STUDY OF ATTITUDE OF MATHEMATICS TEACHER TOWARDS DIKSHA APP IN RANCHI DISTRICT OF JHARKHAND

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CERTIFICATE

This is to certify that **Prachi Mahto**, student of Integrated B.Ed.-M.Ed. program is enrolled for the academic year 2022-2025 in the Regional Institute of Education, Bhopal has worked under my guidance and supervision for dissertation work entitled "**Study of Attitude of Mathematics Teacher towards DIKSHA App in Ranchi District of Jharkhand".** I further certify that this work is original and worthy of submission of the requirement of degree of Integrated Three-Year B.Ed.-M.Ed. program of Barkatullah University, Bhopal (M.P.).

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DECLARATION

I hereby declare that the dissertation entitled **"Study of Attitude of Mathematics Teacher towards DIKSHA App in Ranchi District of Jharkhand"** has been carried out by me during academic year 2022-2025 in partial fulfilment of the requirement for the Degree of Three-year Integrated B.Ed.-M.Ed. program of Barkatullah University, Bhopal (M.P.).

This study has been conducted under the guidance and supervision of **Dr. Pavan Kumar**, Assistant Professor, Department of Education, Regional Institute of Education (NCERT), Bhopal (M.P.).

I also declare that the research work done by me is original. This dissertation work has not been submitted by me for the award of any degree or diploma in this and any other University or Institution.

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Chapter 1 Introduction

1.1 Introduction

Quality education constitutes a fundamental right of every child as articulated in numerous national and international policy documents including the Right to Education Act (2009) in India. The assurance of quality education is not only a moral but also a strategic necessity for achieving sustainable development, promoting social justice and fostering inclusive growth. Within this framework, teachers occupy a central and transformative role. They serve as facilitators of learning, provides educational experiences and act as a mediators between educational policies and their practical enactment within classroom settings. The beliefs, attitudes and professional behaviour of teachers significantly influence the success and sustainability of educational innovations.

As contemporary education systems increasingly integrate digital technologies to enhance teaching and learning processes the role of teachers becomes even more critical. In response to the increasing demand for integrating technology into educational practices various initiatives have been launched at national and state levels to equip both teachers and students with digital tools and resources. One of the most significant initiatives in this direction is the Digital Infrastructure for Knowledge Sharing (DIKSHA) platform.

Despite the app's potential, the successful implementation of such digital tools relies heavily on the attitudes of teachers. Research indicates that teacher's perceptions, beliefs and experiences significantly influence their willingness to adopt and integrate new technologies into their classrooms. Factors such as perceived usefulness, ease of use and the availability of training and support play critical roles in shaping these attitudes.

As mathematics education faces challenges such as student engagement, diverse learning needs and varying levels of digital literacy, understanding teacher's attitudes toward tools like the DIKSHA app is crucial. Mathematics teachers play a pivotal role in implementing these technological resources in their classrooms and their perceptions can significantly influence the effectiveness of such initiatives.

1.2 DIKSHA

DIKSHA (Digital Infrastructure for Knowledge Sharing) is a national digital platform developed by the Ministry of Education, Government of India and launched in September 2017. It is designed to provide a robust and inclusive digital infrastructure that supports teaching, learning and teacher professional development across the country. The initiative aligns with the vision of the National Education Policy (NEP) 2020, which emphasizes the integration of technology in education to improve quality, access and equity.

DIKSHA caters the needs of teachers, students, school heads, and educational administrators by offering high-quality, curriculum-aligned digital resources in multiple Indian languages. The platform can be accessed through the DIKSHA mobile application as well as its web portal, making it widely accessible to users across urban and rural areas.

1.2.1 DIKSHA App

The primary aim of the DIKSHA (Digital Infrastructure for Knowledge Sharing) app is to provide a comprehensive, accessible and inclusive digital platform for enhancing teaching and learning across India by offering high-quality, curriculum-aligned educational resources and facilitating continuous professional development of teachers.

1.2.2 Key Features of DIKSHA App

1. DIKSHA provides interactive, curriculum-mapped content for classes 1 to 12 including lesson plans, e-books, audio-visual resources, worksheets, and practice questions, all aligned with NCERT and state curricula.
2. The platform offers self-paced online training modules, certification courses and capacity-building programs for in-service teachers. These modules are designed to enhance pedagogical knowledge, content understanding and classroom management skills.
3. To address the linguistic diversity of India, DIKSHA is available in over 35 Indian languages, ensuring inclusivity and wider reach among teachers and students from different regions.

4. One of the most innovative features of DIKSHA is its integration with textbooks through QR codes. By scanning these codes, users can access supplementary digital resources directly related to textbook topics.
5. The platform enables tracking of teacher participation in training modules and automatically generates digital certificates upon course completion. This promotes accountability and encourages continuous professional learning.
6. Recognizing the limitations of internet connectivity in many regions, DIKSHA allows users to download content and access it offline, making it particularly beneficial for rural and remote areas.
7. DIKSHA supports adaptive learning pathways, enabling users to select content based on their learning needs, grade level, and preferred language, thus promoting a personalized learning experience.
8. Many state education departments have adopted DIKSHA as their official learning platform. It has been customized to meet state-specific requirements and used extensively for teacher training and student learning.

1.2.3 Significance of DIKSHA App

DIKSHA plays a pivotal role in India's efforts to digitize education especially in the wake of the COVID-19 pandemic which highlighted the urgent need for accessible online learning platforms. It has enabled millions of teachers and students to continue teaching and learning remotely. By offering structured and scalable digital content DIKSHA supports the development of competent, confident, and well-equipped teachers which is a critical component of quality education. Moreover, DIKSHA contributes to the goals of Digital India, Samagra Shiksha, and PM eVIDYA, helping to bridge the digital divide and enhance educational outcomes in both rural and urban settings.

1.3 Attitude

Attitude refers to a person's mental and emotional outlook or disposition toward a particular object, person, idea or situation. It reflects how someone thinks, feels and is likely to behave in relation to something or we can say that attitude is the way we react to things positively, negatively or neutrally based on our beliefs, feelings and past experiences.

The term attitude is defined by educationist and psychologists in various different ways:

Thurstone (1946): Attitude is the degree of positive or negative affect associated with some psychological order.

Allport (1935): An attitude is a mental and neural state of readiness organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related.

Gardner (1985): Attitudes are components of motivation in language learning. They influence how much input students are willing to receive and how actively they engage in the learning process.

Skinner (1953): Attitudes are components of motivation in language learning. They influence how much input students are willing to receive and how actively they engage in the learning process.

Crow & Crow (1973): Attitude is the mental and emotional readiness to respond, organized through experience, and exerting a directive or dynamic influence upon the individual's response to situations.

1.3.1 Characteristic of Attitude

- Attitudes are not innate; they are acquired through experience, education, and social interaction. This learning may occur through direct instruction, observation, or personal experience within the educational setting.
- Attitudes tend to be consistent over time, they are not permanent and can change due to new experiences, education, persuasion, or social influence.
- Attitudes reflect a favourable or unfavourable evaluation of a person, object, situation, or idea. For instance, a student may have a positive attitude toward group work or a negative attitude toward exams.
- Attitudes significantly influence an individual's choices, actions, and responses in educational contexts. For example, a teacher's attitude toward inclusive education can affect their classroom practices.
- Attitudes can be specific to particular subjects or contexts, such as attitudes toward science, learning languages, school environment, or authority figures.

- Attitudes can be quantified using scales or questionnaires, such as the Likert scale, semantic differential scale, or Thurstone scale, often used in educational research.
- Attitudes are shaped by family, peers, teachers, media, and cultural norms, all of which play a crucial role in shaping students' and teachers' perspectives.

1.3.2 Component of Attitudes

Attitudes are composed of three interrelated components, referred to as the ABC model:

1. Affective Component (Feelings): This component refers to the emotional or feeling segment of an attitude. It reflects how a person feels about a particular object, subject, person, or event.

2. Behavioral Component (Actions or Intentions): This component refers to the way the attitude influences how a person acts or behaves. It reflects a person's predisposition to act in a certain way toward the object of the attitude.

3. Cognitive Component (Beliefs or Thoughts): This component consists of the beliefs, thoughts, or knowledge an individual holds about the attitude object. It involves rational evaluation and logical reasoning.

1.3.3 Significance of Attitude in Education

Attitude plays a vital role in the field of education as it significantly influences both teaching and learning processes. A teacher's attitude toward their profession, students, and subject matter deeply affects their teaching effectiveness, classroom management, and interactions with learners. Positive attitudes contribute to the creation of a supportive and encouraging classroom environment, where mutual respect and open communication thrive. Moreover, attitudes shape students' emotional and social development, influencing their behavior, interpersonal relationships, and ability to adapt to new challenges. In an ever-evolving educational landscape, learners and educators with open and flexible attitudes are more likely to embrace innovation and lifelong learning. Attitudes also play a role in character formation, helping students develop values such as responsibility, empathy, and perseverance. Ultimately, cultivating positive attitudes in education is essential for promoting academic success, personal growth, and a well-rounded, value-based learning experience.

1.4 Mathematics

Mathematics is a broad and diverse field of study that seeks to explore, understand, and explain various phenomena in the world through the use of numbers, symbols, shapes, and logical reasoning. It involves the study of patterns, structures, quantities, and changes. Mathematics is not limited to solving practical problems but extends into abstract realms where concepts do not necessarily have immediate practical applications. The key characteristic of mathematics is its use of logical reasoning, often abstract and symbolic, to discover relationships, solve problems, and develop theories that can be universally applied.

In everyday life, mathematics helps us with simple tasks such as counting, measuring, budgeting, and analyzing data. However, it also plays a crucial role in more complex activities, such as computing, designing algorithms, exploring theoretical physics, and understanding the natural world.

The term mathematics is defined by different mathematician in various different ways:

- Aristotle: Mathematics is the science of quantity.
- Benjamin Peirce (American mathematician): Mathematics is the science that draws necessary conclusions.
- Carl Friedrich Gauss (The “Prince of Mathematicians”): Mathematics is the queen of the sciences.
- Bertrand Russell (Philosopher and logician): Mathematics is the subject in which we never know what we are talking about, nor whether what we are saying is true.
- David Hilbert (German mathematician): Mathematics is a game played according to certain simple rules with meaningless marks on paper.
- Alfred North Whitehead: The science of pure mathematics, in its modern developments, may claim to be the most original creation of the human spirit.
- G.H. Hardy (British mathematician): A mathematician, like a painter or a poet, is a maker of patterns.
- Richard Feynman (Physicist): Mathematics is not real, but it feels like it is.

1.4.1 Significance of Mathematics

Mathematics holds a vital place in our daily lives, education, and the advancement of society. It is the foundation of all scientific and technological progress, providing the tools needed to understand and solve real-world problems. From simple tasks like budgeting, measuring, and shopping, to complex fields such as engineering, medicine, data science, and space exploration, mathematics is everywhere. It sharpens logical reasoning, critical thinking, and problem-solving abilities, which are essential skills in both academic and professional settings. Mathematics also contributes to economic development by aiding in financial planning, statistical analysis, and decision-making processes. Moreover, it reveals the hidden patterns in nature and art, enhancing our appreciation for symmetry, structure, and beauty. In essence, mathematics is not just a subject—it is a powerful language that helps us interpret, shape, and improve the world around us.

1.4.2 Mathematics Teacher

A mathematics teacher plays a critical role in the educational development of students by fostering their understanding of numbers, patterns, structures, and logical reasoning. Unlike many other subjects, mathematics requires a unique combination of abstract thinking and practical application, and it is the responsibility of the mathematics teacher to bridge this gap for learners. A good mathematics teacher not only explains complex formulas and theories but also nurtures a positive attitude toward the subject, encouraging students to appreciate the beauty and usefulness of mathematics in everyday life.

The responsibilities of a mathematics teacher extend far beyond delivering lectures. They must carefully plan lessons, design activities, and select examples that cater to different learning styles and levels of ability. Mathematics teachers use a range of teaching aids such as visual models, interactive software, and hands-on activities to make abstract concepts more tangible. They must also create an environment where students feel comfortable asking questions, making mistakes, and exploring different methods of solving problems. Regular assessments, timely feedback, and individualized support are key aspects of their role to ensure that all students can progress and build their confidence in mathematics.

Moreover, mathematics teachers must continually enhance their own skills. The world of mathematics is vast and ever-evolving, with new methods, technologies, and educational strategies emerging all the time. Effective mathematics teachers engage in professional development activities like workshops, seminars, and peer collaboration to stay current. They also play a role in developing critical life skills in students, such as logical reasoning, analytical thinking, problem-solving, and decision-making, all of which are essential in personal and professional life. By inspiring curiosity and resilience, a mathematics teacher helps students not only master the subject but also prepare for a future where mathematical thinking is increasingly important.

A mathematics teacher is much more than an instructor; they are a guide, a motivator, and a mentor. Through their dedication, creativity, and expertise, they can transform mathematics from a subject many fear into one that students enjoy, understand, and apply throughout their lives.

1.5 Need of the Study

In the Indian context, especially in semi-urban and rural areas, additional challenges such as limited digital literacy, infrastructural constraints, and varied professional development opportunities further complicate the process of technology integration. Teachers' experiences and attitudes towards platforms like DIKSHA may thus differ widely based on geographical, socio-economic, and institutional factors. There is limited research focusing specifically on mathematics teachers' perceptions of the DIKSHA app. Understanding the attitude of teachers is essential for identifying barriers to effective implementation and for developing strategies that enhance teacher engagement with digital resources. This study focuses on exploring the attitudes of mathematics teachers of Ranchi district of Jharkhand towards the DIKSHA app, examining their experiences, challenges, and the perceived impact of the app on their teaching practices.

1.6 Present Study

The Present study investigates how teachers perceive the DIKSHA app in terms of its usability, relevance, and effectiveness in enriching their teaching practices. By examining their attitudes, the study aims to contribute to the body of knowledge

regarding the integration of technology in mathematics education and provide insights for future professional development initiatives.

Through surveys method, this study gather qualitative and quantitative data about the teachers experiences about the DIKSHA app. These findings highlight the recommendations for improving its utilization in mathematics education. Ultimately, this research seeks to enhance the pedagogical strategies employed by mathematics teachers, ensuring that students receive a robust and engaging learning experience.

1.7 Statement of the Problem

This study seeks to determine:

"Study of Attitude of Mathematics Teacher toward DIKSHA App in Ranchi District of Jharkhand".

1.8 Operational Definition of Key Terms

Mathematics Teachers: In this particular study, mathematics teacher is represented as a government teachers of Ranchi district who were using DIKSHA app for teaching and learning resources.

Attitude: In this study, the teacher attitude refers to interest, motivation, usability and accessibility towards the DIKSHA app.

DIKSHA App: The terminology DIKSHA App is used for resources such as e-content, tutorial, quizzes, question banks etc. which are related to mathematics content only.

1.9 Objective of the Study

1. To evaluate the impact of the DIKSHA app on teachers' instructional strategies, usability and accessibility.
2. To assess the effectiveness of online courses, interactive quizzes and question banks. understanding the mathematical concepts.

1.10 Hypothesis

1. Mathematics teachers with greater teaching experience are less likely to adopt the DIKSHA App as compared to less experienced teachers due to traditional teaching preferences.

2. Mathematics teachers who perceive the DIKSHA App as effective in enhancing student learning exhibit a more positive attitude toward using the app.

1.11 Research Question

1. How do mathematics teachers in Ranchi District perceive the utility of the DIKSHA app in enhancing their teaching effectiveness?
2. What challenges do mathematics teachers face while using the DIKSHA app, and how do these challenges affect their attitudes towards it?
3. How do mathematics teachers perceive the integration of the DIKSHA app into the existing curriculum in Ranchi District schools?

1.12 Delimitation

1. The study is confined to Ranchi District of Jharkhand only.
2. In this study government teachers of Ranchi District were included.
3. Present study is confined to secondary and senior secondary mathematics teachers only.

1.13 Conclusion

This study has explored the attitudes of mathematics teachers in Ranchi district towards the DIKSHA app, a key digital platform aimed at enhancing teaching and learning. The findings highlight how teachers perceive the app's usefulness, ease of use, and the challenges they face in integrating it into their classrooms. Understanding these attitudes is crucial because teachers' acceptance and engagement directly impact the success of digital initiatives like DIKSHA. By addressing the concerns and building on the positive perceptions, policymakers and educators can better support teachers in using technology effectively. Ultimately, fostering a positive attitude towards such tools will contribute to improving the quality of mathematics education and ensuring that students benefit from innovative and accessible learning resources.

Chapter 2 Literature Review

2.1 Introduction

A literature review is a section of a dissertation or research paper that surveys, summarizes, and critically evaluates existing scholarly work related to a specific topic or research question. Its purpose is to provide an overview of what has already been studied, identify patterns, gaps, or inconsistencies in the literature, and establish the context for the researcher's own study. By examining previous research, the literature review helps justify the need for the new study and demonstrates how it contributes to the ongoing academic conversation. It is not just a summary of sources but a critical analysis that highlights the relevance, strengths, and limitations of existing studies.

2.2 Review of Literature

Shokeen A. & Kaur B.(2025) conducted a study on "Evaluating Perception of Delhi Government School Teachers towards the DIKSHA Platform: A TAM-Based Analysis" in this research researcher took the population 71 teachers which were randomly taken from three regions in Delhi. The study emphasizes on that perceived usefulness, and ease of use significantly influences the attitudes, intention and actual usage behaviour of a user in TAM model. Researcher divided his paper based on three research question and get three different finding. For the first research question researcher find out that a strong positive correlation was found between perceived usefulness and perceived ease of use. For second research question the finding i.e., familiarity with DIKSHA platform had a moderate positive correlation with the variable Perceived usefulness and Behavioural Intention of using the platform. And third research question i.e., the frequency of using DIKSHA had a positive correlation with all the constructs of TAM.

Verma R., Dash D.N., and Purohit M. (2025), conducted a study on "Access and Use of DIKSHA for School Teachers and Students Amid COVID-19: An Assessment of Rural Rajasthan". The study assessed the access and use of the online education platform DIKSHA during the pandemic in rural areas of Rajasthan. It employed mixed methods research and covered 100 government schoolteachers and 100 students of grades 9-12. The study findings indicate that 96 per cent of teachers learnt to use DIKSHA during a pandemic and used the portal for lesson plans, assessments, question banks, and improving teaching skills. 95 per cent of students used DIKSHA to access

digital textbooks and interactive worksheets. Education through DIKSHA has bridged the learning gap among rural children during the pandemic. The study also assessed challenges faced by teachers and students related to internet connectivity and interruptions.

Supriya (2022), conducted a study on the" study of attitude of male and female teachers towards DIKSHA digital initiative" in this research researcher took the population for the study of the Male and Female, "teachers" of Muzaffarpur Bihar. A total of 50 male "teachers" and 50 female "teachers" teach in secondary schools". The study findings show that there is no significant difference between the attitudes of male and female teachers towards the national teacher platform- DIKSHA among secondary school teachers in Government and Private Schools.

Ghosh (2022), conducted a study on Impact of DIKSHA app as an electronic resource in english language teaching learning process in different kendriya Vidyalaya's of India. The study is framed within the context of India's National Education Policy (NEP) 2020 which emphasizes the development of tech-savvy teachers and the widespread use of e-learning platforms like DIKSHA for both student learning and teacher training. DIKSHA offers a diverse range of educational content, including videos, audio notes, PDFs, assessments, and training modules, all aligned with the CBSE curriculum. Ghosh's research, involving both quantitative and qualitative analysis of 60 KVS English teachers' responses, reveals high engagement with the app, particularly for teaching core English skills—listening, speaking, reading, writing, grammar, and vocabulary. Teachers reported positive classroom outcomes, increased student participation, and enhanced capacity building through government-backed programs like NISHTHA and Experiential Learning. However, the study also notes some limitations, such as technical glitches, frequent update requirements, and a need for more interactive worksheets and MCQ-based resources. Importantly, the research highlights DIKSHA's potential as a self-learning platform, offering flexibility and accessibility, especially for slow learners. The study concludes that DIKSHA, despite minor challenges, holds substantial promise for transforming English language instruction and fostering digital readiness among teachers and students in Indian schools.

Kanvaria and Dubey (2022) conducted a study on DIKSHA, NISHTHA and CPD: Experiences and perceptions of school learning-facilitators their study conducted among 20 government school teachers (PRTs and TGTs), highlights generally positive experiences with e-training through DIKSHA. The majority of participants (78 percentage) rated the portal as "good," citing its accessibility, structure, and timely module completion. Approximately 77 percentage reported that they could apply the training content effectively in classroom teaching. However, the study also points to challenges such as lack of time for processing content, monotonous video lectures, and a preference among some for offline training due to better interpersonal engagement and real-time feedback. Respondents suggested that training videos should be shorter and more engaging, with varied teaching strategies to avoid redundancy. Incentives for course completion were also proposed to improve motivation. Despite these areas for improvement, the study affirms that DIKSHA serves as an effective platform for CPD, supporting the NEP 2020's vision of technology integration in education and teacher empowerment. The findings underscore the need for a more engaging and responsive training approach that balances flexibility with depth and interactivity.

Mahato S. (2022), conducted a study on Blended Mode for PM e-VIDYA: A Framework stated that E-materials, e-resources, and e-methods are now utilized and utilized for PM e-exclusively VIDYA's online mode. People who can't access the mode properly, such as blind people, deaf-and-dumb people, intellectually impaired people, and other types of impaired people, are deprived in some ways, as well as people who are uncomfortable with online mode or have problems with online mode, are deprived of the benefits of PM e-VIDYA. As a result, the researchers attempted to create a foundation for PM e-mixed VIDYA's mode. The framework is developed using a combination of documentary and logical analysis.

Goel and Malik (2021) A study on awareness and usage of E-resource portals among prospective teachers their study revealed that while many teacher trainees were aware of platforms like DIKSHA, SWAYAM, and e-Pathshala, actual usage was limited, often due to lack of training or confidence in using the tools. For instance, only 28 percentage used DIKSHA and just 4 percentage used NISHTHA, despite higher awareness levels. The majority of users accessed these portals primarily for teaching and learning purposes. The study highlights the urgent need for targeted orientation and digital

literacy programs to bridge the gap between awareness and effective use of educational e-resources.

Lin, Chen, and Liu (2017) conducted a study on A study of the effects of digital learning on learning motivation and learning outcome their research involved 116 students divided into control and experimental groups, with digital learning implemented over a 32-week instructional period. The findings revealed that digital learning significantly improved both intrinsic and extrinsic motivation, outperforming traditional teaching methods. The authors emphasized that digital learning not only increased student engagement and access to diverse resources but also allowed for real-time interaction, self-paced learning, and improved record-keeping of learning history. The results underline the importance of teacher involvement in adapting instructional strategies to effectively integrate digital platforms and create motivating, learner-centered environments. This study supports the growing body of literature that advocates for digital learning as a valuable and effective approach in contemporary education.

Jagannadh Y.V. (2011), conducted a study on "Teaching Competency and Attitude Towards Teaching Profession of B.Ed. College Students" and discovered that there is a positive inter-dimensional link between teaching Competency and Attitude Towards Teaching Profession. In terms of teaching ability and attitude toward the profession, there are no substantial differences between male and female student teachers, nor between rural and urban student teachers. In terms of teaching competency and attitude toward the profession, student teachers aged under 25 and those aged over 25 do not differ considerably.

Farahiza (2010), conducted a research on Blended learning in higher education institution in Malaysia. It combines the strengths of traditional face-to-face teaching with the flexibility of online learning, addressing the limitations inherent in both methods. Traditional classroom instruction offers direct interaction and a sense of community but is often restricted by time, location, and resource availability.

Theoretical models such as Khan's Octagonal Framework and Carman's five-component model provide structured guidance for implementing effective blended learning. These models emphasize essential elements like pedagogy, technology, learner support, collaboration, and continuous assessment. A well-designed blended

learning system has the potential to transform education by making it more inclusive, interactive, and aligned with the needs of 21st-century learners. Thus, blended learning stands out as a dynamic and adaptable approach that supports the evolution of teaching and learning in modern higher education.

2.3 Research Gap

The reviewed literature demonstrates a broad interest in DIKSHA's role in education, but several gaps remain. First, few studies address DIKSHA's use by mathematics teachers, despite the subject's unique instructional demands. Existing research often focuses on urban or national-level samples, with minimal exploration of regional districts like Ranchi, Jharkhand. Second, much of the research centers on general teacher perception without distinguishing subject-specific experiences. Lastly, several studies are pandemic-specific, lacking long-term insights into platform usage in normal classroom settings.

Therefore, the present study aims to fill these gaps by investigating the attitudes of mathematics teachers towards the DIKSHA app in the Ranchi district of Jharkhand, providing subject-specific, region-specific, and contextually grounded insights into its effectiveness and usability.

Chapter 3 Research Methodology

3.1 Introduction

Research Methodology refers to the systematic framework or blueprint that guides a researcher in conducting a study. It includes the strategies, techniques, tools, and procedures used to collect, analyse, and interpret data in order to answer a specific research question or achieve the objectives of the study. According to John W. Creswell, "Research methodology is the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions or problems". The present chapter deals with the population, sample, tools used for data collection and statistical techniques used for the study.

3.2 Research Design

This study uses a descriptive research design to explore how mathematics teachers in Ranchi district of Jharkhand feel about the DIKSHA app, a digital platform developed by the Ministry of Education to support teaching and learning with e-content and teaching resources. A descriptive approach was well-suited for this kind of research because it helps present a clear and accurate picture of the current attitudes of teachers without trying to change or control any part of their environment.

To gather this information the study uses the survey method which was a common and effective way to collect data from a large group of people. By using standardized tools like questionnaires or attitude scale the survey ensures that data collected was consistent and comparable. This makes it easier to identify general trends and patterns in how teachers perceive and use the DIKSHA app. The method also allows for a wide reach across different types of schools and teacher backgrounds, helping to provide a well-rounded and reliable understanding of their views.

3.3 Population

The population of a study includes all individuals who share certain characteristics relevant to the research and from whom the researcher intends to draw conclusions. For this investigation, the population comprised mathematics teachers working in various schools within Ranchi district, Jharkhand.

3.4 Sample

A sample is a representative subset of the population, selected for the purpose of conducting the study. In the present study, a total of 32 mathematics teachers were

selected using simple random sampling. The sample included teachers from state government school to ensure diverse representation in terms of institutional settings and technological access.

3.5 Research Tools and Techniques

To study the attitude of mathematics teachers towards the DIKSHA App, a combination of quantitative and qualitative research tools and techniques can be employed. A structured questionnaire using a Likert scale was used to observe the usefulness, effectiveness and overall satisfaction of mathematics teacher towards DIKSHA App.

3.6 Tools Description

In the present study, researcher was studied about the attitude of Mathematics teacher towards DIKSHA App. The researcher had developed a self-made questionnaire with closed-ended questions to quantify attitudes of teachers which consists of Likert scale items regarding usability, effectiveness, and overall satisfaction with the DIKSHA app and name tool as Attitude Scale Regarding DIKSHA App. For the construction of the Attitude Scale researcher had selected 25 items consisted of both open ended and close ended were satisfy the objective of usability, effectiveness and overall satisfaction regarding DIKSHA App and these items clearly satisfy the objective for collecting the information related to the Attitude of Mathematics Teacher towards DIKSHA App.

3.7 Data Collection

Data had been gathered using both online (using google forms) and offline mode depending on availability of the teachers and their access to the internet. Before starting the data collection permission had been taken from school authorities to ensure smooth coordination. All participating teachers had been informed about the purpose of the study and their consent had been obtained. They were also been assured that their responses has been kept confidential and used strictly for research purposes.

3.8 Statistical Techniques of Data Collection

3.8.1 Meaning of Statistical Techniques

Statistical technique refers to a method or procedure used to collect, organize, analyze, interpret, and present numerical data in a systematic manner. These techniques help researchers draw meaningful conclusions, identify patterns, test hypotheses, and make informed decisions based on data. Common statistical techniques include measures of

central tendency (mean, median, mode), measures of dispersion (range, variance, standard deviation), correlation, regression, and tests of significance. In research, statistical techniques was essential for ensuring that the findings were accurate, reliable, and valid.

3.8.2 Statistical Techniques used in Present Study

In the present study following statistical techniques were used-

1. Standard Deviation – To measure the dispersion or spread of responses around the mean, helping understand the variability in teachers' attitudes.
2. Pie Charts- To show the proportion of responses in a clear and interpretable format.

Chapter 4 Data Analysis and Interpretation

4.1 Introduction

This chapter presents the analysis and interpretation of the data collected during the course of the study. The primary objective of this section is to systematically examine the responses and observations gathered through questionnaires and to derive meaningful insights in relation to the research objectives and hypotheses.

Data analysis is a crucial part of the research process as it helps transform raw data into relevant findings that answer the research questions. It involves organizing the data, applying statistical or qualitative techniques and interpreting the results in the context of the theoretical framework and literature reviewed in earlier chapters.

4.2 Data Analysis and Procedure

In the present study, the researcher had developed self-constructed tool in order to measure the attitude of the secondary school teachers. For the purpose of collection of the data total 32 different government school were selected from Ranchi District of Jharkhand with the help of random sampling technique. A total number of 32 mathematics teachers of the secondary stage were chosen. Out of them, 6 female and 26 males teachers were selected and data were collected with the proper consent of the teacher.

To analyse the attitude of mathematics teachers towards the DIKSHA app descriptive statistical treatment was undertaken. Statistical treatments such as mean, median, mode and standard deviation were calculated for each of the 20 items of the questionnaire. The items were grouped into three core dimensions: **Effectiveness** (Items 1–7), **Usefulness** (Items 8–14), **Practical Application** (Items 15–20) and 5 open ended question related to all of them.

Table1: Descriptive Analysis of Data

Dimensions	SI No.	Mean	Median	Mode	Standard Deviation
Effectiveness	1.	4.47	5.00	5	.671
	2.	4.09	4.00	4	.641
	3.	3.91	4.00	4	.777
	4.	3.94	4.00	4	.716
	5.	4.03	4.00	4	.897
	6.	4.00	4.00	4	.880
	7.	3.78	4.00	3	.975
Usefulness	8.	3.69	4.00	4	.998
	9.	4.13	4.00	5	.871
	10.	4.13	4.00	4	.833
	11.	3.84	4.00	4	.954
	12.	4.00	4.00	4	.803
	13.	3.91	4.00	4	.856
	14.	4.06	4.00	4	.669
Practical Application	15.	3.94	4.00	5	.948
	16.	3.88	4.00	3	.942
	17.	3.78	4.00	4	.832
	18.	3.84	4.00	4	.808
	19.	3.94	4.00	4	.840
	20.	3.91	4.00	4	.818

4.2.1 Effectiveness of DIKSHA App

The responses in this category showed a clearly positive attitude among teachers. Item 1 had the highest mean 4.47 which means that most of the teachers strongly agreed that the DIKSHA app helps them in their teaching. Other items of this dimension (item 2, item 5 and item 6) also had high mean between 4.00 and 4.09. However, item no. 7 was a bit lower with mean of 3.78, which shows that 75.6 percentage of teachers were less

certain about that particular aspect. The standard deviation values which ranged from 0.641 to 0.975 shows that 57.16 percentage teachers had similar opinions and 75.6 percentage of teacher had different or mixed views especially for Item 7. Still, all the items had a median value of 4.00, meaning that 71.42 percentage of teachers agreed on the usefulness of DIKSHA app. Overall data reveals that mathematics teachers find that the DIKSHA app is most helpful and effective in improving their teaching.

4.2.2 Usefulness of DIKSHA App

The responses on usefulness of DIKSHA app received positive feedback from teachers. Items 9 and 10 had the highest mean value 4.13 which show that many teachers agreed the app offers helpful resources and content. However, Item 8 had the lowest mean value 3.69 and the standard deviation values which ranged from 0.669 to 0.998 which shows the highest variation in responses. These values suggested that teachers had mixed opinions possibly due to differences in access to digital tools or how well they know the app. Still, the median value for all items was 4.00. It means that 85.71 percentage of teachers had a positive view even with some variation.

4.2.3. Practical Application

The responses of this section shows that teachers have generally positive views about usability and applicability of DIKSHA app, however their agreement was a bit less strong as compared to other areas like effectiveness and usefulness. The mean value of items from 15-20 is ranging from 3.78 to 3.94. It is showing that most of teachers agreed the app was usable. However, the standard deviation values which ranged from 0.808 to 0.948 indicate that there are differences in individual experiences. Even these differences in the median score for all items is still 4.00. Which shows that 66.66 percentage of teachers agreed on the practical value of the DIKSHA app.

4.3 Open Ended Questions

Open-ended questions are such type of questions that allows respondents to response in own way and provide detailed descriptions about the questions/statements rather than choosing from predefined options. Unlike closed-ended questions that gives freedom about simple yes or no responses or multiple-choice selections. Open-ended questions/statements encourage individuals to elaborate on their thoughts, experiences, and feelings. These questions often begin with prompts such as how, why, what, or

describe and are particularly valuable in qualitative research, where understanding personal perspectives and the reasoning behind certain behaviours is essential.

Open Ended Item -1

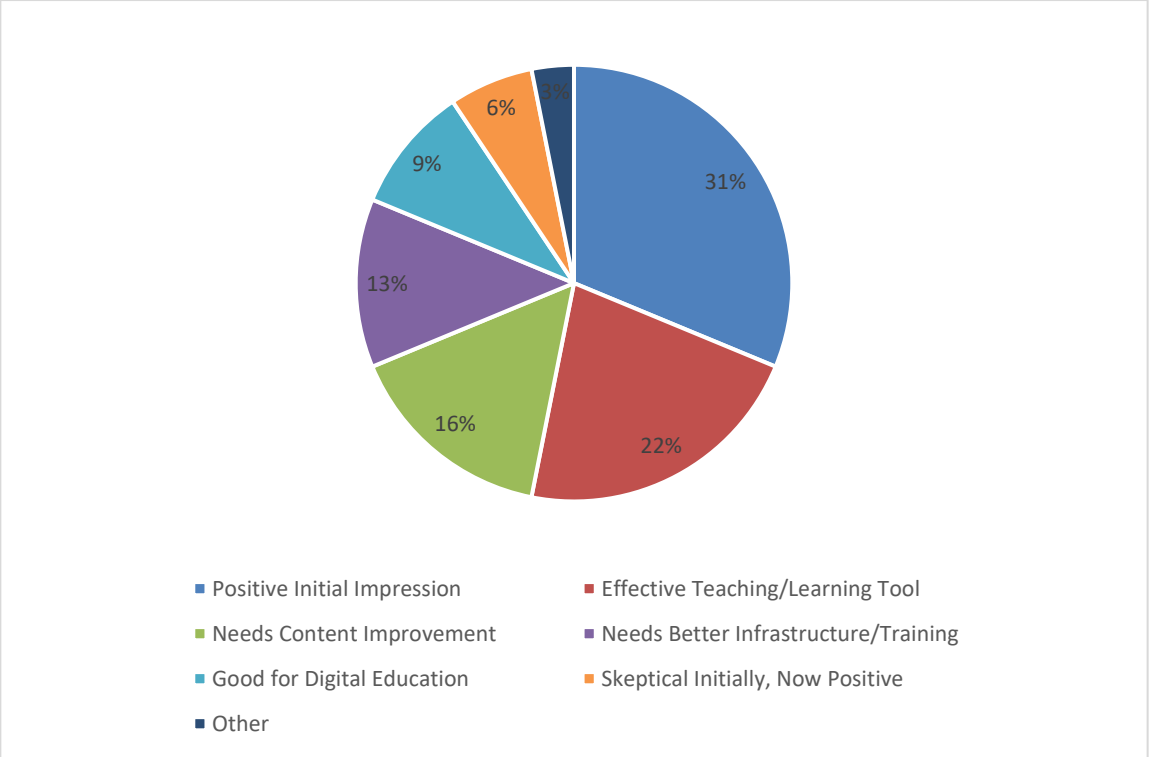

Fig 1: Initial impression of the DIKSHA App and their perception changed over time.

Figure -1 shows the responses of teachers related to initial impression of the DIKSHA App and their perception changed over time. The responses were received through open ended format and interpreted through qualitative method. After analysing data we found that 31, 22, 16, 13, 09, and 06 percent teachers have positive initial impression, effective teaching and learning tool, need for content improvement, need for better infrastructure and training, good for digital education, skeptical initially now positive respectively.

Open Ended Item -2

Fig 2: Features of Diksha App which were helpful for Mathematics Teacher.

Data was taken through open ended questions and interpreted through qualitative methods. Figure -2 shows the responses of teachers regarding features of DIKSHA App which were helpful for mathematics teacher and analysed data reveals that 16, 14, 11, 11, 11, 08, 08, 05, 05, 03, 03 and 05 percent teachers said Videos/Simulations, Interactive Materials/Visual Tools, Quizzes/Assessment/Progress Tracking, Extra Content/Topic Knowledge, General Content Variety, Supplementary Learning materials, Textbooks, Bilingual/Multilingual Content, Real-Life examples, Audio/Visual presentation, User Interface/Usability and negative/neutral feedback respectively were helpful.

Open Ended Item - 3

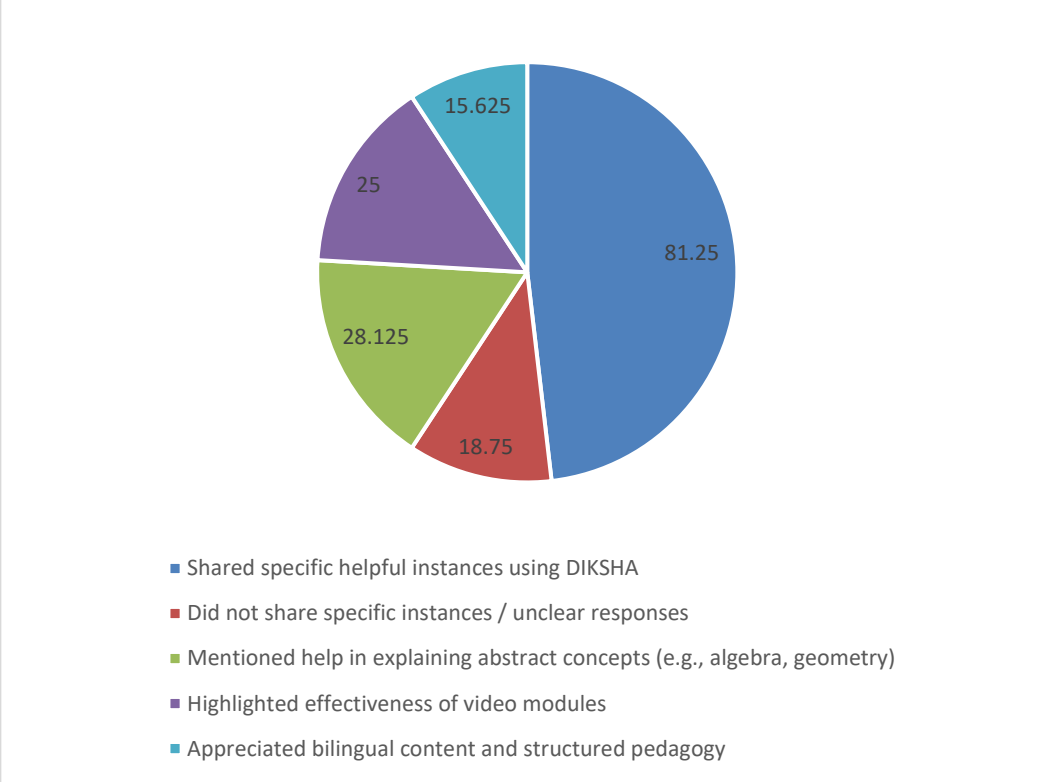

Fig 3: Specific instances regarding DIKSHA App which helped to solve a problem or innovative the teaching.

Data was taken through open ended questions and interpreted through qualitative methods. Figure -3 shows the responses of teachers regarding Specific instances regarding DIKSHA App which helped to solve a problem or innovative the teaching and analysed data reveals that 81.25, 18.75, 28.15, 25 and 16.25 percent teachers have shared specific helpful instances using DIKSHA app, did not share specific instances/unclear responses, mentioned help in explaining abstract concepts (e.g., algebra, geometry), highlighted effectiveness of video modules and appreciated bilingual content and structured pedagogy respectively.

Open Ended Item - 4

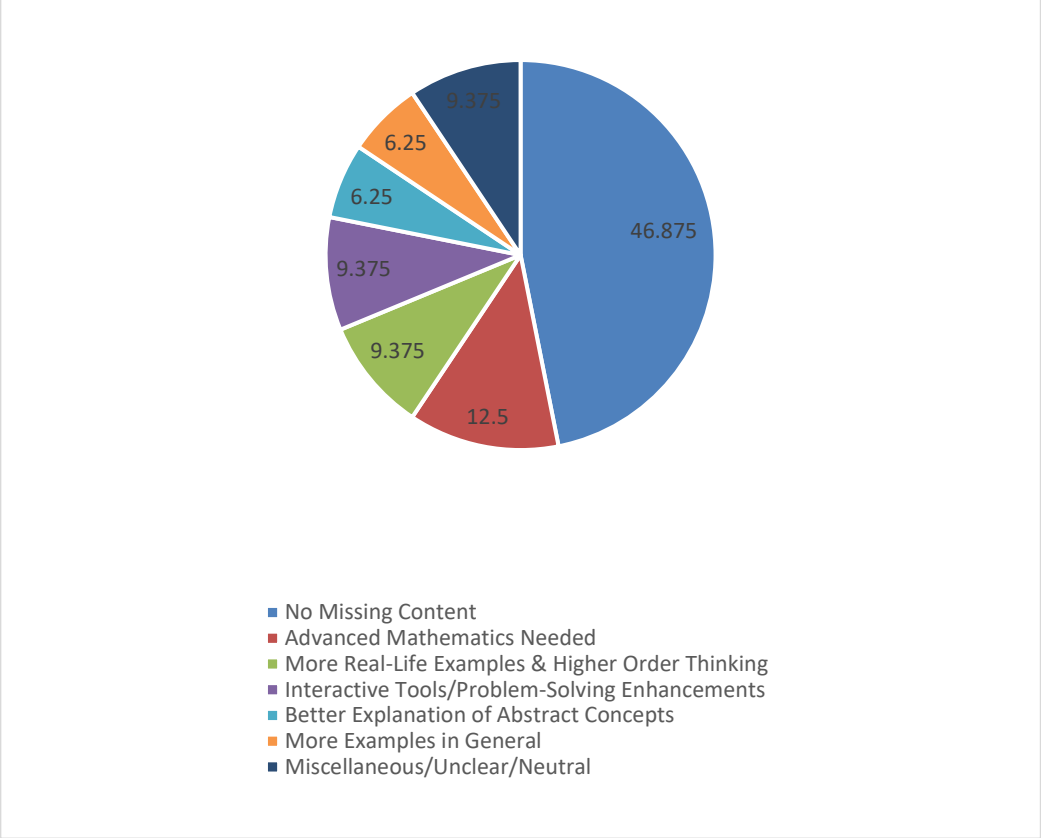

Fig 4: Topics or resources feeling missing or inadequate.

Data was taken through open ended questions and interpreted through qualitative methods. Figure -4 shows the responses of teachers regarding topics or resources feeling missing or inadequate and analysed data reveals that 46.875, 12.5, 9.375, 9.375, 6.25, 6.25 and 9.375 percent teacher have no missing content, advanced mathematics needed, more real-life examples & higher order thinking, interactive tools/problem-solving enhancements, better explanation of abstract concepts, more examples in general and miscellaneous/unclear/neutral.

Open Ended Item -5

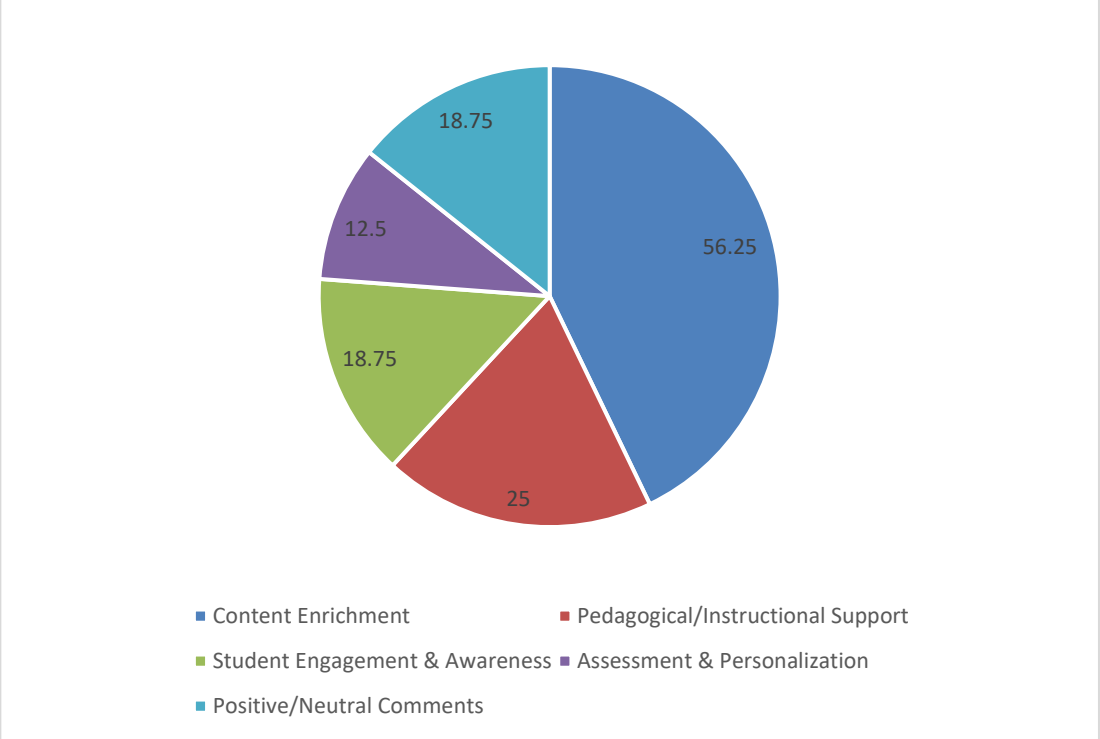

Fig5: Suggestion for further improvement.

Data was taken through open ended questions and interpreted through qualitative methods. Figure -5 shows the responses of teachers regarding Suggestion for further improvement and analysed data reveals that 56.25, 25, 18.75, 12.5 and 18.75 percent teacher have content enrichment, pedagogical/instructional support, student engagement & awareness, assessment & personalization and positive/neutral comments.

Conclusion

The responses from mathematics teachers in Ranchi district indicate a generally positive attitude toward the DIKSHA app with many recognizing its potential to enhance teaching and learning. A significant number of teachers appreciated its video modules, interactive tools, and bilingual content particularly in explaining abstract

mathematical concepts. However, areas for improvement were also highlighted including content enrichment, advanced-level materials, better infrastructure, and increased teacher training. These findings suggest that while DIKSHA is a valuable digital resource, its impact can be further strengthened through targeted content development, pedagogical support, and improved digital readiness among educators.

Chapter 5 Findings, Conclusion and Suggestion

5.1 Introduction

This chapter contains a brief summary of the study, findings and conclusions drawn from previous chapter of data analysis. It is followed by the education implication based on the findings of the present study. Major findings, conclusion and recommendation for further study are given in this chapter.

5.2 Findings

The major findings of the study can be summarised as follow:

- The study found that the DIKSHA app is useful for mathematics teacher in enhancing their teaching strategies, especially for explaining complex and abstract concepts.
- The mathematics teachers felt that the DIKSHA app is accessible and easy to use. Whereas few teachers experience difficulties due to the poor internet connectivity, lack of devices, or limited digital skills.
- Teachers also experienced that the DIKSHA app supports a more structured and engaging classroom environment through its multimedia content and interactive features.
- They also find that online courses and resources like quizzes and question banks included in DIKSHA app were effective in improving student's understanding of mathematics.
- The use of visual aids and simulations helped mathematics teacher in better explanation and retention of mathematical topics, especially in areas like algebra and geometry.
- The study also found that the mathematics teachers appreciate the variety and alignment of DIKSHA app content with the mathematics curriculum that supported both teaching and learning outcomes.

5.3 Conclusion

Diksha App is a digital platform introduced to enhance teaching and learning. This study explored the attitudes of mathematics teachers of Ranchi district toward the DIKSHA app. The findings reveals that mathematics teachers having a positive view regarding DIKSHA app. The DIKSHA app recognizes its potential to support

classroom instruction through videos, interactive tools, and curriculum-aligned content. The finding shows that teacher appreciate the role of DIKSHA app in explaining abstract mathematical concepts and making lessons more engaging. Further, present study also highlights certain challenges faced by mathematics teachers in accessing the DIKSHA app such as inadequate digital infrastructure, limited training, and varying levels of digital literacy which effect the usability and practical application of the DIKSHA app for mathematics teachers.

Instead of these challenges faced by the mathematics teacher their overall response for DIKSHA app was encouraging, and many teachers expressed a willingness to continue using the DIKSHA app. Therefore, it is important to provide regular training, improve digital access, and enrich the content to ensure that DIKSHA app can be fully integrated into mathematics teaching and improve the overall quality of education.

5.4 Educational Implication

The present study carries significant educational implications particularly in the context of digital integration in classrooms and the professional development of teachers.

- This study suggests the necessity of continuous and context-specific digital training programs to enhance teacher's technological competency and confidence.
- Teachers are likely to adopt digital tools when the resources directly support curriculum goals, classroom engagement, and student learning outcomes.
- The study underscores the importance of building a supportive institutional culture that encourages innovation and experimentation with technology. It will create an enabling environment through incentives, recognition, and regular follow-up on the use of digital resources in teaching.
- Present research findings can guide in policy decisions at the state and district levels to bridge the digital divide and ensure that initiatives like DIKSHA app are not only accessible but also effectively integrated into teaching practices.

5.5 Suggestions

The findings of the study as well as the recommendations for further research and practices in the field of DIKSHA app and are believed to contribute the knowledge base on DIKSHA app. Further researches could be conducted in this field to get better understanding of students as there is scope of such researches was conducted. Some suggestions for future researches are as follows:

5.5.1 Suggestion for Government

- To ensure alignment with the evolving curriculum and to meet the academic needs of teachers across different grades.
- To improve its user interface and navigation to make it more intuitive and accessible especially for teachers with limited digital literacy.
- To provide professional development programs focused on teachers' training for effectively utilize digital tools.
- To enhance student engagement features such as personalized learning paths, gamified assessments and progress tracking tools.
- To implement a robust feedback mechanism within the app that allow teachers to share their experiences and challenges in report making

5.5.2 Suggestion for Further Study

This study provides a valuable insight into the attitudes of mathematics teachers toward the DIKSHA app. Further study can be expanded and deepen on understanding of digital resource usage in education. Other studies can be conducted on student's perspectives regarding DIKSHA app to evaluate its impact on learning outcomes and engagement from the learner's point of view. The researcher might do comparative research across various districts or states to help them to identify regional differences in access, usage, and challenges. It offers a broader view of implementation effectiveness. Researches can be conducted on subject-specific areas beyond mathematics to assess the overall effectiveness of DIKSHA app across the curriculum. Such studies will contribute to evidence-based improvements in digital education policies and practices.

References

Azizan, F. Z. (2010). *Blended learning in higher education institution in Malaysia*. Proceedings of Regional Conference on Knowledge Integration in ICT 2010, 454–466.

Ghosh, K. (2022). Impact of DIKSHA App as an Electronic Resource in English Language. Teaching-Learning Process in Different Kendriya Vidyalaya's of India. *Journal of Physics: Conference Series*, 2286(1), 012019.

https://doi.org/10.1088/1742-6596/2286/1/012019

Goel, P., & Malik, N. (2021). A study on awareness and usage of E-resource portals among prospective teachers. *Integrated Journal of Social Sciences*, 8(1), 1–8. http://pubs.iscience.in/ijss/article/view/1204

Govt. of NCT of Delhi. (2024). *DelE Education Department*. Www.edudel.nic.in. https://www.edudel.nic.in/

Kanvaria, V. K., & Dubey, V. (2022). DIKSHA, NISHTHA and CPD: Experiences and perceptions of school learning-facilitators. *Indian Journal of Educational Technology*, 4(2), 144–151.

Lin, M. H., Chen, H. C., & Liu, K. S. (2017). A study of the effects of digital learning on learning motivation and learning outcome. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(7), 3553–3564. https://doi.org/10.12973/eurasia.2017.00744a

Mahato S.(2022). Blended Mode for PM e-VIDYA: AFramework.*Researchgate.net.*

MoE, GOI. (2020). PM e-Vidya. Pmevidya.education.gov.in. https://pmevidya.education.gov.in/index.html

Sharma, A. (2021). *Guide for DIKSHA Implementation in Schools* (No. 50). ICT India Working Paper.

Shokeen, A., & Kaur, B. (2025). Evaluating perception of Delhi government school teachers towards the DIKSHA platform: A TAM-based analysis. *Indian Journal of Educational Technology*, 7(1), 243–255.

Supriya, Navita M.(2022).TO STUDY THE ATTITUDE OF MALE AND FEMALE TEACHER TOWARDS DIKSHA -DIGITAL INITIATIVE. *International Journal of Management and Social Science Research Review.*

Snoek, M. (2021). Educating quality teachers: how teacher quality is understood in the Netherlands and its implications for teacher education. *European Journal of Teacher Education,* 1–19.

SWAYAM. Gov.in (2022). Diksha Portal. Online.

https://SWAYAM.gov.in/

Verma, R., Dash, D. N., & Purohit, M. (2025). Access and use of DIKSHA for school teachers and students amid COVID-19: An assessment of rural Rajasthan. *Indian Journal of Educational Technology, 17*(1), 45–57. https://journals.ncert.gov.in/IJET/article/view/850

Jagannadh, Y. V. (2012). Teaching competency and attitude towards teaching profession of B.Ed. college students. *International Indexed & Referred Research Journal*, 4(38), 65–67.

Appendix

ATTITUDE SCALE REGARDING DIKSHA APP

Name of the teacher(optional):.....

Name of the School:.....

Designation:.....

Gender:.....

Location:.....

Educational Qualification:.....

General Instruction:

This scale constructed for measurement of attitude regarding DIKSHA App. This consisted of total 25 items, which have 5 options and all options have equal importance. You need to opt any one option from given options. The statements present here are based on the usability, effectiveness and overall satisfaction regarding DIKSHA App. The opinion provided by you will be used for research purpose only. All information or opinion provided by you kept confidential, therefore, please feel free to provide your responses.

यह पैमाना दीक्षा ऐप के संबंध में दृष्टिकोण को मापने के लिए बनाया गया है। जिसमें कुल 25 आइटम शामिल हैं जिनमें 5 विकल्प हैं, सभी विकल्पों का समान महत्व है, आपको दिए गए सभी विकल्पों में से किसी एक विकल्प को चयन करना है। यहां मौजूद कथन दीक्षा ऐप की उपयोगिता, प्रभावशीलता और समग्र संतुष्टि पर आधारित हैं। आपके द्वारा प्रदान की गई राय का उपयोग केवल शोध उद्देश्य के लिए किया जाएगा और आपके द्वारा प्रदान की गई सभी जानकारी अथवा राय गोपनीय रखी जाएगी, इसलिए कृपया बेझिझक अपनी प्रतिक्रिया दें।

S.No. **क्र.सं.**	**Questions** **प्रश्न**	**Strongly Agree** **पूरी तरह सहमत**	**Agree** **सहमत**	**Neutral** **निष्पक्ष**	**Disagree** **असहमत**	**Strongly Disagree** **पूरी तरह असहमत**

1.	DIKSHA app provides relevant teaching materials for mathematics subject. दीक्षा ऐप गणित विषय के लिए प्रासंगिक शिक्षण सामग्री प्रदान करता है।					
2.	The DIKSHA app provides diverse learning styles in mathematics. दीक्षा ऐप गणित में विविध शिक्षण शैलियों को प्रदान करता है।					
3.	DIKSHA app helps you explain abstract mathematical concepts clearly. दीक्षा ऐप आपको अमूर्त गणितीय अवधारणाओं को स्पष्ट रूप से समझाने में मदद करता है।					
4.	DIKSHA app offers engaging learning activities for mathematics students.					

	दीक्षा ऐप गणित के विद्यार्थीयों के लिए आकर्षक अधिगम गतिविधियाँ प्रदान करता है।					
5.	DIKSHA app provides relevant training modules for improving mathematics instruction. दीक्षा ऐप गणित निर्देशन में सुधार के लिए प्रासंगिक प्रशिक्षण मॉड्यूल प्रदान करता है।					
6.	DIKSHA app helps students track their progress in mathematics learning. दीक्षा ऐप विद्यार्थीयों को गणित सीखने में उनकी प्रगति को ट्रैक करने में मदद करता है।					
7.	Students use DIKSHA app for additional mathematics learning					

	outside the classroom. विद्यार्थी कक्षा के बाहर अतिरिक्त गणित सीखने के लिए दीक्षा ऐप का उपयोग करते हैं।					
8.	DIKSHA app is effective in remote teaching of mathematics. दीक्षा ऐप गणित के दूरस्थ शिक्षण के लिए प्रभावी है।					
9.	The DIKSHA app makes mathematics teaching more enjoyable. दीक्षा ऐप गणित शिक्षण को और अधिक मनोरंजक बनाता है।					
10.	The mathematics content on DIKSHA app aligns well with the curriculum you teach. दीक्षा ऐप पर गणित की सामग्री आपके पढ़ाए जाने वाले पाठ्यक्रम के					

	साथ अच्छी तरह मेल खाती है।					
11.	The DIKSHA app promotes critical thinking skills in students during mathematics learning. दीक्षा ऐप से गणित के अधिगम के दौरान विद्यार्थीयों में आलोचनात्मक सोच कौशल को बढ़ावा मिलता है।					
12.	DIKSHA app encourages collaborative learning in mathematics among students. दीक्षा ऐप विद्यार्थीयों के बीच गणित में सहयोगात्मक शिक्षा को प्रोत्साहित करता है।					
13.	DIKSHA app promotes independent learning of mathematics					

	subject among students. दीक्षा ऐप विद्यार्थीयों में गणित विषय को स्वतंत्र रुप से शिक्षा को बढ़ावा देता है।					
14.	DIKSHA app resources are helpful for teaching mathematics. दीक्षा ऐप संसाधन गणित पढ़ाने में सहायक हैं।					
15.	The DIKSHA app is easy to use for teaching mathematics. गणित पढ़ाने के लिए दीक्षा ऐप का उपयोग करना आसान है।					
16.	You prefer using DIKSHA app as compared to traditional methods of teaching mathematics. आप गणित पढ़ाने के लिए पारंपरिक तरीकों के बजाय दीक्षा ऐप					

	डिजिटल टूल का उपयोग करना पसंद करते है।					
17.	You would recommend the DIKSHA app to other mathematics teachers. आप अन्य गणित शिक्षकों को दीक्षा ऐप की अनुशंसा करेंगे।					
18.	You feel more confident during teaching mathematics with the help of DIKSHA app. आप गणित शिक्षण को दीक्षा ऐप की सहायता से पूर्ण करने में अधिक आत्मविश्वास महसूस करते हैं।					
19.	Your students perform better in assessments after incorporating DIKSHA app into teaching. दीक्षा ऐप को शिक्षण में शामिल करने के बाद					

	आपके छात्र मूल्यांकन में बेहतर प्रदर्शन करते हैं।					
20.	The use of DIKSHA app will shape the future of mathematics education. दीक्षा ऐप का उपयोग गणित शिक्षा के भविष्य को आकार देगा।					

1.What are your initial impressions of the DIKSHA app and have they changed over time?

दीक्षा ऐप के बारे में आपकी प्रारंभिक धारणाएं क्या हैं और क्या वे समय के साथ बदल गई हैं?

_____

_____

_____

_____

_____

_____

2.Which features of the DIKSHA app do you find most helpful for teaching mathematics?

दीक्षा ऐप की कौन सी विशेषताएँ आपको गणित पढ़ाने के लिए सबसे उपयोगी लगती हैं?

_____

_____

_____

_____

3.Can you share any specific instances where the DIKSHA app helped you solve a problem or innovate in your teaching?

क्या आप कोई विशिष्ट उदाहरण साझा कर सकते हैं जहां दीक्षा ऐप ने आपको किसी समस्या को हल करने या अपने शिक्षण में कुछ नया करने में मदद की हो?

4.Are there any topics or resources in mathematics that you feel are missing or inadequate in the DIKSHA app?

क्या गणित में कोई विषय या संसाधन हैं जो आपको लगता है कि दीक्षा ऐप में गायब हैं या अपर्याप्त हैं?

5.What suggestions do you have for improving the DIKSHA app for mathematics educators?

गणित शिक्षकों के लिए दीक्षा ऐप को बेहतर बनाने के लिए आपके पास क्या सुझाव हैं?

6.Any other relevant opinion

कोई अन्य प्रासंगिक राय