



A Study of the Implementation of the DIKSHA program in the Secondary School Education in Koderma District, India

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Abstract: It is very important for a country to create a strong system of education that can build a strong foundation for its citizens. For this, it is mandatory to upgrade our system of education with time to meet the ever-changing demands of society. DIKSHA (Digital Infrastructure for Knowledge Sharing) is the national digital platform for school education in India, an initiative of the National Council for Education Research and Training (NCERT) and the Ministry of Education. DIKSHA aims to democratize access to digital learning for students and teachers irrespective of their socio-economic backgrounds. It is in the form of a free mobile application and web portal available for use anywhere, anytime, and for anyone. In the present research investigator tried to investigate the adoption of DIKSHA app, its implementation, and responses by the teachers in secondary school education in Koderma district in Jharkhand state. According to the sample of teachers' responses, the overall data shows that a total of 80 teachers have given responses. The number of male teachers is 49 and the number of female teachers is 31 respectively. According to the data in terms of percentage male teachers participated more and given responses of 61.25 % and female teachers' responses given in percentage terms is 38.75 %. The Mean and standard deviation of male teachers and female teachers have 4.9 and 3.1 respectively. Students' surveys from different selected secondary schools in the Koderma district, showed that out of 500 students 349 students responded with the positive development of learning habits while 151 students give negative responses.

Key Words: DIKSHA app, ICT, Digital educational technology, Secondary School Education, Professional Development, and Quality enhancement.

1. INTRODUCTION:

Education being a fundamental right and fundamental need of survival is a matter of both national and international importance, as well as the success of any country, is also directly related to its skilled and competent society. So, it becomes very important for a country to create a strong system of education that can build a strong foundation for its citizens. For this, it is mandatory to upgrade our system of education with time to meet the ever-changing demands of society. The curriculum and syllabus need to be analysed at the school level for mapping them with learning outcomes. Rather than following textbook content with rigidity, the learning of children at homes needs to be mapped with learning outcomes and to the themes given in syllabus, and children are to be assessed accordingly. DIKSHA (Digital Infrastructure for Knowledge Sharing) is the national digital platform for school education in India, an initiative of the National Council for Education Research and Training (Students' learning enhancement guideline, NCERT 2020) and the Ministry of Education (DIKSHA.gov.in). DIKSHA was launched on 5 September 2017 and has since been adopted by 35 States and UTs as well as CBSE and NCERT and by corers of learners and teachers. DIKSHA aims to democratize access to digital learning for students and teachers irrespective of their socio-economic backgrounds. It is in the form of a free mobile application and web portal available for use anywhere, anytime, and for anyone. As part of PM eVidya announced under the Atma Nirbhar Bharat program, DIKSHA is the 'one nation: one digital platform' for school education in India. DIKSHA is a platform for diverse and rich curriculum-linked e-content for all states/UTs accessible across digital devices (laptop/mobile/desktop/tablets, TV, and radio) to have coherence of access and learning experience. At the same time, DIKSHA is designed to inherently support states/UTs to exercise autonomy, independence, and choice to craft and run learning programs to suit their needs and achieve their



goals, by using solutions, tools, and data on the platform. This is now running various programs like e-content, energized textbooks, and teacher professional development on the DIKSHA app for students and teachers.

DIKSHA will serve as National Digital Infrastructure for Teachers. All teachers across the nation will be equipped with advanced digital technology. Diksha portal will enable, accelerate and amplify solutions in the realm of teacher education. It will aid teachers to learn and train themselves for which assessment resources will be available. It will help teachers to create training content, profile, in-class resources, assessment aids, news, and announcement and connect with the teacher community. It envisages providing: Teacher training courses (for example – training on learning outcomes, etc.) Teaching resources such as lesson plans, concept videos, and worksheets, mapped to curriculum assessments for teachers, to find out their strengths and areas of improvement (www.India.gov.in). Teachers will be able to access this material offline on their smartphones, tablets, and other devices anytime and anywhere. The material will be contextualized to local languages as well as mapped to the curriculum.

To meet the need of the above challenges for new-age learning and training DIKSHA program is one of the best options to bring changes in the education system. It not only provided e-content, an energized textbook for students for all grades but it also helps the teacher to build their professional competencies through training on it. The progress and prosperity of any nation have a positive relationship with the quality of education and the teachers' training program of the country. Well-designed teachers training program leads to the assurance of quality teachers for school education.

2. Objectives:

- ❖ To study the success rate of implementation of the DIKSHA program in secondary school education in the Koderma district.
- ❖ To study the teacher's professional development and quality enhancement by using DIKSHA app.

2.1 Hypothesis:

- ❖ There will be a significant difference among teachers in context to gender, stream, and locality.
- ❖ In secondary school education in the Koderma district, the DIKSHA program will be implemented properly.
- ❖ The teacher's professional development at secondary school in the Koderma district will be satisfied level.

3. METHODOLOGY:

For the purpose of the study researcher has chosen the schools up to secondary level in Koderma district. Koderma district is situated in the Jharkhand state and on the basis of education it is a backward area. In this district, there are many governments and public and private affiliated schools situated in urban, rural, semi-urban, and semi-rural areas. Approximately there are more than 60 numbers of secondary schools available in this district. For present investigation we have used quantitative approach with closed-ended questionnaire. Following the collection of data by questionnaire, the researcher conducted a systematic analysis.

3.1 Sample collection:

The randomly selected sample is to be collected from the population irrespective of gender, stream, locality, age, caste, etc, and collected from secondary schools. The 10 affiliated private, public, and government school is to be selected randomly for the collection of teachers and student sample data. The data collection was planned and executed in such a way that it does not affect its acceptability.

3.2 Sample size:

We distributed 100 sheets of self-made questionnaires to both students and teachers belonging to the secondary school of the Koderma district after that we have to collect responses given by teachers and school students. The response sheet collection is done by individually each teacher and student. The overall collected samples are as follows 100 samples of students and 80 samples of teachers from various diversified backgrounds such as gender, cast, locality, stream, etc from the populations. The size is sufficient for finding the results.

3.3 Analysis of data:

It is possible due to the collection of responses given by teachers and students. It was done by self-made questionnaire in which the degree of agreement and disagreement responses were given by teachers and students from the secondary school of Koderma district and analysis was given as follows:

- ❖ **Total teachers sample collected: 80 out of 100 sheets.**
- ❖ **Total student sample collected: 100 out of 100 sheets.**



Teachers based on Gender (Male/Female):

Sample of teacher's responses the overall data shows that a total of 80 teachers were given responses. It contains all teacher's responses in questionnaire statements for adopting digital educational technology, the internet, ICT-based teaching learning platforms, Diksha app implementation, etc. on a gender basis during teaching-learning processes. All male teachers and female teachers belong to different schools. The total number of schools is 10 and the data shows that a maximum of 80 teachers responded. The number of the male teacher is 49 and the number of female teachers is 31 respectively. If we look in terms of percentage participation of male teachers who gave responses is **61.25 %** and female teachers' responses given in percentage terms is **38.75 %**. The Mean and standard deviation of male teachers and female teachers have 4.9 and 3.1 respectively.

Teachers based on Stream (Subject specialization):

Subjects	Male Teacher	Female Teacher	Total
Science	12	5	17
Math	11	1	12
Commerce	5	1	6
Social science	6	12	18
Literature	6	7	13
Computer science	9	5	14
Total	49	31	80

Table 1: Collected Data of the teachers according to their Stream (Subject specialization)

The data shows that out of 80 teachers, maximum number of male teachers are in science ie. 12 followed by mathematics stream i.e. 11. Again we investigated that female teachers are more in social science subject i.e. 12 where as the female participation in science is only 5. The role of female teachers are very less in computer science (5), maths (1) and in commerce (5) stream. These fields are technical and teachers need to use computer for the data interpretation.

Teachers based on Locality:

The data belongs to teachers based on their locality. Locality means a teacher belongs to an urban area, rural area, semi-urban area, and semi-rural area in one perspective. The other perspective is the school belongs to the above locality and a student belongs to the above locality. This is necessary to know the difficulty level of implementation of the Diksha program, using digital education, etc. in various localities. The data in the table reveals that a total of 80 teachers' responses of which 49 belong to male teachers and 31 belongs to female teachers. We investigated that most of the male teachers comes from urban areas (20) and from semi urban areas (19) i.e. 79.59 % whereas the females participation from urban and semi urban areas are 87.09% (fig-1)

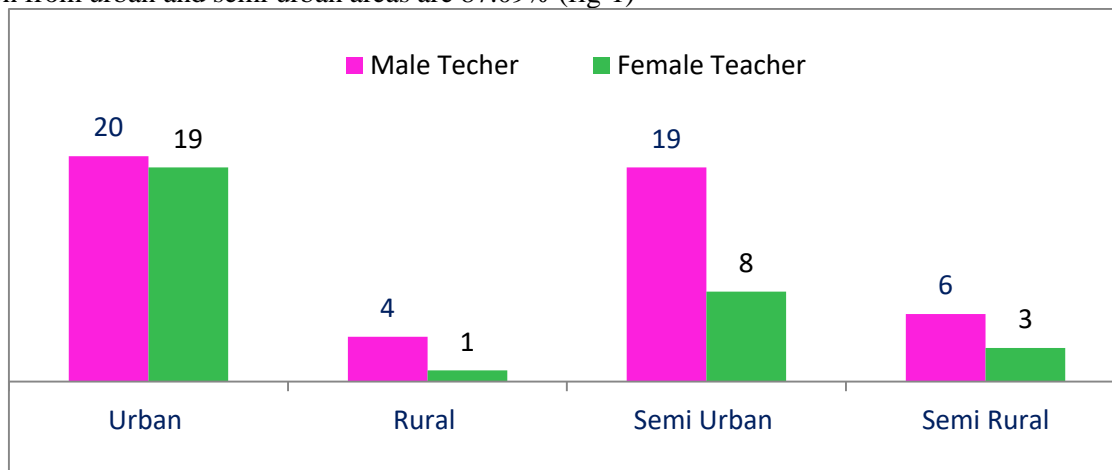


Fig-1 Data distribution of the teachers according to their locality



Table 2 shows all general information which is related to teachers using innovative practices, digital learning devices, materials, internet, web, app, ICT-based technology, etc during the teaching-learning process. Interpretation of data are based on five scales ie. Strongly agree, agree, undecided, disagree and strongly disagree. Data shows that among ten statements maximum teachers goes through ‘strongly agree’ to using and implementing ICT based digital teaching learning materials, tools, Diksha app, etc and got highest marks **3522**. Some of them agree with **2990** marks, some of them are confused about using the digital platform (2998), some teachers disagree (1254) and a few teachers from various backgrounds strongly disagree with implementing digital technology (720). This is shown below in bar graph figure no: 2.

S.No	General Information	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	I am comfortable using technology for teaching and learning.	400	320	240	160	80
2.	I am more comfortable using Diksha mobile app /web for teaching and training.	364	298	240	133	77
3.	I think that getting information from ICT is better than using printed materials/books.	358	288	221	131	74
4.	A Diksha course material is easier and more convenient for training and teaching.	372	299	230	127	71
5.	I think that ICT allows me to learn more in the time I have for my studies.	299	323	232	122	67
6.	I think that course materials or modules improve my learning and teaching profession.	367	301	233	102	88
7.	I use ICT to create my digital learning resources.	289	272	227	125	77
8.	ICT allows me to take greater control of my language learning.	349	270	222	131	67
9.	I usually use the web/mobile app to download the learning materials.	370	295	228	124	70
10.	I use the mobile app and web to access a portal course module or energized textbook i.e. learning material.	354	324	225	99	49
	Total	3522	2990	2298	1254	720

Table 2: Data distribution of all teachers in a secondary school in Koderma district with general information and their Interpretation (Group A)

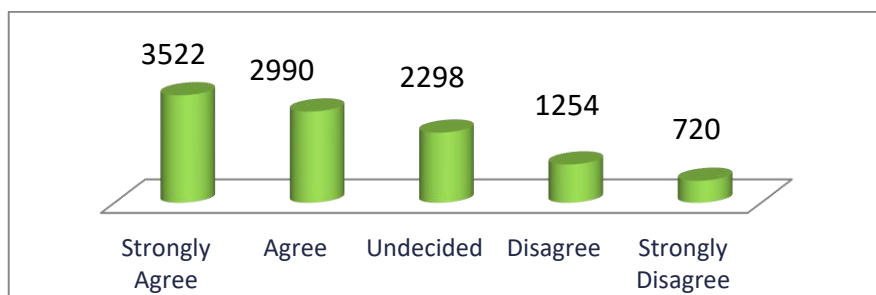


Figure 2: Data Interpretation of general information of all teachers in the secondary school of Koderma is in the form of a bar graph.



S.No	Pedagogical ICT training contents	Yes	No	If yes specific period		
				15 Days -1 M	1M-3M	3M-6M
1.	Basic courses on general application as MS word, Excel Powerpoint presentations, or internet use are provided by your school.	69	11	42	16	0
2.	Course on the Diksha app is sufficient for all-around development.	73	7	0	0	0
3.	Use of mobile email course/training module of Diksha app energized textbook etc for professional development purposes.	66	14	0	0	0
4.	The Diksha training is provided by your school.	54	26	48	23	0
5.	ICT training provided by school staff Personal learning about ICT in your own time.	70	10	0	0	0
6.	After course completion take participated in the assessment process.	75	5	28	0	0
7.	It helps with a career development program.	68	12	0	0	0
8.	The Diksha training module is easy to understand.	78	2	0	0	0
9.	I always completed the assessment of the training module.	74	6	34	0	0
10.	I always participated in a quiz during course modules.	44	36	0	0	0
Total		671	129	152	39	0

Table 3: Pedagogical ICT training contents table (Group B)

Table 3: The ten statements contain pedagogical ICT-based training of teachers. It is related to in-service training of teachers for quality enhancement and professional development which is provided by the school administration, governmental organizations, and various boards such as C.B.S.E, C.I.E.T, etc. in specific periods such as 15 days to one-month training, one month to three-month training or three months to six months of training. The data interpreted that most of the teacher's responses in the group B part of the questionnaires were in the Yes and No form and each statement's response for Yes has 1 and No for 0 marks along with training done in the specific time.

Student Survey:

S.No	General Information	Yes	No
1.	Do you think the school teachers provide you with adequate innovative practices in the classroom?	83	17
2.	Does your teacher encourage you to use the Diksha energized textbook?	35	65
3.	Does your teacher encourage you to participate in quizzes & assessments on the Diksha app?	49	51
4.	Does your teacher guide you in using ICT tools?	87	13



5.	Does your teacher help you with updating your knowledge ledges?	95	5
Total		349	151

Table 4: Collected Data Interpretation of all students in the secondary school in Koderma district (Group C)

In table 4 it contains five statements in the Yes and No form and it was collected from student surveys from different selected secondary schools in the Koderma district because the outcomes of teacher's performance are reflected in students whether the objectivity of this research fulfilled or not and what level the students responses in a new era of digital education. For this total 100 numbers of sheets were distributed among ten secondary schools. The marking response is as follows 1 mark for Yes and 0 marks for No responses shows that out of 100 students 349 students responded with the positive development of learning habits while 151 students gives negative responses.

4. RESULTS :

Approximately there are more than 60 numbers of secondary schools available in this district. This means at the secondary level the education provided by the various boards and governmental agencies is quite satisfactory levels. Data support that the government are trying to enhance quality education and professional development by adopting digital education, ICT, the Diksha program, etc. The result shows that the male teachers participated more and were able to adopt an innovative practice in teaching-learning processes and gives responses of 61.25 % and female teachers responded less as compared to the male teachers percentage terms is 38.75 %.The participation of female teachers is less due to various reasons such as socio-economically as well as political region, but analysis reveals that the implementation of Diksha programs is satisfactory at the secondary school level in the Koderma district. Questionnaire of Group A (table-2) shows that teachers are comfortable in using DIKSHA app and maximum teachers avail this facilities during teaching learning period. Group B questionnaire are related to the pedagogical ICT training which is time to time provided by the schools. Here three sections, first is specific period between 15 days to 1 month, second is 1 month to 3 month period and the third is 3 month to 6 month period. The teacher for their all-around development and quality enhancement in teaching-learning processes agree to participate in training programs periodically through the DIKSHA app. most of the teachers take training monthly. They agree with the statement that ICT training improve them professionally but they are week in item no 10 ie. "I always participated in a quiz during course modules". Group C is related with student survey and they agree with that teachers uses this app and they updating their knowledge. The week part is in item no 2 ie. "Does your teacher encourage you to use the Diksha energized textbook?" The students also responded they have been equipped with digital learning material at the school level, which is provided by teachers. In this regard, the Diksha app plays a very important role to bring changes and make a society digitally sound.

5. CONCLUSION:

In terms of policy perspective, DIKSHA program initiatives are relevant and appropriate. The technology under the Diksha program initiatives is not so important, but the important thing is how we use it. The time has come that ICT in education is something that is more than its relevance, It is a necessity of today's education system. It is clearly about methodology, not just tools, and it needs to be not about products, it needs to be more about practices. However, the role of the teacher is there going to be supported with digitalized backup, To bridge the access gap, new models of content creation, content delivery, learning management, and planning needed more to be developed and promoted. The monitoring and evaluation system for creating a cooperative, life-long, and self-learning environment have to be developed.

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