents of NMMC school, Government aided school & Private school and also from Upper Primary and Secondary Section. This research will be survey method for studying accessibility and challenges of Technological Assisted text book in the teaching learning process. With the help of questionnaires researcher will check the opinion of teachers, students and parents of students of Municipal School, Government aided and private school. To study the nature of the data and differences between various variables of the study, the researcher made use of inferential statistics technique. For the purpose of inferential analysis of the data in the

present study, T test and ANOVA was used to find out the relationship between various dimensions. The values of standard deviation used to measure the trade or actions of scores in sample each hypothesis is tested with T test and ANOVA. Accessibility for Teachers, students and parents of Municipal school teacher is good but the analysis shows that Government aided and Private school teachers face difficulties in accessing the QR code. It could be because of lack of knowledge regarding QR code. The analysis shows that government aided school students face a few more difficulties compared to the other school students. Challenges faced by teachers, students and parents could be because some teachers were not aware of QR Code or DIKSHA APP, or they need training for using it. Issues faced by them, could be Internet service, lack of technological knowledge or they might be not aware of QR Code.

Keywords: *Accessibility, Challenges, Technology, Textbook, Teaching Learning Resources, Teachers, Students, Parents.*

1.1 Introduction:

Technology in the textbook: - “Technology will not be replaced great teachers but technology in the hands of great teachers can be transformational.” Formal education is implemented by specially qualified teachers. Teachers use various modes like lecture, discussion, demonstration, role plays, team teaching while teaching in class room. Teachers need to enhance their teaching skills by using innovative teaching strategies with the help of effective learning resources. The use of this material was started in the form of small cards, pictures, letters and tables. In recent advances new changes had taken place in education material .The audio materials were now replaced by audio-visual tools. Educational materials were available in the form of Cassette and Cd. Moreover there are online classes, lectures, webinars, and small crash courses to make education or study easy. In the other words it is available in the forms of apps and online tutors. Technology has taken a strong leap in different sectors. It has been observed the step vies the growth of technology. Education sectors are not far from this progress. Studies have changed a lot in terms of teaching methods. We look forward to the positive changes in education as per the need of hour. Early learning methods were teacher centric and now it has becomes a student centric. **E-Material:** It means the resources available in electronic format such as e-journals, databases and e-books. E-Materials is an effective tool for teaching and learning process in a contemporary education system. A learning system supports formalized teaching but with the assistance of electronic resources is known as

E learning. Internet becomes the main resource of e-learning. It also can be termed as a transfer of skills and knowledge, and the delivery of education made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly because it was assumed that this technique lacked the human element required in learning. According to the new perspective of the SCERT the change is often seen as a part of parental participation. Now a day's educational material is out there the within the support of PPT, Wikipedia, various links, websites, You Tube videos, which may have called as an E-MATERIAL or E-CONTENT. Only one click, you can reach to the most difficult question within the fraction of seconds. All the material is available at your desktop but it becomes very difficult to choose the right one. A person might get diverted from the main line stream into the sub topics leading to further confusions. The government of Maharashtra gave an idea of assembling all of these methods under one roof. Here the word roof means "textbooks". Because it compels us to think innovatively and are available with effective outputs. All these study material will now be assembled at one single site, which can be helpful for each student to study. All the education material which is available in the form of websites, you tube, different links, audios, games, app, videos PPT. This single site gave a rise to the concept of **QR CODE**. The major difficulty can be solved with one single click. But it is difficult to decide that technology is curse or boon. This big question falls in the case of E-content. Every material is in front of the student. But what exactly do we want? What's important? What exactly is needed? It is difficult to keep check on viewing unnecessary videos. And so the Government has decided that all these content (E-Content) can be made available at one single point. Here still the textbook plays the vital role in our teaching learning processes. If all these E-contents are attached to the textbook the students will be able to receive accurate and necessary information and the misuses can also be avoided. So the government came forward with the concept of QR Coded Text Book. All E- Contents are prepared for textbook of standard 2 to 7 and 9th &10th. These contents were added to the QR code of the text book.

1.2 Review Of Related Literature:

Leena Sharma (2017), conducted study on "**Effectiveness of an ICT Programme on Technological Pedagogical and Content Knowledge (TPACK) among Pre-service Teacher Educators.**" ICT is a nonexclusive term alluding to innovation which are Being utilized for gathering, putting away, altering and passing on data in different

structure. Objectives are related with Information and Communication Programme (ICT), and Self development tool. Information and Communication Programme (ICT), Technological Pedagogical and Content Knowledge (TPACK), Teacher Self Efficacy (TSE) and Teaching Effectiveness (TE) are the important things for a teacher. Objectives of The Study: 1. To find the Effect Size of ICT-EIP on Technological, Pedagogical & Content knowledge (TPACK), Teacher Self Efficacy (TSE) and Teaching Effectiveness (TE) of pre-service teacher educators of both experimental (E) and control(C) group after experimental treatment.2.To find variable importance of Technological, Pedagogical & Content knowledge (TPACK), Teacher Self Efficacy (TSE) and Teaching Effectiveness (TE) of pre-service teacher educators of both experimental (E) and control(C) group after experimental treatment.3. Development of

Decision Tree and Interpretation of the results of Technological Pedagogical and Content Knowledge (TPACK), Teacher Self Efficacy (TSE) and Teaching Effectiveness (TE). of preservice teacher educators of both experimental (E) and control(C) group after experimental treatment.4. To adapt and standardized the ‘Teaching Effectiveness (TE)’ scale for pre-service educators in Indian Studies. Findings Of The Study: Information and Communication Programme (ICT) plays a vital role in the field of education due to its multi-sensory approach. It Offers opportunities for almost all subjects & especially it provides a good ground for complex matter. The effectiveness of ICT-EIP over traditional methods of teaching has been established through the present study.

Nair Sobhana Nandakumar (2017) conducted a study on “**Impact of New Trends of Teaching Learning Process in Mathematics towards the Competitiveness of Female students at Higher Secondary Schools in Mumbai**”. Education May be a dynamic method it changes with time in step with the necessity of society. If the system of education steps to change itself to dynamical state of affairs the progress can halt. The researcher wanted to explore the impact of new trends of teaching learning process in Mathematics towards the competitiveness of female students at higher Secondary in Mumbai School. The researcher wanted to study the impact /influence of new trends of learning also encourage usage of new trends in education to facilitate equal representation of females in professional courses. The study found the impact of new trends by comparing the scores of std XI class of two groups (Experimental and Control group) by teaching the topic Angles and measures from Trigonometry (prescribed syllabus of

Maharashtra state board of Higher secondary). Objectives Of the study 1. To study the impact of new Trends of teaching learning process in mathematics towards female students. 2. To study the new trends in maths teaching learning. 3. To study the relation between competitive risk of female students and new Trends of teaching learning process. 4. To find out the female student's attitude towards professional courses with the impact of nutrients of teaching learning process. 5. To study the attitude of female students of aided and unaided school towards the new trends in teaching learning mathematics. **Shaik Anwar Basha F (2017)**, conducted study on **'Effectiveness of programmed learning method in learning social science among school students at Kallakurichi educational district.'** There are individual differences among children in terms of level of intelligence, level of understanding, attitudes, achievements et cetera therefore the same type of institutional method in classroom may not be issued to the classroom situations to cater to the need needs of individual differences and abilities we have to adopt innovative instructional procedure the national policy on education has emphasised the need of qualitative improvement of school education. The new education policy 1986 envisages a Drift from traditional lecture method to an approach that has a focus on learner. Program instruction in a subhead under instruction and represent a more rigorous attempt to develop a mastery over specified goals to secure insure learning. The present study has an attempt to test the effectiveness of social science in secondary school level it is hoped that the study would contribute some highlights to words new approach of teaching. Objectives of learning social science 1. To appreciate the values enshrined in the Indian enshrined such as Justice liberty equality and fraternity E and the unity and integrity of the nation and building of a socialist, secular and democratic society. 2. To grow as active, responsible and reflective members of society. 3 To question and examine received ideas, instructions and practises. 4. To undertake activities that will help them to develop social and life skills. Objectives of the study 1. To find out whether there is any significant difference in the pre-test score in social science between control and experimental group statements of standard eight. 2. Find out whether there is a significant difference in the pre-test scores in social science between control and experimental group students of standard eight with respect to gender, locality, type of schools, parent's education and occupation. 3. To find out whether there is any significant difference in the post test score in social science between control and experimental group students of standard eight with respect to gender locality type of school's parent education

and occupation. 4. To find out whether there is any significant difference between pre-test and post test score in social science among the experimental group students of standard eight to find out whether there is any significant difference between the post-test and retention test score in social science among experimental group students of standard eight. Findings of the study the results of the study reveal that learning through program learning method helps to improving the achievement of students, in general and enhance ability of learners in the skills such as knowledge understanding application of social science concepts in particular hence, it is the need of the day to develop and introduce such model for better teaching learning process at school level.

Richa Sharma, A research journal December 2020 study on “**Comparative study MOOC learning and blended learning in teaching learning process.**” The purpose of the study is to find out the differences between learning and blended learning in the teaching learning process. The sample was taken from the school. Objectives of the study

1. The main objective of the study is to find out the comparison between MOOC learning and blended learning the present research is normative survey research. Findings of the study. 1. Blended learning in which a combination of online learning and a traditional classroom can be followed by THE approach to sustain the quality and efficacy of the learning. This method shall not only accelerate academic achievement but it will also develop a practical skill said as well. 2. Blended strategy is better than MOOC.

Garba bala Doguwa, July 2021, “**Analysis of availability and uses of information and Communication Technology (ICT) Resources in the Teaching of Physics in Science Secondary School in Kano State**”.

Objective of the study:

1. The study analysed the information and Communication Technology (ICT) facilities availability and uses in science Secondary School in Canada state.
2. To find out ICT resources availability to Physics teacher in Science Secondary School in Canada state.
3. To find out whether ICT resources are used in the teaching of Physics, by Physics teacher in Science Secondary School Kano State. Findings of the

Study: 1. The result it shows that ICT resources are not available in most of the science School and that most Physics teacher do not utilize even the few available ICT resources in teaching physics. Suggestion of the

Study: 1. Government and Non-governmental organization should work hard to speak in

effective teaching learning of Physics.

2. The study has revealed that ICT resources are not available in reasonable number in majority of the science Secondary School in chemistry.3. The available ICT resources are not utilized properly by Physics teacher despite the impact of ICT resources in physics education.

1.3 Aims Of The Study:

To study the accessibility, usefulness and challenges of technological of assisted (QR Coded) textbook as a learning resource.

1.4 Objectives Of The Study:

1. To compare the accessibility of technological assisted (QR coded) text books for teachers, students & Parents on the basis of type of school namely
 - a) Municipal School
 - b) Government Aided
 - c) Private Schools of Navi Mumbai
2. To compare the accessibility of technological assisted (QR coded) text books for teachers, students & Parents on the basis of level of education namely.
 - a) Upper Primary school
 - b) Secondary school.
3. To compare the challenges of technological assisted (QR coded) text books for teachers, students & Parents on the basis of type of school namely
 - a) Municipal School
 - b) Government Aided
 - c) Private Schools of Navi Mumbai
4. To compare the challenges of technological assisted (QR coded) text books for teachers, students & Parents on the basis of level of education namely.
 - a) Upper Primary school
 - b) Secondary school.

1.5 Hypothesis Of The Study

1. There is no significant difference in the accessibility of technological assisted (QR coded) text books for teachers, students & parents on the basis of type of school namely
 - a) Municipal School
 - b) Government Aided
 - c) Private Schools of Navi Mumbai

2. There is no significant difference in the accessibility of technological assisted (QR coded) text books for teachers, students & parents on the basis of level of education namely
 - a) Upper Primary
 - b) Secondary school.
3. There is no significant difference in the challenges of technological assisted (QR coded) text books for teachers, students & parents on the basis of type of school namely
 - a) Municipal School
 - b) Government Aided
 - c) Private Schools of Navi Mumbai
4. There is no significant difference in the challenges of technological assisted (QR coded) text books for teachers, students & parents on the basis of level of education namely
 - a) Upper Primary
 - b) Secondary school.

1.6 Delimitations Of The Study:

1. A representative sample of Upper Primary and Secondary school Teachers, Students and Parents are selected from ten educational clusters of Navi Mumbai. The selected teachers, students and parents are from state board of English, Hindi and Marathi medium.
2. A representative sample of Municipal schools, Government aided Schools and Private schools Teachers, Students and Parents are selected from ten educational clusters of Navi Mumbai. The selected teachers, students and parents are from state board of English, Hindi and Marathi medium.

2. Research Methodology

2.1 Research Design:

Survey method: This research will be survey method for studying accessibility, usefulness and challenges of Technological Assisted text book in the teaching learning process. With the help of questionnaires researcher will check the opinion of teachers, students and parents of students of Municipal School, Government aided and private school. Following collection of data, will be analysed and relation between the dependent variables will be analysed.

2.2 Sample:

A research population is generally a large collection of individual or objects that is the main focus of a scientific query. A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. The entire population here refers to teachers, students and parents of upper primary and secondary schools from municipal schools, government aided school and Private school from Navi Mumbai, Thane districts. Only upper primary and secondary school teachers and students and parents will be selected through random sampling.

- i) Teachers of upper primary and secondary section of Municipal School, Government aided and private school.
- ii) Students of upper primary and secondary section of Municipal School, Government aided and private school.
- iii) Parents of students of upper primary and secondary section of Municipal School, Government aided and private school.

2.3 Tools Used:

A research tool plays a major role in any worthwhile research as it is the factor for determining the perfect conclusion of the study. It is necessary to adopt a systematic procedure to collect essential data. Relevant data, adequate in quantity and quality should be collected. The instruments thus employed as means for collecting data are called tools. The selection of suitable instruments or tools is of vital importance for successful research. For the purpose of present study, the researcher will use three tools to collect information from teachers, students and parents of students of Municipal School, Government aided and private school. These include researcher made tools.

A. Researcher made tools: Questionnaires for teachers, students, and parents' opinion, about technological assisted text book in teaching process.

2.4 Validity Of Tool:

For the purpose of checking validity of the tool, Content validity was done by five experts.

2.5 Reliability of Tool:

The researcher established the reliability of the tool through Kuder and Richardson formula of reliability. The result of the reliability of the tool is as follows.

Reliability of Tool: Kuder and Richardson formula = 0.81

2.6 Procedure:

For the purpose of the study the researcher followed the following procedure.

1. Researcher took the permission from the Principal of Municipal School, Government aided School and Private School. These schools were selected from ten Educational clusters of Navi Mumbai.
2. Researcher made questionnaire in English language. Some students were from Marathi medium, so may be students and parents will get it difficult to understand the questionnaire. So as per need the researcher has translated the questionnaire in Marathi.
3. Teachers-240, Students-240, Parents-240 were selected from Municipal School, Government aided School and Private School for the study. Google form link was forwarded to the teachers. Teachers forwarded it to students and parents. Thus the data collection was done.
4. For the present study two types of analysis were done that is descriptive analysis and inferential analysis. A descriptive statistical measure studies the characteristics of particular group. The generalization is limited up to the particular group studied. The conclusion cannot be extended beyond the group. For the present study the statistical measures used for descriptive analysis were of measure of Central tendency (mean, median and mode) and Measure of variability (standard deviation, skewness and kurtosis) are included.

3. Results:

Table 1

Descriptive Statistics of ACCESSIBILITY of technological assisted (QR Coded) textbooks for the total Sample

- i. The following table gives the measures of central tendency and variability of accessibility for Teachers, Students and Parents of total sample.

Variable	Sample Size	Mean	Median	Mode	Standard Deviation	Kurtosis	Skewness
Accessibility	720	30.99	31.00	32.00	2.18	1.21	-0.97

Interpretation of descriptive analysis of Accessibility of technological assisted (QR Coded) textbooks for the total Sample.

The mean, median and mode of Accessibility for the total sample of Teachers, Students and Parents are in the ascending order. The Skewness is -0.97 which is negative. So, the

data is negatively skewed. The kurtosis is 1.21 it is less than standard value 3. Hence the distribution is said to be platykurtic.

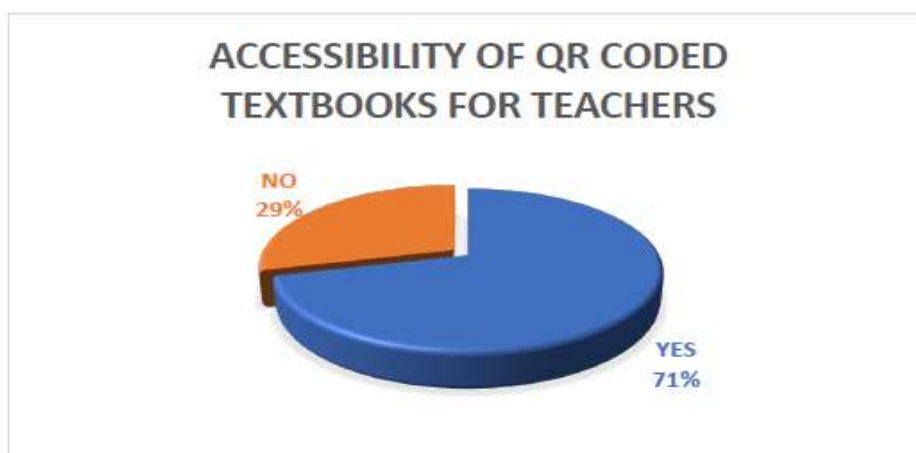
PERCENTAGE OF TEACHERS, STUDENTS & PARENTS FOR ACCESSIBILITY OF TECHNOLOGICAL ASSISTED TEXT BOOK.

ACCESSIBILITY							
NO	STATEMENT	Teachers		Students		Parents	
		YES	NO	YES	NO	YES	NO
1.	Are you aware about the DIKSHA APP?.	96%	4%	98%	2%	95%	5%
2.	Do you use it?.	78%	22%	98%	2%	71%	29%
3.	Are you aware about the Quick Response Code (QR Code) in the text book?	85%	15%	81%	19%	77%	23%
4.	Have you downloaded the DIKSHA APP on your mobile?	89%	11%	88%	12%	91%	9%
5.	Lack of access to the internet creates a hurdle to use the DIKSHA APP..	40%	60%	9%	91%	50%	50%
6.	DIKSHA APP can be used offline.	51%	49%	55%	45%	44%	56%
7.	Unable to use the DIKSHA APP due to lack of technological knowledge..	37%	63%	31%	69%	43%	57%
8.	DIKSHA APP is very convenient.	84%	16%	93%	7%	88%	12%
9.	The QR Coded e-content is interactive.	76%	24%	83%	17%	78%	22%
10	The QR Coded e-content in the textbook is inappropriate..	68%	32%	30%	70%	25%	75%
11	The QR Coded e-content has engaging teaching learning materials..	81%	19%	85%	15%	75%	25%
12	Scanning the QR Code is time consuming..	36%	64%	35%	65%	75%	25%
13	DIKSHA APP can be used by the children.	91%	9%	93%	7%	87%	13%
14	Students can scan the QR Code individually.	90%	10%	95%	5%	88%	12%
15	The DIKSHA APP is difficult to handle due to lack of training...	42%	58%	35%	65%	37%	63%
16	Everyone can easily use DIKSHA APP.	83%	17%	95%	5%	86%	14%
17	Material in DIKSHA APP can be easily understood by all.	81%	19%	90%	10%	79%	21%
18	DIKSHA APP can be used at anytime, anywhere.	74%	26%	73%	27%	77%	23%

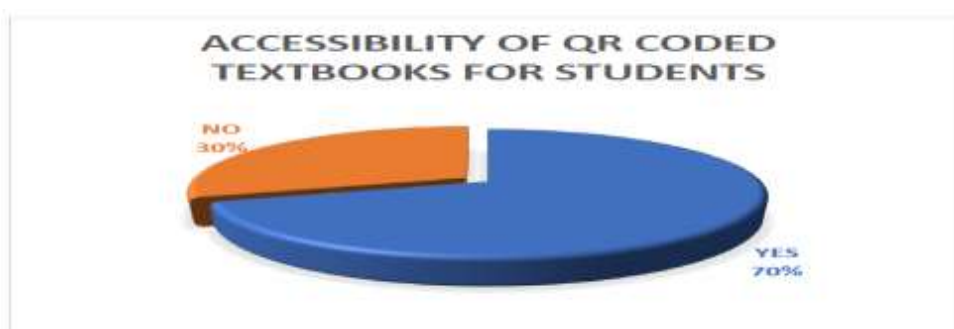
Interpretation:

Approximately 95% of the teachers students and parents are aware of the DIKSHA APP. Round about 71% of the parents 90% of the students are using Diksha app. Round about 89% of the teachers have downloaded Diksha APP and are aware about QR code in the

textbook. 50% of the parents and approximately 40% of the teacher are facing hurdles to use the Diksha app whereas approximately 37% teachers are facing problem due to technological knowledge. Round about 80% teachers, students and parents finds Diksha app convenience. E content is interactive according to them. Approximately 95% students find can scan the QR code individually. Approximately 50% of teachers, students and parents found that diksha app can be used offline. Round about 37% of the parents found that training for using Diksha app is necessary. Approximately 90% of the students find the material from Diksha app easy-to understand. Round about 77% parents are saying that Diksha can be used anytime anywhere.

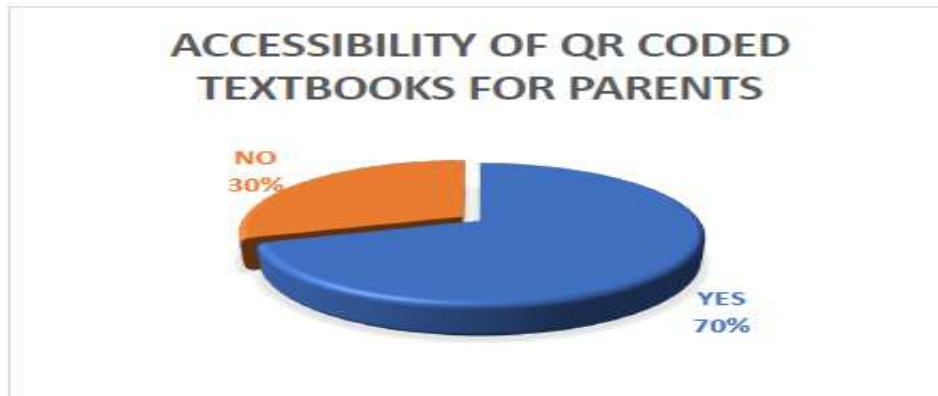


Conclusion: The research reveals that approximately 71% of teachers were using DIKSHA APP to found QR Coded e-content because it is very convenient to use and scan. QR Coded e content engaging teaching learning material. Also easy to search relevant material because internet issue does not make any hurdle in using DIKSHA APP. It provides appropriate guideline to users. While 29% teachers found that, they will require a basic training to understand the same. Some of them are not aware of QR code, some may be technically sound enough to understand it.



Conclusion: The research reveals that over all 70 % of students found were aware of DIKSHA APP and using QR Coded e-content. Students can scan individually. The

material is easily understood by all. Students found the material easily available any time anywhere. It is interactive and engaging learning material. While 30% students found it difficult to use. They will require a basic training to understand the same.



Conclusion: The research reveals that overall 70 % of parents have downloaded DIKSHA APP in their mobile phone. They were aware of DIKSHA APP and their students to use QR Coded e-content. Students can scan individually. The material is easily understood by all. Parents found the material easily available any time anywhere for their kids. It is interactive and engaging learning material. Only 30% parents found it difficult to use. They will require a basic training to understand the same. Or they might be not aware about DIKSHA APP and QR codes.

Table 2

Descriptive Statistics of CHALLENGES of technological assisted (QR Coded) textbooks for the total Sample

The following table gives the measures of central tendency and variability of Challenges for Teachers, Students and Parents of total sample.

Variable	Sample Size	Mean	Median	Mode	Standard Deviation	Kurtosis	Skewness
Challenges	720	27.44	28.00	28.00	2.42	0.85	-0.57

Interpretation of descriptive analysis of Challenges of technological assisted (QR Coded) textbooks for the total Sample.

The mean, median and mode of Challenges for the total sample of Teachers, Students and Parents are in the ascending order. The Skewness is -0.57 which is negative. So, the data is negatively skewed. The kurtosis is 0.85 it is less than standard value 3. Hence the distribution is said to be platykurtic. Approximately 89% of teachers students and parents says that searching the relevant material is an easy task.

PERCENTAGE OF TEACHERS, STUDENTS & PARENTS FOR CHALLENGES OF TECHNOLOGICAL ASSISTED TEXT BOOK.

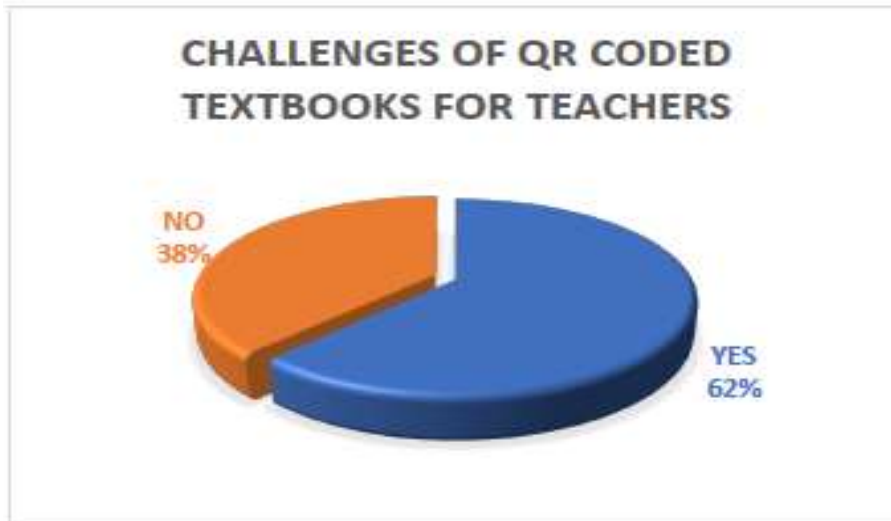
CHALLENGES							
NO	STATEMENT	Teachers		Students		Parents	
		YES	NO	YES	NO	YES	NO
1.	Using the DIKSHA APP is very difficult..	38%	62%	29%	71%	31%	69%
2.	The internet issue does not obstruct me from scanning the QR code.	52%	48%	63%	37%	48%	52%
3.	Students get bored while watching the QR Coded e-content.	35%	65%	34%	66%	30%	70%
4.	Scanning the e-content does not lead to the waste of precious time.	54%	46%	59%	41%	58%	42%
5.	With the help of QR Code, searching the relevant material is an easy task.	91%	09%	89%	11%	87%	13%
6.	An efficient technological knowledge encourages one for using the DIKSHA APP.	91%	9%	87%	14%	86%	14%
7.	Due to issues in internet accessibility it is difficult to use the DIKSHA APP..	64%	36%	60%	40%	59%	41%
8.	The DIKSHA APP provides appropriate guide line to follow.	90%	10%	88%	12%	86%	14%
9.	Using the DIKSHA APP is time consuming.	44%	56%	33%	67%	27%	73%
10.	Retention of attention is an issue in use of DIKSHA APP..	52%	48%	50%	50%	43%	57%
11.	Monitoring is less easy while using the phone for the teaching learning process.	78%	22%	75%	25%	68%	32%
12.	The DIKSHA APP is not convenient due to overcrowded classroom..	42%	58%	42%	58%	43%	57%
13.	It is necessary to undergo the proper training to use the DIKSHA APP.	68%	32%	62%	38%	58%	42%
14.	Lack of availability of smart board proves ineffective while using the DIKSHA APP..	47%	53%	45%	55%	43%	57%
15.	Traditional method of teaching learning is better than the DIKSHA APP.	71%	29%	65%	35%	63%	37%
16.	The QR coded e-content is interactive and engaging teaching material.	88%	12%	80%	20%	88%	12%
17.	The QR coded e-content is just a copy of textbook.	56%	44%	54%	46%	56%	44%

Interpretation:

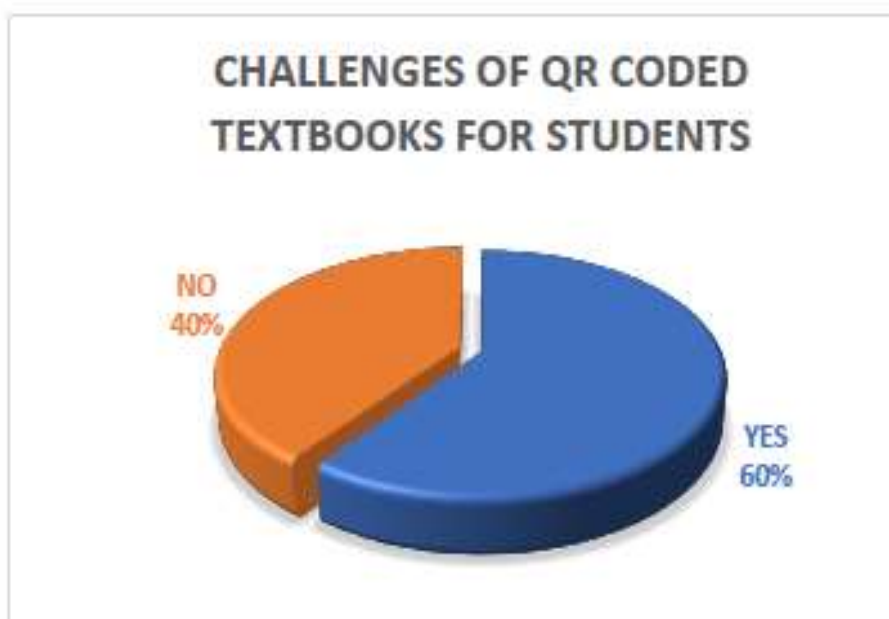
Average 62% teachers says that students get bored while watching the QR coded content.

Approximately 40% of teachers, students and parents are saying that retention of attention

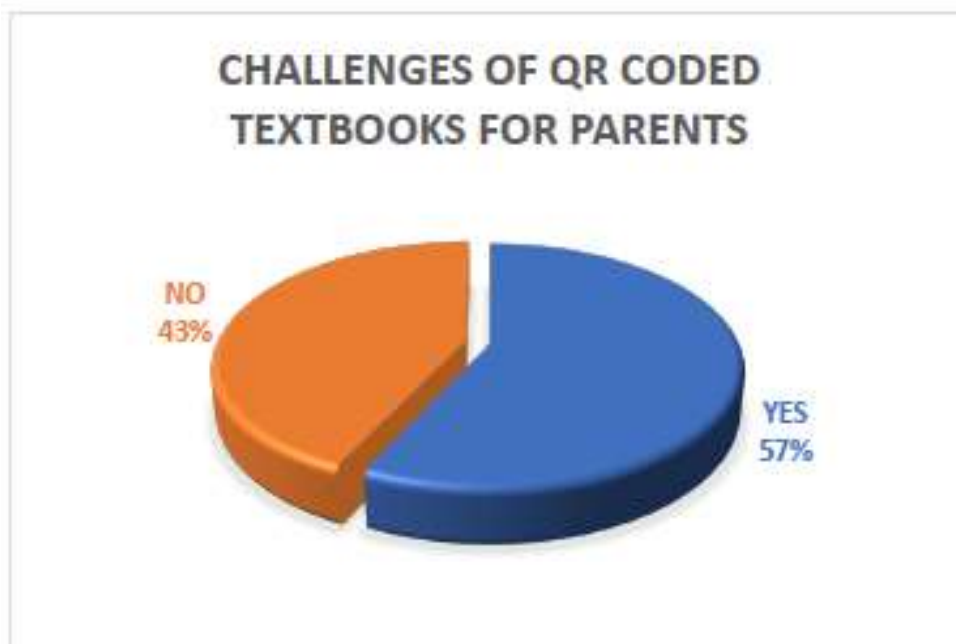
isan issue. Approximately 74% of teachers, students and parents says that monitoring is difficult while using DIKSHA APP. 88% of teachers, students and parents says that technological knowledge encourages one for using Diksha app 66% teacher students and parents save that traditional method of teaching learning is better than QR Code.



Conclusion: Approximately 62% of teachers says that using DIKSHA APP is not time consuming. QR Coded e-content is interactive and engaging for students. Also easy to search relevant material because internet issue dose not make any hurdle in using DIKSHA APP. It provides appropriate guideline to users. While 32% teachers says that unavailability of smart board, overcrowded class room can be challenging for teachers. Some of them are not aware of QR code, some may be technically sound enough to understand it. They will require a basic training to understand the same.



Conclusion: Approximately 60% of students says that using DIKSHA APP for QR Coded e content is interactive and engaging for students. Also easy to search relevant material because internet issue does not make any hurdle in using DIKSHA APP. It provides appropriate guideline to users. While 40% students says that it is difficult to use. They might be facing problems while using QR code. Some of them are not aware of QR code, some may be technically sound enough to understand it. They will require a basic training to understand the same.



Conclusion: The research revealed that approximately 57% of parents were using DIKSHA APP for QR Coded e-content was found interactive and engaging for students. Also easy to search relevant material because internet issue does not make any hurdle in using DIKSHA APP. Student do not get boar while watching e-content. Only 43% of parents found that it difficult to use. They might be facing problems while using QR code. Some of them are not aware of QR code, some may be technically sound enough to understand it. They will require a basic training to understand the same.

Overall Discussion:

Asseccibility

Accessibility for Teachers of Municipal school teacher is good but the analysis shows that Government aided and Private school teachers face difficulties in accessing the QR code. It could be because of lack of knowledge regarding QR code.

Accessibility for students of Municipal schools, government aided schools, Private schools, analysis shows that government aided school students face a few more

difficulties compared to the other school students.

Accessibility for parents of Municipal schools, Government aided schools, Private schools, are almost the same, but the analysis shows that government aided school and private school parents face difficulties in accessing the QR code. It could be because of lack of Internet services, lack of knowledge regarding QR code or understanding the E-content etc , or being unaware of DIKSHA app.

Challenges

Challenges for Teachers of Municipal school, government aided school and private school, the analysis shows that government aided school teachers face difficulties compare to Municipal school & private school teachers, while using this QR code. Challenges faced by teachers, could be some teachers are not aware of QR Code or DIKSHA APP, or they need training for using it.

Challenges for students of Municipal school, government aided school, private school, analysis shows that government aided school students face a few more difficulties compared to other school students. Issues faced by students, could be Internet service, lack of technological knowledge or they might be not aware of QR Code.

Challenges for parents, of Municipal school, government aided school, private school, analysis shows that government aided school parents face a few more difficulties compared to other school students. Issues faced by students, could be Internet service, lack of technological knowledge or they might be not aware of QR Code.

5. Suggestions

Suggestions to improve Accessibility and Challenges for Teachers, Students and Parents.

It is necessary to conduct training sessions of awareness of QR coded textbook for teachers. They should get proper guidance of using it. They should know how the internet issues could be solved. It is necessary to conduct training sessions of awareness of QR coded textbook for Students. Students should know how to scan it , how it is useful for self-study. Parents are the main factor who are going make the access of smartphones for students. It is necessary to conduct a session for the awareness of QR coded textbooks. In this pandemic parents try to help out the students by providing their cells. But for some parents net package was also hurdle in accessing this facility. So with the help of training session, parents doubts could be resolve.

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