



ENHANCING DIGITAL SKILLS THROUGH HANDS ON EXPERIENCE AMONG RURAL GIRLS OF BHANGEL VILLAGE, UTTAR PRADESH

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Abstract- The hallmark of the 21st Century India is computer and technology driven society. Various reports published by both the government as well as the research organizations have established the need for technologically literate citizens. This is a pre-requisite to the existence of man today as the government is steadily shifting towards digitalization. The chances of employability increases manifold when the person is technologically versed and is in the knowhow of the computer operations. It is also becoming apparent that technology will continue to be increasingly integrated into nearly every aspect of social and working world. Connecting the people with the rest of the world through internet is becoming increasingly important in the digital world of the present times. The girls of the rural area have less knowledge and understanding of the digital world. There's a felt need on the basis of the observations that the rural girls are not digitally skilled. This is due to not getting the access to digital learning. The present research intends to train the rural girls of Bhangel village, Noida, Uttar Pradesh with the idea that educating a girl is equivalent to educating a family and this would be a humble step towards the government's mission of Pradhan Mantri Gramin Digital Saksharta Abhiyan. This digital skills training will further help in making them empowered towards the various digital platforms like financial transactions, educational learning, social communications, etc. and thus contribute towards nation building. At this time of the pandemic, the need to be digitally skilled is the need of the hour.

Key Terms: Digital Skills, Digital Empowerment, Mobile Technology

I. INTRODUCTION

With the vision to transform India into knowledge super power and to be digitally empowered society and knowledge economy, the government of India initiated the Digital India programme. Various government services are now available on a single mobile app platform called UMANG. A Digital India Week was celebrated and the project taken up involved digitalizing India by providing broadband services to 250,000 villages. The government initiatives included larger plans to connect rural areas with high speed internet networks. This campaign introduced three components, namely, the development of secure and stable digital infrastructure, delivering government services digitally and universal digital literacy. Ever since then, there's an upsurge in the internet subscribers in India. The National Digital Literacy Mission was formed which had the mission of educating over 1million people. 250,000 government schools got broadband and free Wi-Fi under the Digital India programme as government's effort to improve the education sector. Government's initiatives to make India a digitally empowered society and reduce the digital divide are highly appreciable.

Internet Saathi, a programme taken up by Google in collaboration with Tata Trusts' rural networks, has travelled a long way in training women on how to take advantage of internet, understand and learn knowledge related to education, farming, subsidies, government initiative, etc. MNCs like Microsoft, Infosys Foundation and Wipro have tied up with few villages and worked towards promoting ICT to mainly the underprivileged in India. A research study conducted by Accenture revealed that there is a correlation between Employability, Digital Fluency and Progression. The overarching programme for the school education called Samagra Shiksha scheme of the government has given much importance to Digital Education.

In spite of all the above said initiatives and schemes, there is an evident digital divide. This digital divide is a manifestation of exclusion and inequality and this continues to be exacerbated due to various reasons. There is a deprivation for women's equal access to digital services. Strategies like identifying the digital skills to be imparted, developing an uplifting strategy for holistic development of digital skills and also addressing the social and cultural norms are the ways and methods so that the skills and system could be mediated. The poorer communities have a lesser and limited access to digital technologies and inadequate access to training in digital technologies results in poor attainment of digital skilling. By employing an

uplifting strategy in digital skills, improved participation and empowerment can be attained. The preliminary survey brought to light that in rural India, gender based digital exclusion is more pronounced as literacy rates and connectivity are relatively lesser and the social norms are more rigid as compared to urban people.

Understanding the need to impart and enhance the knowledge of Digital skills and to provide the selected sample hands on experience, the present study on Enhancing Digital Skills through hands on experience among rural girls of Bhangel Village, Uttar Pradesh was undertaken

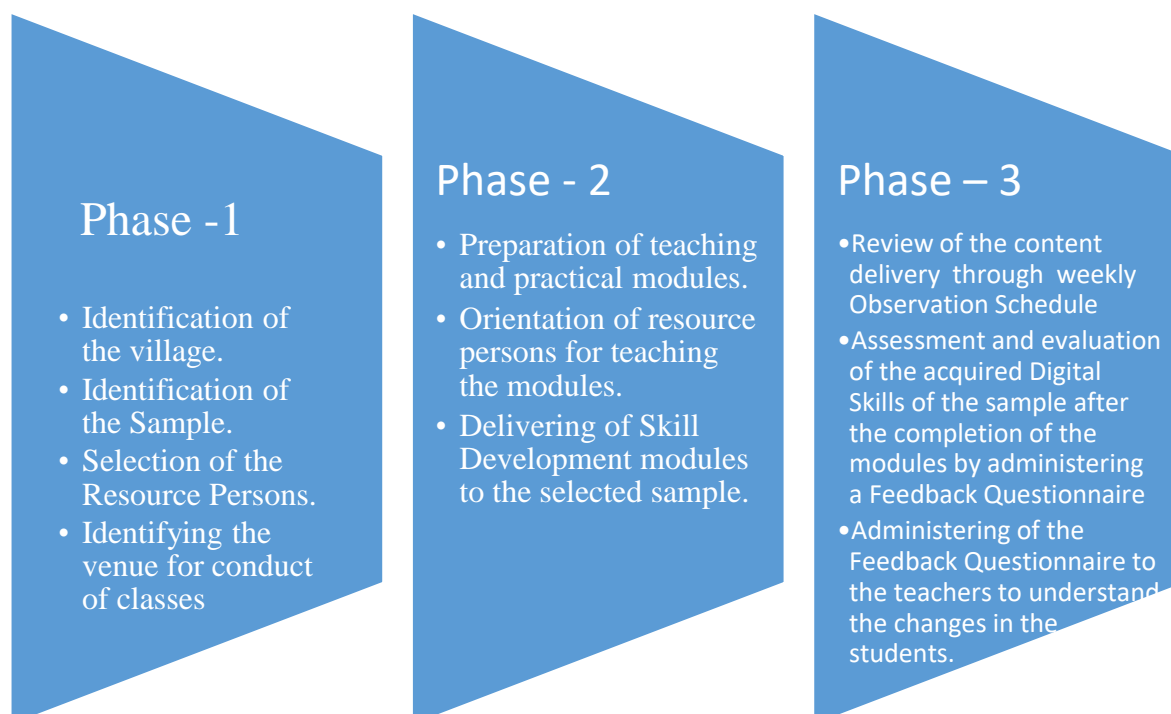
Objectives of the Study

- To impart knowledge about the fundamentals of a computer
- To disseminate information regarding the internet and its uses
- To facilitate interactive actions and transactions online
- To impart knowledge and hands on experience on E-communication and E-learning

Research Questions

1. How to bridge the digital divide?
2. How to empower the girl child through digital skills?
3. How could the learning be made more meaningful and interesting?
4. What are the various sites that could be accessed in order to make learning easier?
5. How could life skills be improved with the knowledge of digital skills?
6. How could the knowledge gained in digital skills be used for building employment opportunities?

II. PLANNING OF RESEARCH



Implementation plan

After consultation with School Management Committee, teachers, students, parents and community heads, the sample was selected as per the requirement of the study. The school provided the third space for the

conduct of the Action Research. A projector was taken hired and the resource persons carried their own laptops for providing hands-on experience to the learners.

Selection of research method

Mixed method of research was employed to develop digital skills among the selected girls of Bhangel Village. A weekly Observation Schedule was constructed by the researcher for the resource persons to keep a check on the weekly progress of the learners. A Feedback Questionnaire was developed and administered to the learners to find out about the acquisition of the Digital Skills. A Feedback Questionnaire was developed for the teachers of the school students who were a part of the sample to understand about the digital skills acquired by their students and the initiative and support they would give.

Sampling

A Purposive Sampling Technique was applied for the study. The sample consisted of girls of the age group 14 - 21 who were school students and school drop-outs. Besides this, there were also housewives.

| NO. OF STUDENTS | NO. OF DROP OUTS | NO. OF HOUSEWIVES |
|-----------------|------------------|-------------------|
| 24 | 16 | 5 |

Administration

A WhatsApp group of the sampled group who had WhatsApp account was created. The teachers were included in the WhatsApp group for facilitating communication with the learners. The others who did not have an access to the group were informed by word of mouth by the teachers and other learners. One of the community schools of Bhangel Village provided a classroom for conducting Action Research.

Materials

A total of four Digital Skill Development Modules were developed by the researcher for the purpose of developing digital skills among the selected sample. A projector was used to transact the theoretical aspects of digital skills. The resource persons used laptops and smart phones to provide experiential learning to the learners.

Researcher's observation during the implementation stage

The learners were very enthusiastic about understanding and learning the digital skills. Though the school students knew about computers to some extent, the dropouts and the housewives were new learners. The sample did not have an e-mail account and were unaware of the educational sites, web browsers, digital safety measures etc. They were given theoretical knowledge about the Fundamentals of computer, introduction to internet, google search, sending and receiving of mails, online transactions and educational websites. Along with the conceptual, experiential learning was also provided to the learners to understand the use of the different devices of computer, to get started with the use of internet, how to search using internet, to create an Email account, to send and receive emails, to make online transactions through Paytm, to access information and support materials on different topics of study.

The learners were keen to learn and understand the usage of computer. They took initiative for searching and learning the educational websites. The hands on experience facilitated the learners to explore and enrich the digital skills. The one to one interaction with the learners enabled them to have in depth hands on experience in acquiring the selected digital skills. The eagerness among the learners made them to actively part take in the activities devised for them. With the help of smart phones and the mobile data most of them had at home, they were desirous of searching for newer knowledge and applying them in understanding concepts.

Evaluation

After developing and enhancing the digital skills among the learners, a Feedback Questionnaire was administered both to the learners and teachers of the school students. The group of learners which included

school students, drop outs and housewives had six questions of Yes or No type and three descriptive type questions. The teachers had fifteen questions in the feedback questionnaire and they were to mark their agreement or disagreement against each statement. A weekly observation schedule was maintained by the resource persons/team in order to keep a check on the progress of the learners.

A detailed analysis of the Questionnaires is as follows

USES OF INTERNET IDENTIFIED BY THE LEARNERS

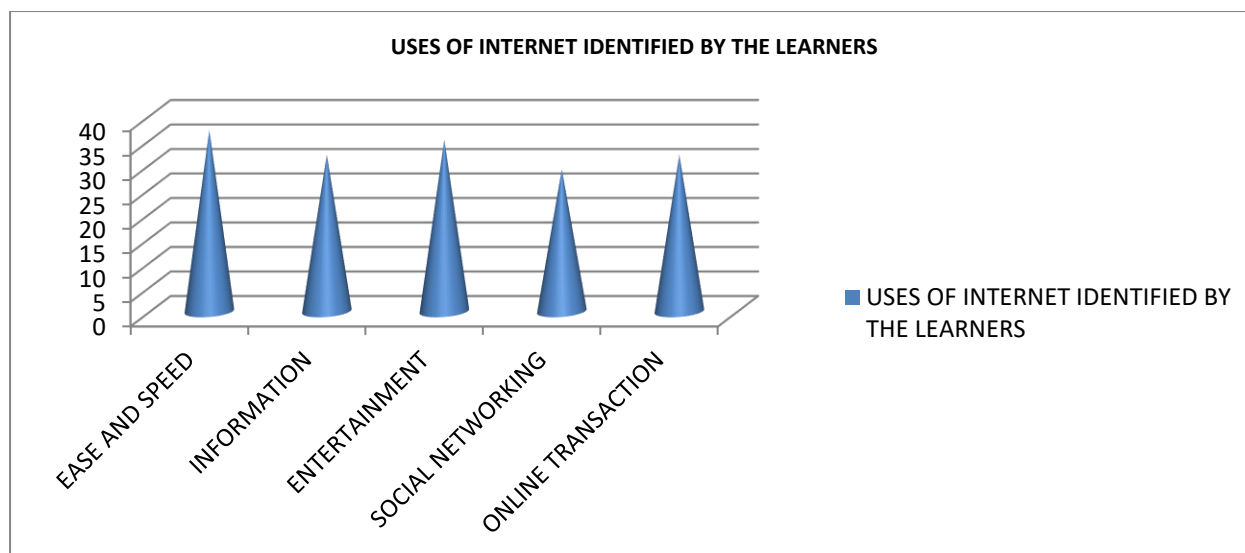


Fig. 1 Uses of internet identified by the learners

The uses of internet as suggested by the learners include accessing of information, ease and speed, for entertainment, for social networking and online transactions. Each learner has given two or more of the above uses.

EDUCATIONAL WEBSITES ACCESSED BY THE LEARNERS AFTER DIGITAL CLASSES

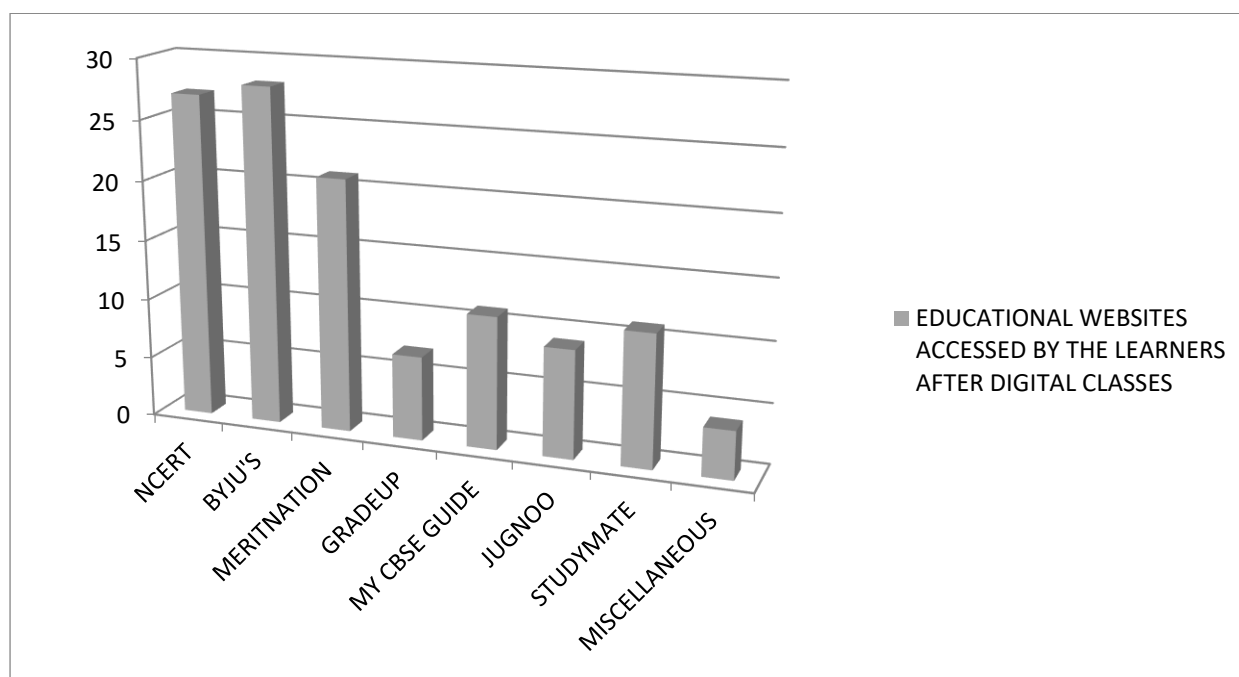


Fig 2 Educational Websites Accessed by the Learners after Digital Classes

Among the learners, the school students have accessed almost all the educational website that was introduced to them in the digital skill classes.

After the successful completion of the Digital classes, the learners were able to acquire knowledge, understanding and accessing of YouTube, Email, Google Search and Net banking.

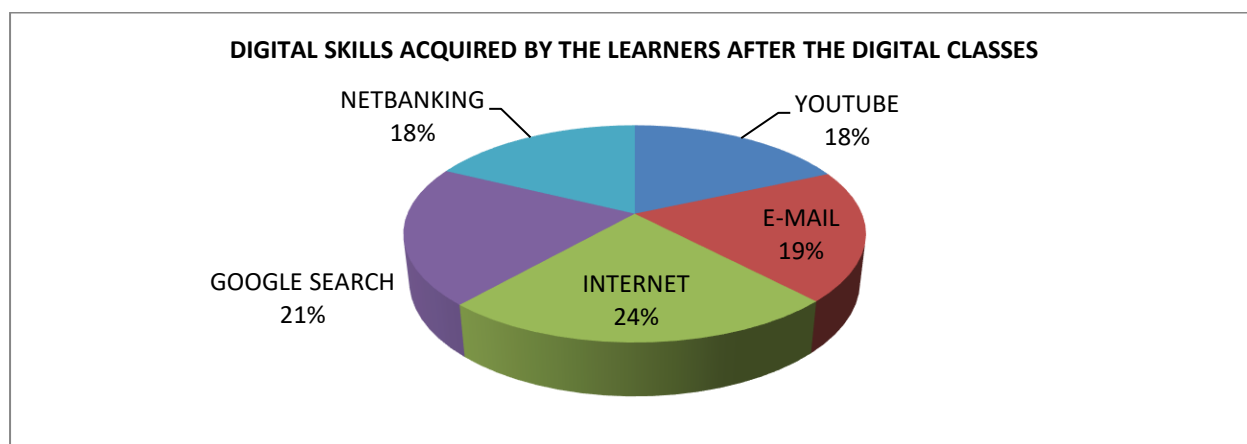


Fig 3 Digital Skills acquired by the learners after the digital classes

FEEDBACK QUESTIONNAIRE FOR TEACHERS

The Feedback Questionnaire for Teachers was given to the teachers of the students in the group. The questionnaire has 15 statements in total. The first five were clubbed under Knowledge about Internet and its uses. The next five are categorized under Acquisition of Digital Skills and the last five under Teacher's reflection and response to acquisition of Digital Skills among students.

KNOWLEDGE ABOUT INTERNET AND ITS USES

Table 4 Knowledge about internet and its uses

| Sl.No. | Descriptors | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|--------|--|----------------|-------|---------|----------|-------------------|
| 1 | Students are able to identify and classify the different parts of computer | 9 | 6 | 0 | 0 | 0 |
| 2 | Students are able to access internet | 5 | 10 | 0 | 0 | 0 |
| 3 | Students are aware about the advantages of internet | 6 | 8 | 1 | 0 | 0 |
| 4 | Students are able to search information using internet | 8 | 4 | 3 | 0 | 0 |
| 5 | Students find internet as an effective tool to make their work easy | 9 | 6 | 0 | 0 | 0 |

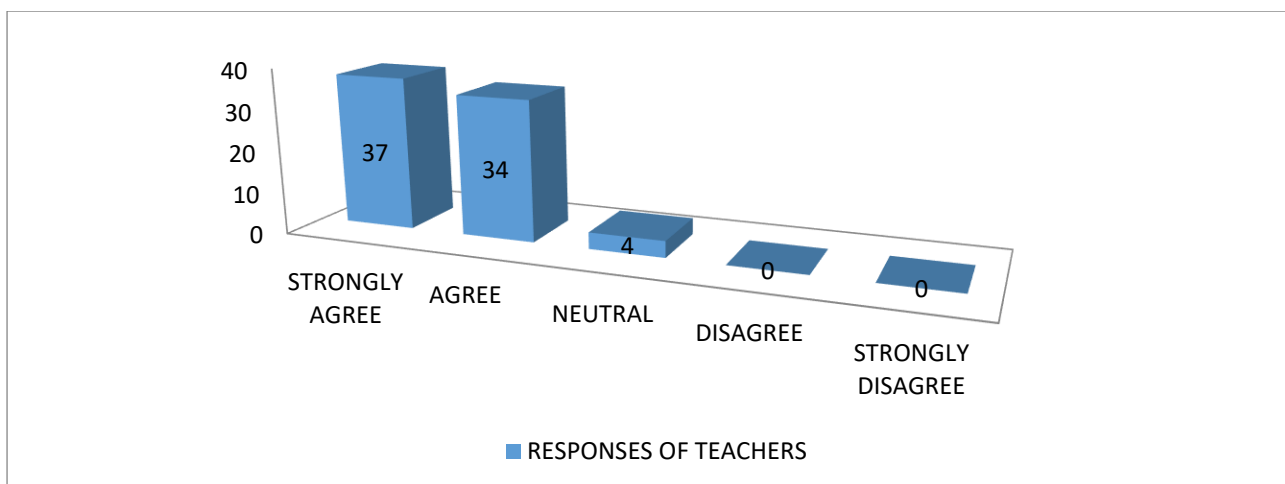


Fig 4 Knowledge about internet and its uses

ACQUISITION OF DIGITAL SKILLS

Table 6 Acquisition of digital skills

| Sl.No. | Descriptors | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|--------|---|----------------|-------|---------|----------|-------------------|
| 6 | Students are able to understand the concept of online transaction | 2 | 6 | 7 | 0 | 0 |
| 7 | Students can name the different educational website | 5 | 10 | 0 | 0 | 0 |
| 8 | Students are able to access educational site | 4 | 6 | 5 | 0 | 0 |
| 9 | Students can compose mail | 1 | 5 | 9 | 0 | 0 |
| 10 | Students can identify the different web browser | 4 | 9 | 2 | 0 | 0 |

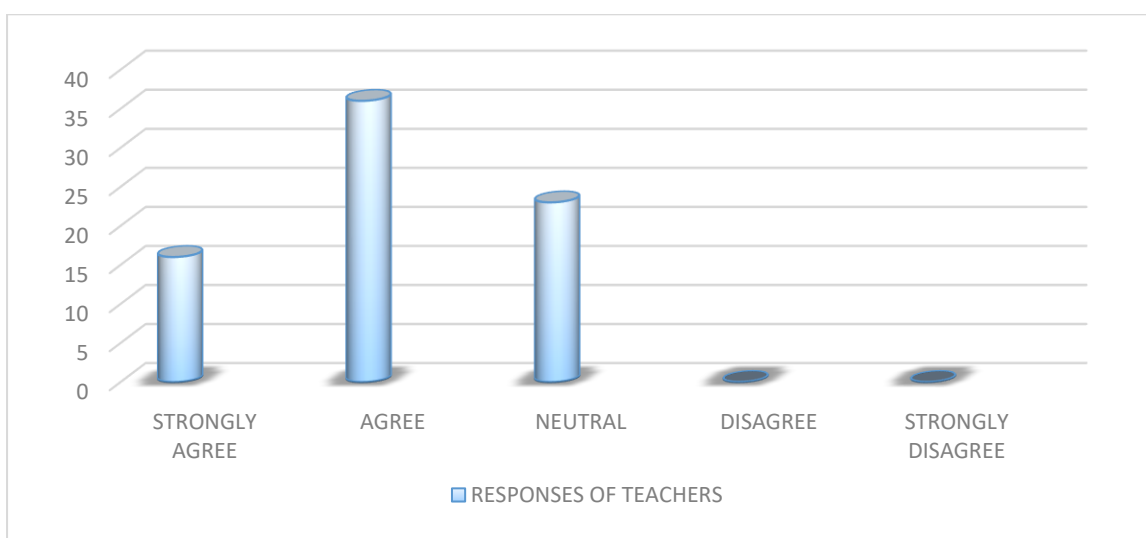


Fig 5 Acquisition of digital skills

TEACHER'S REFLECTION AND RESPONSE TO ACQUISITION OF DIGITAL SKILLS AMONG STUDENTS

Table 8 Teacher's reflection and response to acquisition of digital skills among students

| Sl.No. | Descriptors | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|--------|---|----------------|-------|---------|----------|-------------------|
| 11 | Students have gained hands-on-experience with different digital skills | 9 | 4 | 2 | 0 | 0 |
| 12 | Students feel immense pleasure and satisfaction after acquiring digital skills | 9 | 6 | 0 | 0 | 0 |
| 13 | This is a good initiative towards empowering the rural girls on acquiring digital skills | 15 | 0 | 0 | 0 | 0 |
| 14 | I shall hereafter help my students to put into practice what they have gained through the digital skill classes | 15 | 0 | 0 | 0 | 0 |
| 15 | I shall support my students to further learn more about employing the digital skills acquired | 15 | 0 | 0 | 0 | 0 |

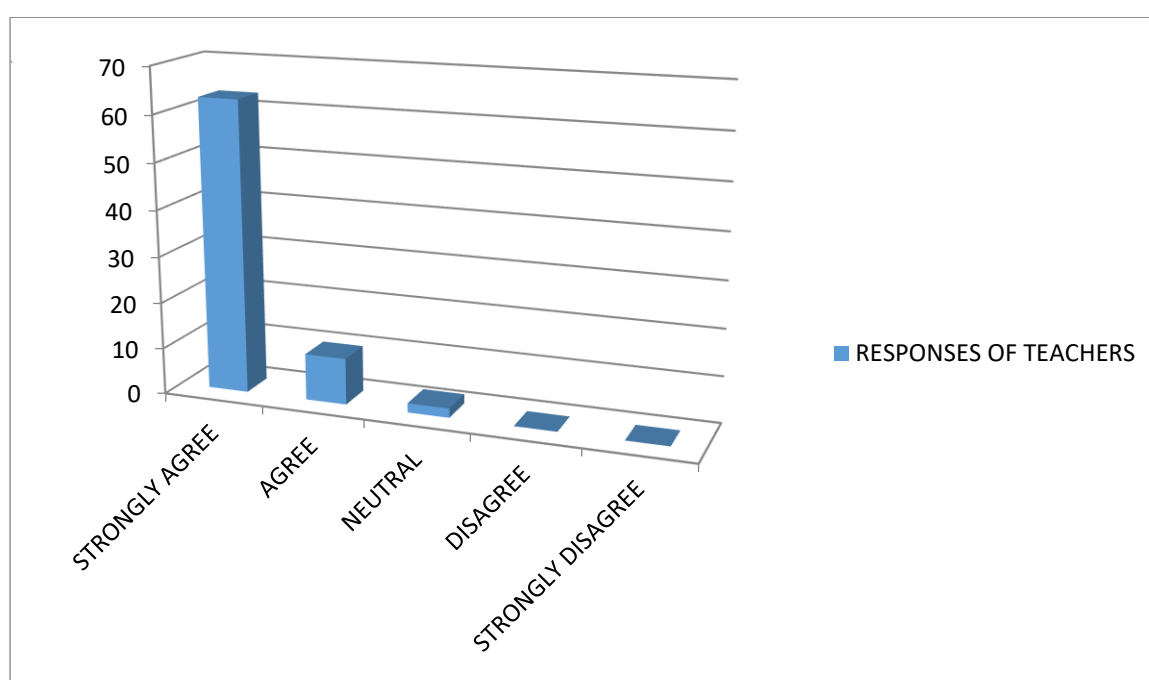


Fig 6 Teacher's reflection and response to acquisition of digital skills among students

Interpretation of data- inference drawn and overall evaluation

Thousands of rural girls in the present era of Digital India campaign do not have basic access to information and communication technology. Providing digital skills to rural population, especially girls who suffer gender based discrimination will open up new avenues for education and up skilling. This can in the long run reduce rural poverty, illiteracy, prejudice and stereotypical attitude. Rural women who are actively into agriculture can gain access to the right information at the right time and leverage it to improve the earnings of the family if they have gained knowledge of digital skills. A significant effort has to be made to have an inclusive digital skill enhancement programmes for rural girls otherwise they would be left far behind the

main stream as the situation in rural India stands in stark contrast to urban India. It is important to make rural India digitally literate as the medium of instruction is becoming more and more digital. With digital empowerment of girls in rural areas, the entire family would be benefitted by way of a better livelihood, standard of living and better job opportunities. Enhancing competency in digital skills would allow them to explore arenas wherein they can re-skill themselves and improve the life skills as well. Improved digital skills could also be visualized as an opportunity for many entrepreneurs in the making which would result in more employment generation. This would add to the country's workforce. If digital skills enhancement strategy is paired with digital literacy programmes like the one launched by Google, it would act as the single biggest boost to Digital India programmes. If the digital skilling programmes are grounded within broader education curricula, then better empowered individuals could be made.

III. FINDINGS OF THE STUDY

- Strengthened platform for networks to advance digital skills of girls and women.
- Digitally active and exposed to gadgets and applications
- Digital competencies for functioning on a broader range of capabilities.
- Learners cognizant of their potential to engage productively with new and wider definitions of what it meant to be digitally literate.
- Learners reflecting on learning and making connections to the school curriculum.
- 'superficial' versus 'effective' mobile technology emerged among stakeholders.
- Enthused learners demonstrated how technology could be leveraged for learning using educational sites.
- Improved knowledge of 'uses of literacy' in the spaces across and between school and home.
- Encouraged co-learning within families
- Engagement with learning
- Greater autonomy with learning and particularly with peer-learning
- Computer Literacy Program for more eligible learners may be conducted for a longer duration of time.
- Interested learners could be put on short crash courses to make them proficient in Windows, MS Office, DOS, Internet etc. so that they could use their computer skills in daily lives and pave way for employment.
- More such programmes could contribute to the Digital Literacy Mission of the government and spread awareness about importance of technology in daily lives.

IV. SUGGESTIONS

- Increase in sample size and coverage of more villages for multiplier effect
- Association of NGOs and other voluntary agencies for furtherance and sustained effort in the digital skills development and empowerment.
- Larger government allocations to foster Action Researches for continued efforts in improvement.
- UP government has a scheme for distributing free laptops to meritorious students. This would become more meaningful if the students are given sufficient training in Digital skills.

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