ENHANCING THE KNOWLEDGE OF ICT SKILLS AMONG PRIMARY TEACHERS IN PUDUKKOTTAI DISTRICT

A research project report

Submitted

to

STATE COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

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Submitted

By

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FOREWORD

Education is an expanding process and so also the field of Research. Both have a variety of challenges and also the same number of solutions to them. Each research has questions or issues and answers in it and it adopts and scientific process and logical conclusion. It follows a universally accepted methodology to get the data and reach the conclusion after proper analysis of the data.

Research Projects are undertaken for a district level academic or co scholastic issue with a view to finding answer to them. Each district has distinct features and challenges in it and a researcher should select the correct

one from them. The present Research Project is undertaken by Mrs.U.Bhuvaneswari, faculty of this Institute. She has really chosen a relevant topic and did justice to it by their hard work and sincere efforts. I hope that the online platform will become the normal one in the years to come for the teachers to work with more vigor and knowledge. I wish them success in their further endeavor.

Principal

Mrs.U.Bhuvaneswari,
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EXECUTIVE SUMMARY

Research and Education are the two sides of the same coin in the school and college domains. Gone are the days when the Research was confined to the realms of Universities and Colleges. Now school teachers can undertake research on any topic and complete it. All students throughout the world learnt the lessons easily in that mode. The teachers began to think of newer ways of teaching and testing, using the emerging online and offline mode, then. Once, we know the advantages of the system, we cannot move away from it or give it up. Still, it is used in a variety of ways with newer features. There are many apps to be used and tested for the teachers.

We undertook the evaluation in the Primary Teachers for our Research topic. The participating teachers could learn something new and also test them immediately for their benefit and also the students'. We are happy to have made a little contribution to the improvement of the testing domain of the Primary Teachers.

U.Bhuvaneswari

Dr.G.Murugan,

Principal i/c
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CERTIFICATE

It is certified that the Project Report entitled **"ENHANCING THE KNOWLEDGE OF ICT SKILLS AMONG PRIMARY TEACHERS IN PUDUKOTTAI DISTRICT"** is an original and independent project work done by **Mrs.U.Bhuvaneswari** Lecturer, District Institute of Education and Training, Pudukkottai. It has not previously formed the basis for any other project work or for the award.

Place: **Dr.G.Murugan**

Date: Principal i/c
DIET, Pudukkottai

ACKNOWLEDGEMENT

At the outset, we thank from the depth of our hearts the **Director and the Joint Directors of the State Council of Educational Research and Training, Chennai** for having given us the opportunity to undertake this District Specific Research Project.

We are highly indebted **to Dr.G.Murugan, Principal in-charge** for his continuous guidance and suggestions from time to time in the conduct and completion of this Project Report.

We whole heartedly thank the **Chief Educational Officer and DEO(s)** who enabled us to carry pout this Project with the Primary Teachers in the district from two blocks.We profoundly thank **the Experts and the Members of the District Research Committee** who played their role exceptionally well and guide us all through this project work.

I thank the team **Mr. A. Kasivijayan**, B.T. Assistant, PUMS, Elaikadividuthi, **Mr. S. Kasiraja**, B.T. Assistant, PUMS, Sevvappatti, for their kind co-operation, suggestions, timely help ands upport in the preparation of tool as well as research project implementation. I thank all the other teaching faculty and non-teaching staff of my Institute, for their help to complete my project study successfully. We sincerely thank the **Primary Teachers** who participated in the Project, tested the online tool and helped in its completion in time.

Mrs.U. Bhuvaneswari

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INTRODUCTION

1.1 Introduction

The invention of Information and communication technology has made tremendous changes in the present-day world. The advent of Information and Communication Technology (ICT) has revolutionised the world in many ways, including education. In the past, classrooms were typically filled with chalkboards, textbooks, and lectures. However, as technology has advanced, so has our ability to incorporate it into the classroom. ICT has brought about a paradigm shift in the way teaching and learning are carried out in schools, colleges, and universities. The use of ICT in teaching has enabled teachers to create a better learning environment for students, making it easy for them to grasp complex concepts and ideas. This write-up explores the impact of ICT in teaching and learning and how it has transformed education. No area has been influenced by this digital phenomenon. The advent of ICT in education helped to improve the quality of education where teaching and learning eventually became an engaging active process related to real life. Active and collaborative learning conditions facilitated by ICT help to develop a knowledge-based student community. The aim of Skill Development is to create qualified teachers with the internationally recognized skills and knowledge.

Technology will not replace great teachers but technology in the hands of great teachers can be transformational – **George Couros.**

It is the ability to use tools of information and communication technology to define one's information problem clearly, access information efficiently, evaluate the reliability, authority and bias of the sources, organize and synthesize one's information with the best ICT tools available in order to use it effectively and responsibly and communicate one's new ideas effectively and ethically with the appropriate ICT tools available.

1.2 ICT Skills:

Skill is defined as the capacity of performing any task absolutely. It is also called as talent. Skill is a domain based activity. The basic skills required for an individual to survive better in this competitive world are reading, writing, communication, computation (e.g.: addition, subtraction, counting, etc.,) and basic computer / e- gadget operations.

Information and Communication skill is defined as the skills that are required for an effective use of ICT to attain the objective with information and technology. The level and nature of the skills differ for different fields like education, industry, engineering, medical, business, graphics, animation, arts, research, etc.,. The use of ICT in education lays a stepping stone to the future innovation & inventions in this digitalized world.

1.3 ICT skills of teachers

Teachers must have ICT skills in order to adapt technological improvements. A computer problem could be caused by a number of things. Whatever the issue, troubleshooting will always be a trial and error process-in some cases, we may need to attempt multiple different approaches before finding a solution; in other cases, and the

problem may be straightforward. In order to adopt millennium models of teaching-learning settings that modified traditional relationships between teachers and students, school administrators and staff must have a technology-ready attitude. Teachers were recast from Stage on the Stage to Guide on the Side (Collins & Halverson, 2018; Lim & Newby, 2019). Technology integration into teaching and learning has evolved into a complex process in which technology-ready teachers easily facilitate this integration while others may face a variety of challenges as a result of negative attitudes, beliefs, and a refusal to incorporate technology, which infuses alienation and gradually reduces their engagement (Agogo, 2015; Efilti&Coklar, 2019).

The ICTs are needed at school level for the following activities (Sansanwal, 2009):

- Teaching-learning
- Diagnostic Testing and Remedial teaching
- Evaluation activities
- Assessment of Learning and
- Use of ICTs
- Psychological analysis of learners
- Development of reasoning and thinking abilities among students
- Instructional material development

1.4ICT in Teaching-Learning Process

Most teachers feel comfortable in using lecture method, which is not capable of achieving various objectives of classroom instruction. ICT may be of great use in achieving various objectives of teaching –learning process. It provides correct

information in a comprehensive manner with different examples. It helps learners to broaden their information base. ICT provides variety in the presentation of content, which helps learners to learn according to their own pace. It helps in better understanding, and long retention of information.

1.4.1 ICT for Diagnostic Testing and Remedial Teaching

Being a teacher, you must have experienced that there are some students who fail to understand certain concepts or retain certain information for a long time. Due to large class size, non-availability of diagnostic tests in different subjects, lack of training, resources and desire on the part of teacher, etc. teachers do not conduct diagnostic tests and provide remedial teaching. Here ICT can help the teachers as well as students in identifying the problem area. Tests can be made available on the website of the school and students can access them from home also. These practices can be monitored by parents also. It is not easy to organize remedial programme for individual students as problems identified may be of varied nature. For this, ICT can be used for developing, preparing and delivering individual Remedial Programme. These programmes may be online or off-line.

1.4.2ICT in Evaluation

The objective of school examination system is to assess the academic performance of students. ICT can be used in educational evaluation. Online tests can be used by individual student to evaluate his/ her learning. Students can instantaneously get the feedback about the status of his/ her understanding. If the answer is wrong, he/ she even can get the correct answer. Not only students, even teachers, can also use it to assess their own understanding of the subject.

1.4.3ICT in Psychological Testing

There are individual differences. Schools do not have a trained psychologist who can assess students on some of the correlates of academic achievement. It is easy to digitalize all the psychological tests including the scoring process and evaluation. The same may be available on the website and students and teachers can use them, whenever required. Even student can use it individually and can share the results with the teacher who can help him/ her to improve his/ her academic performance. Thus ICT can be used in psychological testing also.

1.4.4ICT for Developing Reasoning and Thinking Abilitiesamong Students

ICT can be used in many subjects. ICT provides students a variety of instructional materials and they can choose those that suit them the best. ICT can be used for developing reasoning and thinking abilities among students belonging to different age groups. This is important in the present context as most educational institutions do not pay attention to development of reasoning and thinking abilities among students.

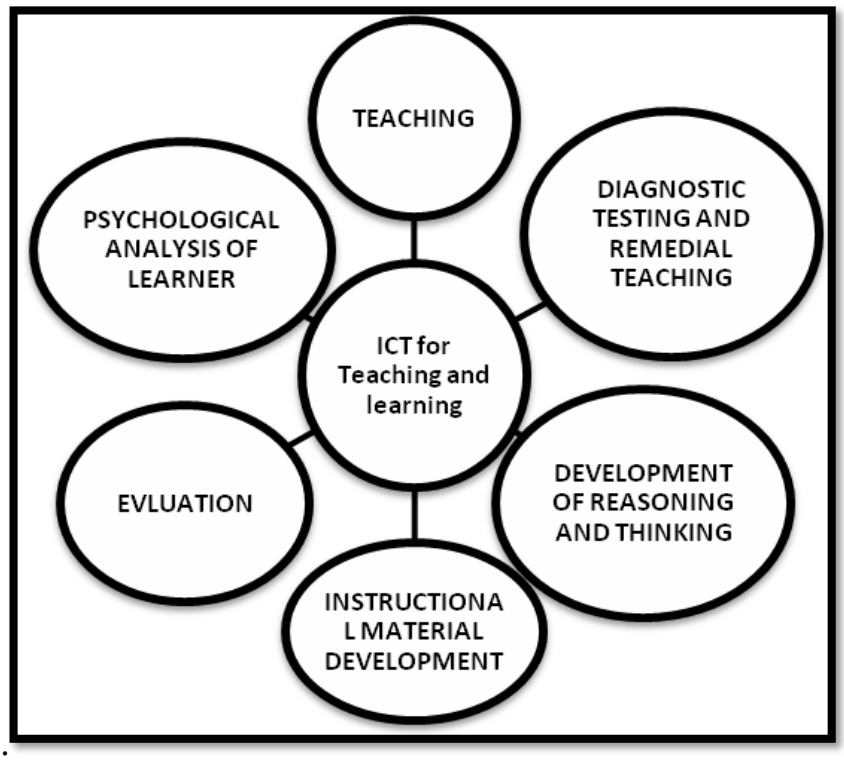
1.4.5ICT for Developing Instructional Materials

At present there is a shortage of qualified and competent teachers in almost all subjects at all levels. Sometimes, instructional materials available in the print form are not of quality and updated. The text book reading is very often not enjoyable and does not help students in understanding the concepts and retaining the information. There are many teachers who are well known in different subject areas. Their lectures should be recorded in CD-ROM, or should be made available to all the users through broadcast on radio and television. It enhances the quality of instruction in the

classrooms. The teacher can also use them to organize discussion after their presentation or broadcast. Teachers can even directly download those lectures. It makes teaching effective, participatory and enjoyable. Digitalized lectures can be uploaded on websites and student teachers can access them as per their needs.

Fig – 1.1

ICT for Teaching and Learning



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1.5Uses of ICT to Teachers

1. ICT enhances the initial preparation by giving good teaching and training materials, use of simulators, recording and feedback in teaching.

2. With the help of ICT, teachers can access with colleagues, schools, institutions and universities, expertise, rich resources in cyber space.

3. ICT enables interaction with students over a physical distance.

4. Didactic software and intelligent tutoring systems can dramatically reduce the cost of teacher training.

5. ICT provides lifelong professional development by providing courses in a virtual situation, training on demand, orientation and refresher courses through videoconferencing and online.

6. ICT facilitates sharing of ideas, experience as well as collaborating on projects, and exchange materials through virtual communities.

1.6Advantages of ICT in education

New technological tools not only bring innovation to academic centres, but also speed up the transfer of information, increase student interest, and allow processes to be automated, among other aspects to be taken into account.

- It improves concentration and comprehension.
- The activities carried out through digital and interactive tools increase student concentration and, therefore, they assimilate concepts more quickly, enhancing learning. This type of tool involves students in more practical learning, with the aim of reinforcing what they have learnt.
- It promotes student flexibility and autonomy. New technologies promote autonomous learning for students. With the incorporation of digital alternatives such as online courses, each student can learn at their own pace, optimising time and resources thanks to the flexibility provided by digitalisation and connectivity.
- It encourages critical thinking. The diverse sources of information that technologies provide bring new points of view to students. In this way, information and communication technologies encourage debate and the acceptance of other

people’s opinions. In addition, the exchange of thoughts allows students to learn about different cultures.

- It facilitates communication between teachers and students. The whole educational community has quick access to the same resources. In this way, digital tools allow direct and immediate interaction, without the need to be physically present. This was especially important during the confinement experienced during the 2020 health crisis.
- Increased classroom productivity and collaborative work. New technologies in the classroom, specifically those that allow access to online content, improve learning productivity by optimising instruction time, and thanks to connectivity, it feeds collaborative work, thanks to new teaching formulas.
- It stimulates motivation. The incorporation of technologies in the classroom improves the motivation of students, it is a quick and practical technique to stimulate the study of new concepts. Digital tools are the daily communicative support of the new generations; therefore, they are easily handled in this environment.
- It incorporates new learning methods. Another of the advantages of ICT in education is that teaching professionals can incorporate new teaching methodologies, thus improving academic results and encouraging dynamism in the classroom. Moreover, their use implies the development of the digital skills needed to avoid the digital divide.

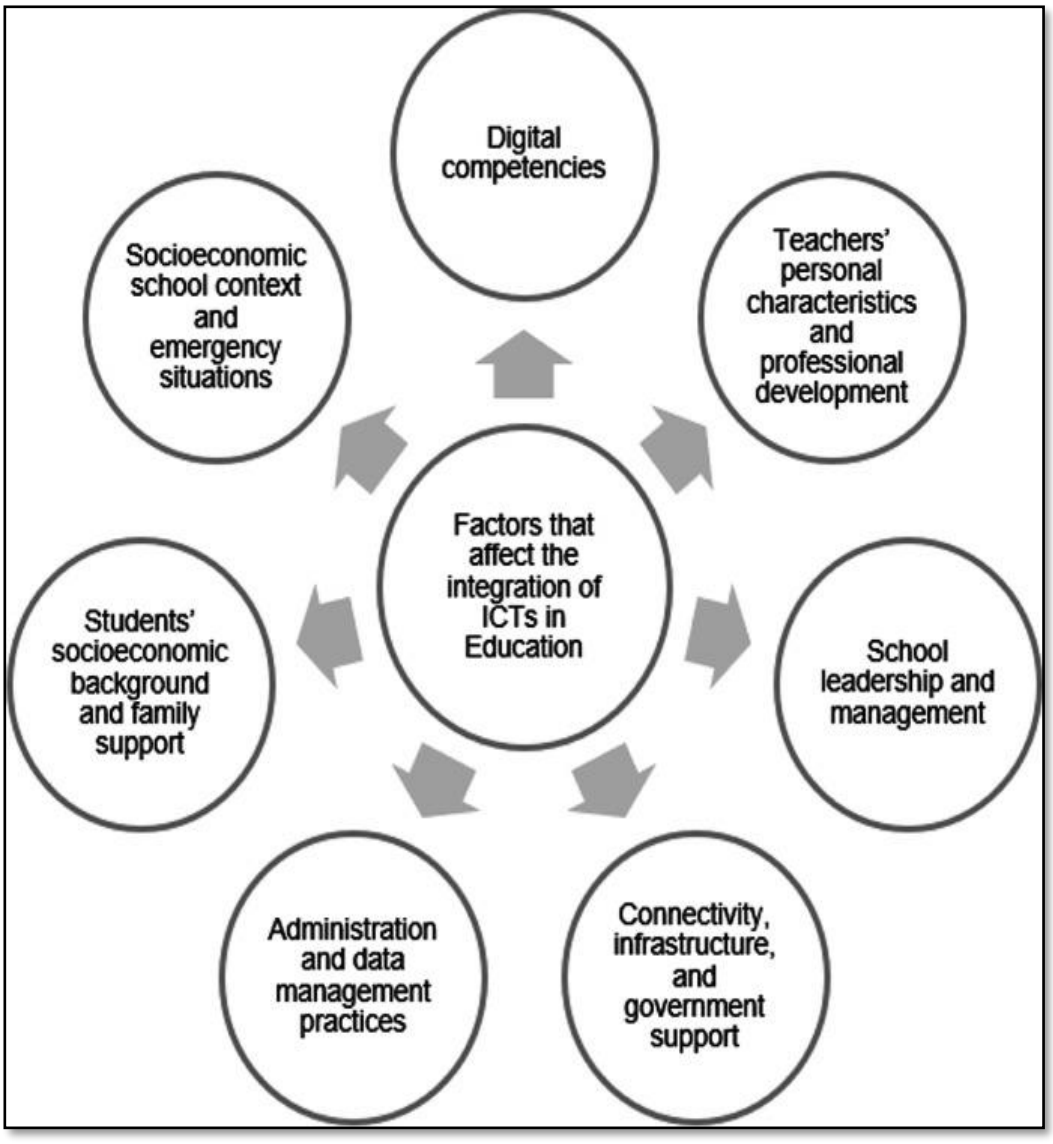
1.7Disadvantages of ICT in education

Technologies are not perfect; **just as they bring many benefits to education**, they also have some disadvantages to be taken into account.

- Distractions and lack of attention. Digitalisation means opening up unlimited access to multiple resources and sources of information, such as web pages, social networks or chats, and therefore, they take attention away from the subject matter.
- Excessive impact. Excessive and inappropriate use can lead students to a compulsive relationship with technology, which can lead to an inability to control consumption and, consequently, have adverse effects on the student's health, social, family and academic life.
- It reduces the development of other skills. Practices such as writing, public speaking and reasoning may be nullified by the widespread adoption of digitisation in academic institutions. The report details that the social skills of the new generations are based on the digital environment, therefore, direct personal communication can be affected.
- Consumption of false information. Much of the information available on the internet is false or incomplete. This fact has a direct influence on the media literacy of students, especially in the ESO educational stage, since half of them do not know how to detect false news, according to a study by the Carlos III University of Madrid.
- Theft of personal data. A lack of knowledge about the dangers of cybercrime can unintentionally expose pupils' data, especially if they are minors, for example, by sharing photos with strangers.

- It reduces human contact. With the incorporation of new technologies, the learning process becomes more distant and the physical relationship with teachers and classmates decreases. As a consequence, by reducing human contact, isolation can appear and become an obstacle to students' personal development.
- It amplifies bullying. A complex subject to deal with and one of the biggest risks is bullying. The lack of physical contact can lead to a loss of assertiveness and misuse of online tools and platforms, which can lead to digital bullying situations.

Fig – 1.2. Factors affect the Integration of ICTs in Education



1.8 ICT SKILLS FOR CLASSROOM INSTRUCTION

1.8.1 GOOGLE FORM

Google Forms is a powerful tool for gathering data in an educational setting, and it's easy for both parents and students to use. Teachers and school administrators can use the intuitive drag-and-drop interface to create custom forms, surveys, quizzes, and polls that help them get the information they need to make better educational decisions.

1.8.2 THE ROLE OF GOOGLE FORM AS AN ASSESSMENT TOOL

In the real classroom setting, teachers face many obstacles in assessing students' performance. One of the obstacles is that the teacher needs a lot of energy and time to assess students' proficiency, especially in large classes. Therefore, the process of assessment is considered an overwhelming activity (Sari et al., 2020). Especially in the pandemic, where learning is carried out remotely using online methods, schools and teachers are Volume 1, No 1, 2021, pp 58-66 59 confused about making assessments. However, during the COVID-19 pandemic, such an assessment is difficult to do. Therefore, teachers and schools are looking for alternative learning assessment tools that are effective and easy to use.

Technically, assessment is traditionally carried out on a paper-based system. Yet, due to the rapid change of technology in the language classroom, the traditional assessment shifts to a technology-based system. One of the most widely used technologies for learning assessment is Google Forms. It is one piece of software that is easily accessible, free to use, easy to operate, and quite well developed as a learning

process evaluation tool. It is also one of the best solutions for alternative learning assessment tools that are effective and easy to use it.

Google Forms are a component of the Google Docs service. The functions of the Google Form for education include providing online practice/test assignments through website pages, collecting people's opinions, collecting various student and teacher data, making online registration forms at schools, and distributing questionnaires to people online. In addition, Google Form can be used to assess student English proficiency.

From the daily assessment, it turned out that almost all students were able to follow and implement, except for some students who were not active from the beginning because they did not have online facilities. For students who cannot participate in assessment activities using Google Forms, the teacher has an alternative assessment method that is done offline specifically for students' homes, as is done during the offline learning process.

1.8.3 THE ADVANTAGES OF GOOGLE FORM

Google Forms is a web-based app used to create forms for data collection purposes (Wiemken et al., 2018; Thuan, 2018). Students and teachers can use Google Forms to make surveys, quizzes, or event registration sheets. The form is web-based and can be shared with respondents by sending a link, emailing a message, or embedding it into a web page or blog post. Data gathered using the form is typically stored in a spreadsheet. Although there are other online survey apps, Google Forms is an excellent free option.

i) Create Surveys to Meet Curriculum Objectives

It is likely that your students are required to make surveys. Take a look at your math curriculum. Learning objectives typically include research design, data collection, data analysis, and reporting outcomes (often these appear in the data management, statistic, and/or probability section). Now take a look at your science curriculum. Scientific inquiry should be listed as a learning objective, which includes asking questions, collecting data, organizing findings, analyzing and interpreting data, and communicating results. The great news is that Google Forms can help your students meet curriculum requirements! Your students will be able to pose a meaningful research question, select a sample group from the population using an appropriate sampling technique, design a questionnaire without question bias, administer the survey, analyze the data using graphs, data tables, and pivot charts, and draw conclusions from the data. Google Forms is a useful tool for meeting objectives.

ii) Ask Various Types of Questions

Google Forms allows you to ask both open-ended and closed-ended questions. We can use drop down menus, multiple choice, checklists, rating scales, and short answers text boxes to gather data. Below are the types of questions we can use in a Google Form:

- Text
- Paragraph Text
- Multiple Choice

- Checkboxes
- Choose from a list
- Scale
- Grid
- Date
- Time

iii) Apply Validation Options to Control Data Entry

Data validation is a rule applied to data entry to make sure that the information is correct and/or useful. Google Forms offers many options for controlling answers provided by respondents. Questions can be set to required to prevent respondents from skipping a question. A number or text can be restricted to a specific entry, character count, or range. A checklist can have the number of options selected limited. As well, the order of choices for a question can be shuffled to avoid placement within a list influencing selection. Validation options provided by Google Forms help to improve the quality of the data recorded.

iv)Create Professional Looking Forms using Themes

Google Forms helps you create a professional looking form. Themes are available allowing you and your students to select from over twenty pre-set designs. In addition, a custom option promotes creativity. The header, text, form background, and page background can all be customized. It is fun to explore the library of header images (some are animated!). Volume 1, No 1, 2021, pp 58-66 61 One feature I like is the ability to set the page background. You can upload a picture, take a snapshot, or load an image from a URL or Google Drive to create a custom look. With so many

web apps limiting the creative process, it is refreshing that form appearance is not restricted to only a few templates in Google Forms.

v) Multiple Ways to Administer Forms Google Forms

lets you and your students collect data using multiple methods. A form can be included in the body of an email allowing a respondent to submit their responses from their Inbox. A link can be generated allowing respondents to answer the questions using a web-based form. Code can be generated and then embedded into a blog or web page as another option for data collection. As well, if a paper/pencil method is preferred the form can be converted into a PDF file using Google Chrome.

vi)Get quick answers

Most communities sometimes have routine activities that held in a certain place, using Google Forms, community administrators can easily plan a journey. For example, camping and study tours. Through Google Forms, administrators/committees can manage registrations taran events, prepare quick polls, collect email addresses, create quizzes, and more.

vii) Create or respondinstantly anywhere

The forms in the Google Forms tool are responsive, meaning easy (and beautiful) to create, edit and respond to on-screen large (personal computer/PC or laptop/laptop) and small (smart phone). Google users Forms can easily share forms/questionnaires/other through the share link (share the link) to the target respondents. Sharing this link can be done via e-mail and social communication media. Even the respondent can immediately provide a response or feedback by accessing shared link. Thus, the data collector will be able to get a direct response from

respondents, even though they are in different places different – far, near – or in different time zones.

1.8.4 Benefits of using Google Forms in the classroom for teachers

It's clear that Google Forms has numerous uses in the classroom.

It makes grading quizzes and tests more efficient. With the self-marking feature in Google Forms, teachers no longer have to manually grade tests and quizzes. Google Forms can do the marking for you, so all you need to do is review the results. This functionality can save teachers hundreds of hours over the course of a school year.

It improves decision-making. Google Forms gives teachers a wealth of student data to review and analyze. Identifying trends and anomalies can help guide their teaching.

It saves time. Instead of manually creating forms and printing, copying, and distributing them, teachers can create a digital version of the form with ease and share it with students or parents online.

1.8.5 Benefits of Google Forms in the classroom for students

Teachers benefit greatly from Google Forms, but they aren't the only ones. It can help students as well:

They gain experience using online software. Especially for younger students, using Google Forms offers an opportunity to become familiar with online applications. It's intuitive and easy to use, so students as young as four or five years old can learn basic actions.

- **It means less paperwork to manage.** Students of all ages benefit from digital forms like Google Forms because they no longer need to worry about taking pieces of paper home and bringing them back to school — which can often result in lost, torn, or crumpled forms.
- **It makes forms easily accessible.** If students need to refer to other Google Forms, they can easily find it in their Google Workspace. Unlike hard copies that are often easy to misplace, Google Forms are organized in folders and searchable in Google Workspace.

1.8.6Benefits of Google Forms in the classroom for parents

While parents aren't in the classroom, they also often have to use tools like Google Forms. Parents are likely to appreciate these benefits:

- **Expedited return of information:** If teachers or administrators require parents to provide information, such as permission for a field trip, for example, Google Forms offers a way for them to instantly provide the details needed without having to send paper forms back with their kids to school.
- **Fast access to student files:** Whether it's a form, quiz, or questionnaire, students can easily share their Google Forms with parents through the Google Workspace. Teachers can do the same, enabling parents to take an active role in their children's education.
- **Easily tractable records:** Google Forms provides parents with a digital paper trail of teacher and administrative information — one that won't get lost or

damaged. This way, parents can easily reference teacher or administrative information when needed to support their children.

- **Student intro forms**

At the beginning of the school year, teachers can ask students to fill out "getting to know you" forms, providing information about their interests, family, strengths and weaknesses, and more. This is a great way for teachers to get to know their students on a more personal level.

- **QR codes**

Teachers and administrators can use QR code generators to create QR codes that lead to specific Google Forms, providing students with a quick way to access forms. This is especially useful for events like parent and student information nights, making it easy for everyone to register for specific school teams or clubs. Just print out the QR codes and have people scan them to access the registration forms.

- **Lesson plans**

Teachers can use Google Forms as a planning template for creating daily lessons. Simply add fields to your form for learning objectives, activities, and more, and then fill it out each day.

- **Teacher knowledge-sharing**

In some schools, teachers work in teams or groups, depending on the grade or subject they teach. If they need to share ideas with each other, such as about the curriculum, student progress, or logistics, they can use Google Forms to collect information from each teacher.

- **Student-created activities**

Google Forms is so easy to use, even students in earlier grades can create their own forms, polls, and quizzes to share with their classmates.

- **Project status**

Teachers need to know how students are doing on large projects and whether they are on track to complete projects on time. A great way to quickly collect this information is with Google Forms. Just create a status update form and get the clarity you need from students in a few minutes.

- **Evaluation rubrics**

Teachers can create rubric templates in Google Forms and use them to grade assignments, essays, projects, and more.

Self-assessments- It's important for students to learn how to evaluate their own work and performance, especially in group projects. Teachers can use Google Forms with self-evaluation questions for students to fill out.

Teacher assessments - Google Forms makes it easy for teachers to gather feedback from students on specific lessons and topics, teaching styles, curriculum, and more.

1.9GOOGLE SHEETS

Google Sheets is a spreadsheet application included as part of the free, web-based Google Docs Editors suite offered by Google. Google Sheets is available as a web application; a mobile app for: Android, iOS, and as a desktop application on Google's ChromeOS. The app is compatible with Microsoft Excel file formats.

1.10GOOGLE DOCS

Google Docs is an online word processor included as part of the free, web-based Google Docs Editors suite offered by Google, which also includes Google Sheets, Google Slides, Google Drawings, Google Forms, Google Sites and Google Keep.

1.11OMR: Optical Mark Recognition

OMR recognizes marks made by human beings on a document or specially printed papers used in examinations, surveys, etc. It is generally used where a large number of applicants apply and data has to be processed immediately and with accuracy. Data is read from the document with an OMR reader.

Data sheet is scanned through a scanner that shines a beam of light on the form paper and detects the areas of limited light transmittance i.e; marked areas as they reflect less light in comparison to blank areas. It gives less than 1% error.

Applications

- Examinations
- Surveys
- Evaluation and Feedback form
- Election
- Banking and Insurance applications

Capabilities

Earlier, special paper, special ink and special input reader were required for the OMR systems which restricted the questions to be asked. Now user can create their

own forms and ask suitable questions. It takes less than 5 milliseconds on average check. User can use any type of mark square, ellipses, circle.

1.11.1 OMR software

OMR software is a computer software application that makes OMR possible on a desktop computer by using an Image scanner to process surveys, tests, attendance sheets, checklists, and other plain-paper forms printed on a laser printer.

OMR software is used to capture data from OMR sheets. While data capturing scanning devices focus on many factors like thickness of paper dimensions of OMR sheet and the designing pattern.

1.11.2EvalBee OMR Sheet Scanner

EvalBee OMR Sheet Scanner is an Android-based application developed by **Ekodroid** labs that helps teachers manage multiple-choice question exams with ease. The app allows users to create templates for various exams like JEE, NEET, AIMCET, and other **MCQ** exams. It also generates instant exam reports by scanning answer sheets with a phone camera.

With the capability of generating exam templates with up to 240 questions, the app supports various answer option types such as matrix, numerical, four options, five options, and true or false. The detailed exam report is available in an **Excel** file, and the app sends individual reports to students via email. Additionally, the app also supports sending exam reports through SMS and various grading options

1.11.3 SPECIFIC APPLICATIONS OF OMR TECHNOLOGY:

- **Surveys and questionnaires**

OMR technology allows for the efficient processing of large volumes of survey forms. Users can fill in bubbles or checkboxes to indicate their responses, and the system scans and captures the data accurately.

- **Examinations and Assessments**

OMR is commonly used for grading multiple-choice tests and assessments. The system reads the marked answers on the answer sheets and tabulates the results automatically saving time and reducing errors in the grading process.

Once students are confident of their response, they should darken the circle with a pen. The box next to the four options is for students to answer. Students have to reply by darkening a circle option and in the box. However, what students write in the box will be the final answers..

1.12Video creation through Power point presentation

PPT stands for PowerPoint Presentation.PPT is a presentation-based program that uses graphics, videos, etc. to make a presentation more interactive and interesting. The file extension of a saved PowerPoint presentation is ".ppt". A PowerPoint presentation comprising slides and other features is also known as PPT.

1.13 Need and significance of the Study:

Integrating technology in the classroom is an effective way to connect with the students of all learning styles. It gives students the opportunity to enhance the interaction with the classmates and instructors by encouraging collaboration. The traditional passive learning model is broken. With technology in the classroom the

teacher becomes the encourager, advisor and coach. VR (Virtual reality) with traditional classroom instruction is one of the examples of how the introduction of new technology can enhance the learning experience and create new opportunities. Technology has played important roles in education, thus the application of Game-based technology as a learning tool particularly in formative assessments might improve learning and achieve promising education. It can be applied live, either face to face or virtual in distance learning. This study examined the information and communication technology (ICT) skills relevant for effective learning possessed by primary

teachers.Especiallyprimaryschoolteachersneedtoimprove ICTskillsforimprovingstudent ’sperformance assessment system in the academic system. In consideration of theabove rationale the present study considered as needed and significant one of thepresentcontext.

1.14Scope oftheStudy

Usage of ICT is a vital part of teaching learning process. The teachers wantedto shift their capacities and improve their skills into managing different educationrelatedservicessuchasteaching,assessingandmonitoringetc.theassessmentsyste m are different types each types has some uniqueness and needed some skills.Now a day’s technology plays different roles in the academic settings inclusion ofevaluation also. The primary teachers need different technological skills includingoffline and online skills. The ICTskillsare significantone for theprimarytoassesstheirstudent’sperformanceinthedifferentaspects.Hence, the development of ICT skills among primary school teachers ismost importantfor the

presentcontext. The presentera haslarge scopefordevelopingtechnologyrelatedskillsamongtheschoolteachers'especiallyprimary school teachers. These are all considered the scope for the presentinvestigation.

1.15Statement of the problem

The present investigation is entitled **"Enhancing the Knowledge of ICT Skills among Primary Teachers In Pudukkottai District".**

1.16Operational definition of key terms

Enhancing

In this study Enhancing refers that the improvement of ICT skillsamongprimaryschool teachers.

ICTSkills

Skill is an ability to perform a particular task.InthisinvestigationICTskillsrefersthatteacherswhoiscapablein teaching and evaluatethe students' performancein theICT mode.

PrimaryTeachers

Inthisstudy74 primaryteachersrefersthatteachersteachingtheprimarylevel students isknown as primaryteachers.

PudukkottaiDistrict

InthisinvestigationPudukkottaiDistrictreferstoPudukkottaidistrictoneamong the northern District in Tamil Nadu, Pudukkottaiand Arantangiare the two educational districts.

1.17Objectives of the study

The following are the objectives for the present study:

- To identify the knowledge of ICT skills among Primary teachers in Pudukkottai district.
- To Plan and prepare various strategies with the guidance of experts.
- To implement the prepared strategies by the experts and the Investigator.
- To find out level of improvement of ICT skills among primary teachers in Pudukkottai district.

1.18Conclusion

Conceptual frame work of the study is given in this first chapter. The next chapter deals with the review of related literature.

CHAPTER-II

REVIEW OF RELATED LITERATURE

CHAPTER – II

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

A literature review explores books, scholarly articles, and any other sources relevant to a detailed issue, area of research or theory, and by so doing, presents a description, summary and critical evaluation of the research works in relation to the research problem being investigated. Literature reviews are designed to provide overview of sources one has explored while researching a particular topic and to demonstrate to the readers how the present research fits within a larger field of study (Fink, Arlene 2004).

Literature review is an essential step in the development of a research project. This step enables the researcher to develop insights and identify the plans and procedures for the study under investigation. It also provides the basis for future investigations, justifies the need for replication, throws light on the feasibility of the study, and indicates constraints of data collection. It helps to relate the findings from one study to another with a view to establish a comprehensive body of scientific knowledge in a professional discipline, from which valid and pertinent theories can be developed. Thus, review of literature is the understandable review of the studies related to the point organized in the demographic profile of undertook the study and abroad.

Important functions regarding the review of pertinent literature are given below.

- Acknowledges those who have laid the groundwork for the present research
- Express knowledge of the research problem
- Depend on the stipulation assess the resources and guides the investigator on the most pertinent or appropriate research
- Displays understanding of theoretical issues that develops the research question
- Provides new theoretical insights or expand a new model as the conceptual framework for the research.
- Convinces reader that the anticipated research will make a significant and significant contribution to the literature.

2.2 Significance of reviewing related literature

- Provides the interpretation of existing literature in light of updated developments in the field to help in establishing the consistency in knowledge and relevancy of existing materials
- It helps in calculating the impact of the latest information in the field by mapping their progress of knowledge.
- It brings out the dialects of contradictions between various thoughts within the field to establish facts.
- The research gaps scrutinized initially are further explored to establish the latest facts of theories to add value to the field
- Indicates the current research place in the schema of a particular field.

- Provides information for relevancy and coherency to check the research.
- Increases the significance of the results by comparing it with the existing literature.
- Provides a point of reference by writing the findings in the scientific manuscript.
- By preventing plagiarism, it saves the scientific manuscript from rejection and thus also saves a lot of time and money.
- Helps to compare and contrast to show the originality and uniqueness of the research than that of the existing other researches
- Rationalizes the need for conducting the particular research in a specified field
- Helps to collect data accurately for allowing any new methodology of research than the existing ones.

2.3 Classification of the studies reviewed

The analysis of related studies revealed that a small number of studies were conducted in the area of ICT Skills. Research was conducted in these areas comprising of educational research journals, educational journals and other education related research literature in order to sketch an abstract of review in the related area of studies and are discussed under the following two categories.

- Review of Indian Studies
- Review of Abroad Studies

2.4 Review of Indian Studies

Kaur (2019) researched "role of teacher's attitude and beliefs regarding use of ICT in Indian classrooms." Data was collected through a survey method from 150

teachers of a secondary school located in North India. The results revealed that teacher's attitude and beliefs towards the use of ICT were 12% (highly favorable), 34.6% (favorable) and 25.3 % (neutral) that showed that most of the teachers have favorable attitude towards ICT use. 't' value at 0.29 indicated that male and female had same attitudes towards use of ICT.

Kaur and Kaur (2019) focused on "attitude toward the use of ICT among distant learners. Attitude Scale toward ICT for teachers designed by Nasrin and Fatima Islahi administered on 50 distance education students who are employed in private and government schools pursuing year two-year bachelor of education (B.Ed) course from Punjabi University Patiala. The study revealed that locality (urban-rural) and type of job (government-private) had no significant difference in attitude toward the use of ICT among distant learners. In respect of gender, the mean value of males was 127, compared to mean value 118 in females, indicated distant male learners had more favorable attitude toward the use of ICT (Kaur & Kaur, 2019).

Babu and Sridevi (2018) focused work on "Role of ICT in higher education: A study." Research was based on literature review method. The study concluded that ICT provides quality education at a low cost and helped to government, higher education Institutes, employers and students for sustainable development (Babu & Sridevi, 2018).

Sahin (2018) researched on "a critical survey on the involvement of ICT in the teacher's training institutes of West Bengal (WB)." The researcher used the descriptive survey method. 60 samples selected from 6 training institutes by stratified random method which are being run under West Bengal university of teachers training,

education planning and administration (WBUTTEPA) in West Bengal. The research revealed that urban and rural male and female teachers had no significant difference towards the use of ICT (Sahin, 2018).

Birwal (2017) researched for "attitude of secondary school teachers towards the use of ICT in teaching learning process." Descriptive survey method was used for the study. By the stratified random sampling method selected 120 teachers (60 private + 60 governments) from Ghazipur, Delhi. The study revealed that secondary teachers had the same attitude towards ICT. Gender and type of school management were not barriers to that. (Birwal, 2017).

Fanai and Chhangte (2016) worked on "a study of the attitude of the secondary school teachers towards ICT with respect to teaching experience and professional qualification." Survey method was adopted to collect data. Investigators applied Attitude Scale towards ICT in Education tool (by Prof. Abdulkafi Albirini, The Ohio State University, 2004 adapted) on 800 teachers, 52 percent of the secondary teachers of Aizawl Districts, Mizoram. Major findings that revealed no significant difference between trained and untrained junior and senior, junior and intermediate, and intermediate and senior teachers on their attitude towards ICT, they had a positive attitude towards ICT (Fanai&Chhangte, 2016).

Shrivastav and Garg (2015) studied "Impact of learning ICT as a subject on secondary school students' self-regulation system." The study used the effect of the program using a single case design in the quasi-experimental design. 1041 respondents were taken from aided and unaided types of schools from Mumbai. Self-Regulation Scale by Brown and Miller's (1991) were used for the study. The study

revealed that after the commencement of ICT subject unaided secondary school students became better at self-regulation (Shrivastav & Garg, 2015).

Lalitha and Prasad (2014) research worked on "Factors influencing the usage of ICT in secondary schools: a case study in Telangana, India." A comprehensive survey methodology used self-constructed questionnaire on 200 secondary school teachers from 20 different education board in district Hyderabad. The results show that gender, age group and ownership of management (government-private schools) had no impact on the usage of ICT in secondary schools. CBSE teachers as compared to SSC board teacher's shows significant impact on the usage of ICT (Lalitha & Prasad, 2014).

2.5 Review of Foreign Studies

Villena-Taranilla et al. (2022) highlighted the role of immersive VR, since its effect on students' learning was greater (at a high level) across educational levels (K-6) compared to semi-immersive and non-immersive integrations. In another meta-analysis study, the effect size of the immersive VR was small and significantly differentiated across educational levels (Coban et al., 2022).

The impact of AI on education was investigated by **Su and Yang (2022)** who showed that this technology significantly improved students' understanding of AI computer science and machine learning concepts. In their meta-review study, **Su et al. (2022)** also documented that AI technologies effectively strengthened students' attitudes towards learning. In another meta-analysis, **Arztmann et al. (2022)** reported positive effects of digital games on motivation and behaviour towards STEM subjects.

Vinayak et.al (2020) ICT play vital role as a strong agent for change among many educational practices i,e conducting online exam, pay online fees, accessing online books and journals. Thus ICT in Higher education improves teaching learning process, provides the facility of online learning to thousands to thousands of learners who cannot avail the benefits of higher education due to several checks, such a time, cost, geographical location etc. Once again ICT serve to provide the means for much of this activity to realize the potential it holds.

Sari et al. (2020) conducted a study that presented an assessment tool in which it aimed to investigate the positive features and limitations of Google Forms as an EFL assessment tool. The research method used in this study is a descriptive qualitative study in which the instruments employed are the class activity log and the observation checklist. Moreover, there are 240 non-English major students among the participants. The results of the study showed that there are five positive features and two limitations to Google Forms as an EFL assessment tool. It can be concluded that the positive features of Google Forms as an EFL assessment tool are in terms of efficiency in time and energy, conformity to the students' characteristics, lower cost, detailed results, and helpful features. In other words, the significant implication is that the use of Google Forms as an assessment tool can alleviate the lecturer's workload. Furthermore, the limitations deal with scoring and tool issues.

Mohit & Lavish (2020) the use of ICT in higher education not only improves classroom teaching learning process but also provides the facility of learning. The teaching community is able to reach remote areas and learners are able to access qualitative learning environment from anywhere and at any time. It is important that

teachers or trainers should be made to adopt technology in their teaching styles to provide pedagogical and educational gains to the learners.

Manisha (2020) In this digital era, ICT use in the classroom is important for giving students opportunities to learn and apply the required 21st century skills. ICT appears as a 'bridge' to break the distance and 'survive' the learning.

Solvi Lillejord, Kristin Borte, Katrine Nesje and Erik Ruud (2018) in their report presented in Norwegian Higher Education, that higher education institutions are not fully exploiting the possibilities inherent in digital technology. They found that 76 percent of the students reported that digital tools provide flexibility and freedom and are important for their studies, but these tools are infrequently or not used.

Agung et al. (2018) conducted a study that aimed to find out how the implementation of the Google-based form learning assessment in schools, as well as the response of students to the implementation of the online assessment, affected This study uses quantitative methods with data collection techniques in the form of questionnaires. The subjects of this study were students in class XI in Madrasah Aliyah Negeri 2 Bandung (high school level) in Bandung, Indonesia. The results of this study indicate that learning assessments using the Google form were responded to very positively by students, who did not experience difficulties and were satisfied with the implementation of online tests. Assessment of Google form-based learning is an excellent alternative to be used by educators in conducting assessment activities that have the advantages of being effective, efficient, and attractive to students.

Zheng et al. (2016) reported a small positive effect of one-to-one laptop programs on students' academic achievement across subject areas. Additional reported benefits included student-centered, individualized, and project-based learning enhanced learner engagement and enthusiasm. Additionally, the authors found that students using one-to-one laptop programs tended to use technology more frequently than in non-laptop classrooms, and as a result, they developed a range of skills (e.g., information skills, media skills, technology skills, organizational skills).

Haßler et al. (2016) found that most interventions that included the use of tablets across the curriculum reported positive learning outcomes. However, from 23 studies, five reported no differences, and two reported a negative effect on students' learning outcomes. Similar results were indicated by Kalati and Kim **(2022)** who investigated the effect of touch screen technologies on young students' learning. Specifically, from 53 studies, 34 advocated positive effects of touch screen devices on children's learning, 17 obtained mixed findings and two studies reported negative effects.

Mahisa &Anju(2014) examined that ICT as a change agent plays an important role in changing the educational practices which was practicing earlier.

Dr .AR .Saravanakumar and A.M. Jazeel (2014) studied **"Infusion of ICT Tools for Enhancing the Quality of Teacher Education in Sri Lanka".** The study results shed light on how ICTs can positively contribute to the digital transformation of schools and which factors should be considered for schools to achieve effective and efficient change.

Tezci (2011) in order to promote student learning, teachers should learn from a student centred perspective that how ICT can be integrated into classroom activities for effective learning. Also should learn use technology to enhance traditional teaching or increase productivity. therefore teachers are need to use ICT for more effective lessons and to deliver the content in more creative and productive ways in order to create more engaging and rewarding activities.

Castro Sánchez and Alemán (2011) investigated that students through ICT based learning are more capable and competent enough to use information and gather data from various sources, and can critically assess the quality of learning materials. Now college students are extra steadily engaged within the significant use of computer systems they construct new information by way of selecting, organizing, deciphering data.

Elias (2011) throws light to examine satisfaction and usability of internet usage on students' assignmentcompletion tasks and their performance. Author indicates that the students who are satisfied with the technology and whose internet usage is more is likely to be more satisfied with the ICT and due to this variance in the student performance is also seen.

Mahmoud Abu Qudais (2010) highlighted about the main factors which affect the attitudes of senior faculty members towards using ICT in their teaching activities. Factors identified which affect are lack of technical skills, insufficient availability of hardware and software, inadequate infrastructure and lack of motivation to use ICT in teaching and it is necessary to

remove these barriers.

Sahu et. al (2009) Primary data was collected for the research purpose and a questionnaire was distributed among the medical students. As a result 77% of the respondents were agreeing that ICT should be the part of their course curriculum. Almost of the respondents opine their desire to have a computer lab in their institutes where as 100 out of 128 respondents expressed that medical education is not effective in the absence of ICT based resources and services.

Alireza et al(2008) examined about the development strategy plan and status about the ICT in Iran. Finding reveals that government has to play a major role if they want to stand in the information arena like regulator, promoter for successful implementation of ICT in higher education. The national IT strategy also needs to address the issues of change in infrastructural factors.

Jef Peeraer (2005) highlighted the factors influencing the ICT in teaching practice in higher education. Author states that teacher enthusiastic nature towards the usage of ICT and skill training plays an important role in the integration of ICT. The important factors for implementation of ICT in teaching-learning are confidence to use computers, ICT skills, infrastructure facility and availability of hardware and software. Lack of technical support insufficient knowledge and lack of motivation were identified as barrier for the usage of ICT.

Mee Chin (2005) mentioned about the obstacles in the use of ICT tools in teaching. Fast change in ICT tools, poor network, improper evaluation in integration of ICT, extra time and effort needed to integrate ICT tools in teaching are the most

significant obstacles. It was urther stated that for successful implementation of ICT in higher education it is necessary to remove these obstacles.

Watts-Taffe et al. (2003) found that ICT class will be easier for teachers if the encouragement, equipment, and necessary technological support are available from institutes to the teachers, they can act as catalysts for the integration of technology through ICT.

2.6 Conclusion

The review of related studies enhanced the investigator ability to have a clearperspective on the problem chosen for the present investigation. Based on the surveyof related studies, an appropriate methodology and a well-organized approach couldbeadopted forthepresent study,which is dealtwith in thesubsequentchapter.

CHAPTER – III

RESEARCH METHODOLOGY

3.1 Introduction

A researcher usually chooses the research methodologies and techniques at the start of the research. The document that contains information about the technique, methods and essential details of a project is called a research design.

Experts define research design as the glue that holds the research project together.It (research design) helps provide a structure and direction to the research, yielding favourable results.

A research design is the plan or framework used to conduct a research study. It involves outlining the overall approach and methods that will be used to collect and analyze data in order to answer research questions or test hypotheses. A well-designed research study should have a clear and well-defined research question, a detailed plan for collecting data, and a method for analyzing and interpreting the results. A well-thought-out research design addresses all these features.

3.2 Statement of the problem

The present study is**"ENHANCING THE KNOWLEDGE OF ICT SKILLS AMONG PRIMARY TEACHERS IN PUDUKKOTTAI DISTRICT".**

3.3Objectives of the study:

- To identify the knowledge of ICT skills among Primary teachers in Pudukkottai district.
- To Plan and prepare various strategies with the guidance of experts.

- To implement the prepared strategies by the experts and the Investigator.
- To find out level of improvement of ICT skills among primary teachers in Pudukkottai district.

3.4Hypotheses of the Study

1. There is no significant of difference between pre and posttest of enhancing the knowledge of ICT skills of primary Teachers in Pudukkottai District.

2. There is no significance of difference between the primary teachers in Pudukkottai districts with respect to Gender.

3.5VariablesoftheStudy

Thefollowingvariablesareused in this study.

Independentvariable

Technology based Training programme

Dependentvariable

ICTskills

Demographicvariables

Gender

3.6Research Method

Research methods are aptly adopted and specific procedures for collectingand analyzing data are followed. Research is the systematic investigation of describing, explaining, predicting and controlling observed phenomena. It includes both inductive and deductive methods.

In the present study the investigator has administered experimental method toenhancing ICT skills and followed by training to be givenfor enhancing the

knowledge of ICT skills of primary teachers in Pudukkottaidistrict.

3.7. Selection of sample and Sampling Technique

Sampling means selection of individuals from the population in such a way that each one has an equal and independent chance of being selected. The population meant for the study is the primary school teachers from the Pudukkottai District. The investigator collected totally 74 samples from all the 13 blocks of Pudukkottai District of using the simple random sampling method.

Pudukkottai district have 2 Educational districts with 13 blocks. (Pudukkottai, Kandarvakottai, Thirumayam, and Karambakudi, Annavasal, Kundandarkovil, Ponnamaravathi and Viralimalai, Thiruvarankulam, Aranthanki, Avodaiyarkovil, Manamelkudi and Arimalam). From the above 13 blocks, randomly 74 primary teachers were selected for this research study. Out of 74, 25 male primary teachers and 49 female primary teachers were acted as samples for this research study.

3.8ResearchTool

The following tool was used by the researcher for collecting data from therespondent. Investigator made Enhancing ICT Skill (EICTS) achievement test Questionnaire used as tool for the study. The investigator and resource persons were conducted pre-test at the beginning of the study to the samples of the group and a post-test was conducted after providing a suitable teaching learning experience to the same sample group.

3.9Construction of Research Tool

PersonalData Sheet

Inordertocollectdemographicinformationnamelygender,localityofschool,

educational qualification, teaching experiences and age of theinvestigatorusedapersonal datasheet.

Enhancing ICT Skill (EICTS) Questionnaire

The Enhancing the knowledge of ICT Skill (EICTS) Questionnaire consists of fifty (50) multiple choice question related to the research area with constructed. This scale was constructed by the investigator with the discussion of Principal, DIET staff and experts in the field of education and technical education respectively.

3.10. Data Collection

The investigator followed the questionnaire in this present study. The investigator developed and used the questionnaire were verified with the help of the subject experts.

During the time of data collection, the investigator got prior permission from the CEO and BEOs of respective blocks. The session of answering to questionnaire the investigator has given proper instruction about the questionnaire to primary teachers. There was a good rapport between the investigator and the respondents. The time taken to complete the tool was approximately 30 minutes. After 30 minutes, the investigator collected in all questionnaires from the primary teachers. This same procedure followed in both the pre test and post test by the investigator.

3.11AdministrationoftheResearchTool

Enhancing the knowledge of ICT Skill questionnaire consists two parts. Part I has personal information of teachers such as name, address etc. Part II has consisted 50 items of MCQs respectivelyThe letters were sent to the Chief Educational Officer to enable them to administer the tool to the 74 Teachers from Pudukkottai district.

The teachers were given 50 Questions from creation of Google forms, MCQs, OMR sheet and video creation with multiple choices asanswers**.**The investigators explained the purpose of the program and briefed themabout the ICT skills. The pretest was conducted for them before the intervention toknowtheirknowledge of ICTskills.Theteachersverywellunderstoodthe task ahead and recorded their responses inboththe tests.

3.12. Validation of tool

Validity

Before the validation, the questionnaire consists of 60 Multiple Choice Questions with a single best response (each question have 1 score) for present research concepts. The teachers were allotted 30 minutes time to complete and submit the questionnaire. Attempting all the questions was mandatory although the teachers hadn't answered the question in case, question was considered to no score and there was no negative score. The investigator administered the tool from 25 primary school teachers in Pudukkottai district on the basis of this pilot study. The evaluation was done out of 60 marks.

The item validity was already found by doing item analysis. In order to establish content validity, the tool was given to primary teachers in Pudukkottai district. The questions were given to primary teachers in the selected school. They gave their opinions regarding the questions. Some words in the questions were changed on the opinion of the teachers, thus, the content validity was established.

Validation of the paper was done by item analysis. The scores of all the teachers were arranged in order of merit. The upper one-third teachers were considered high achievers and lower one-third as low achievers.

An item contains a stem and four options including one correct (key) and three incorrect (distractor) alternatives. Nonfunctional distractor (NFD) in an item is the option, other than the key selected by <5% of learners and functional or effective distractor is the option selected by 5% or more teachers. On the basis of NFDs in an item, DE ranges from 0% to 100%. If an item contains three or two or one or nil NFDs, then DE would be 0, 33.3%, 66.6%, and 100%, respectively.

Reliability

In the present study, the investigator used test-retest method for establishing reliability. After the days of interval, the same test was conducted to the same set of teachers. The correlation, co-efficient is 0.79. Thus, the reliability of the test is 0.79.

3.13. Pilot study

A pilot, or feasibility study, is a small experiment designed to test logistics and gather information prior to a larger study, in order to improve the latter's quality and efficiency. A pilot study can reveal deficiencies in the design of a proposed experiment or procedure and these can then be addressed before time and resources are expended on large scale studies (Doug Altman et al. 2006). A well-conducted pilot study, giving a clear list of aims and objectives within a formal framework will encourage methodological rigour, ensure that the work is scientifically valid and publishable, and will lead to higher quality [research](Lancaster et al. 2004). The investigator conducted a pilot study to select and modify the tool. The investigator

administered the tool from 25 primary teachers in Pudukkottai district on the basis of this pilot study, the entire research work was designed and channelized by the investigator.

Design of the study (Table.3.1)

<table>
<tr><td>Sl. No</td><td>Type</td><td colspan="4">Source</td></tr>
<tr><td>1</td><td>Nature of study</td><td colspan="4">Single group pretest - posttest design</td></tr>
<tr><td>2</td><td>Variables</td><td colspan="4">Dependent variables- ICT skills
Independent variable- Technology based Trainingprogramme</td></tr>
<tr><td>3</td><td>Tools used</td><td colspan="4">Enhancing ICT Skill (EICTS) Questionnaire</td></tr>
<tr><td rowspan="3">4</td><td rowspan="3">Samples selected</td><td colspan="3">Primary school teachers</td><td>Total</td></tr>
<tr><td>Blocks</td><td>Pretest</td><td>Posttest</td><td rowspan="2">74</td></tr>
<tr><td>13</td><td>74</td><td>74</td></tr>
<tr><td>5</td><td>Data Analysis</td><td colspan="4">Statistical analysis such as mean score and graphical representation.</td></tr>
</table>

3.14. Planning and Intervention

- ✓ Conducting pre-test
- ✓ Planning teaching design
- ✓ Preparing learning materials by the investigator
- ✓ Execution of activities by the investigator
- ✓ Conducting post test
- ✓ Analysis of data to find out the different between the pre and post test

3.15. DataCollection

The investigator collects primary data during the course of doing experiments in an experimental research and then investigator can obtain primary data either through direct communication with respondents in one form of questionnaires.

3.16. Conducting the experimentation

AdministeringPreTest

The questionnaire thus constructed was administered as a pre-test to theteachers of the experimental group to assess their entry behavior. The duration ofthepre-test was 30 minutes.

Treatment

The treatment was in terms of enhancing the knowledge of ICT skills. The experimental group was exposed to the enhancing ICT skills. The ICT skills Enhancing training was given to the teachers by way of Laptop or mobile mode. The experiment phase was carried out for a period of one day. The purpose of the study is to enhancing the knowledge of ICT skills of primary teachers in Pudukkottai district.

ConductingPosttest

After training, the post-test was conducted to the experimental group. The duration of the test was 30 minutes. For the experimental group, the post-test was administered after a period of one day of treatment. The main purpose of the post-test was to find out the Enhancing the knowledge of ICT skills of primary teachers in Pudukkottai district.

3.16.1. Control phase

74 primary school teachers were selected from the 13 blocks of Pudukkottai District. The pretest was conducted using the validated tool to the all 74 primary school teachers.

3.16.2. Experimental phase

Already acted, 74 control phase primary school teachers were called for attend the special workshop. Then the Investigator and Resources persons were executed the intervention.After the execution of the intervention, same tool was used for post test to the all 74 primary school teachers.

3.17DataAnalysis

Thefollowingstatisticaltechniqueswereappliedtothepresentinvestigation.

1. Descriptiveanalysis
2. Differentialanalysis

3.17.1 Descriptive Analysis

Statistical technique used

Statistical technique serves the fundamental purpose of descriptive and inferential analysis.

Mean

Mean is the widely used method of calculating average and it's obtained by adding up all the observations and dividing I by number of observations.

where, $\bar{X} = \Sigma x \,/\, N$

$\bar{X} \Rightarrow The arithmetic mean.$

$\Sigma x \Rightarrow The sum of all items.$

$N \Rightarrow Totalnumberofitems.$

Standard Deviation

Standard deviation is the square root of the mean squares of the deviations of individual items from their arithmetic mean.

Standard deviations are calculated using the formula

$$S.D=\sigma=\sqrt{\Sigma fd^2 /N-(\Sigma fd/N)^2} \times c$$

Where,

$d \Rightarrow Deviationofvariablesfromassumedmean$

$f \Rightarrow Thefrequencyofeachvariables$

$N \Rightarrow Totalnumberoffrequency$

c $\Rightarrow Lengthofclassinterval$

3.17.2 Differential Analysis

t-test

The t-test is to measure the significance of the difference between two independents sample means. The formula to find out the t value is

$$t=M1 \sim M2\sqrt{\sigma 12N1+\sigma 22N2}$$

Where,

$M1 \Rightarrow$ The Mean value of the first group

$M2 \Rightarrow$The mean value of the second group or different group

$\sigma 1 \Rightarrow$The standard deviation of the first group

$\sigma 2 \Rightarrow$The standard deviation of the second group

$N1 \Rightarrow$ Sample of the first group

$N2 \Rightarrow$ Sample of the second group

Correlation coefficient

The correlation coefficient is a statistical measure of the strength of the relationship between the relative movements of two variables. There are several types of correlation coefficients, but the one that is most common is the Pearson correlation (*r*). This measures the strength and direction of the linear relationship between two variables. The Pearson product-moment correlation coefficient, or Pearson's *r*, is a measure of the strength and direction of the linear relationship between two variables that is defined as the covariance of the variables divided by the product of their standard deviations. This is the best-known and most commonly used type of correlation coefficient.

Pearson's correlation coefficient formula

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Where,

n- Quantity of Information

Σx - Total of the First Variable Value

Σy - Total of the Second Variable Value

Σxy - Sum of the Product of & Second Value

Σx^2 - Sum of the Squares of the First Value

Σy^2 - Sum of the Squares of the Second Value

The values range between -1.0 and 1.0. A calculated number greater than 1.0 or less than -1.0 means that there was an error in the correlation measurement. A correlation of -1.0 shows a perfect negative correlation, while a correlation of 1.0 shows a perfect positive correlation. A correlation of 0.0 shows no linear relationship between the movements of the two variables. A value of exactly 1.0 means there is a perfect positive relationship between the two variables. For a positive increase in one variable, there is also a positive increase in the second variable. A value of -1.0 means there is a perfect negative relationship between the two variables. This shows that the variables move in opposite directions - for a positive increase in one variable, there is a decrease in the second variable. If the correlation between two variables is 0, there is no linear relationship between them.

Relative size	Effect size	% of control group below the mean of experimental group
	0.0	50%
Small	0.2	58%
Medium	0.5	69%
Large	0.8	79%
	1.4	92%

3.18Conclusion

The chapter detailed the methodology part of the present study. The scientific feature of the research study was sustained objectively and was also established at every stage of research. In the following chapter, the detail analysis and discussion of the results are furnished in the next chapter.

CHAPTER-IV

DATAANALYSISANDINTERPRETATION

4.1 Introduction

The process of the data collection is followed by analysis of the obtained data from the sample population. The quantification of the collected data analyzing is done through a series of interrelated steps. In the initial step obtained data is prepared analysis, involving the assignment of numeric scores to the raw data, assessment of type of scores to be used in coding, selecting an appropriate statistical test and drawing conclusions and inferences from the displayed results in tables and figures.

Analysis and interpretation help researcher to the results to be achieved in a study.Therefore,theresultsobtainedaftertheanalysismustbecarefullychecked.Therefore,i n thischapter, thedata obtained are analyzedand interpreted.

4.2 Date Collection and Analysis

Totally 74 samples (primary teacher) were collected from all the block of Pudukkottai District. Pudukkottai district have 2 Educational districts with 13 blocks. 1. Pudukkottai educational district have 7 blocks (Pudukkottai, Kandarvakottai, Thirumayam, Viralimalai, Annavasal, Kundrandarkovil and Ponnamaravathi). 2. Aranthangi educational district have 6 blocks (Thiruvarankulam, Aranthanki, Avodaiyarkovil, Manamelkudi,Karambakudi and Arimalam). From the above 13 blocks, primary teachers were randomly selected for this research study. Out of 74, 25 male primary teachers and 49 female primary teachers were acted as samples for this research study.

The investigator and resources persons were conducted pre-test at the beginning of the study and a post-test was conducted after providing a designed teaching learning experience to the participants using the same test tool for both pre-test and post-tests. The tool (questionnaire) consists Part I has personal information of teachers such as name, address etc. Part II has consisted of 50 MCQ items related to the present research content of Google form, Google sheet, OMR sheet creating and OMR scanning, video preparation through PPT. Attempting all the questions was mandatory although the teachers hadn't answered the question in case, question was considered to no score and there was no negative score. 50 MCQs with a single best response (each question have 1 score) for related to research study concepts.

4.3.Date Analysis

After giving the activities mentioned in the experimental design the pre and post test was conducted to assess the achievement. The marks are tabulated in Table 4.1.

Table. 4.1.

The pre and post test score are obtained from the74 samples.

SAMPLE	PRE TEST SCORE	POST TEST SCORE	DIFFERENCE
1	27	45	18
2	32	47	15
3	26	47	19
4	28	44	16
5	29	48	19

6	27	42	15
7	24	44	20
8	26	45	19
9	22	48	26
10	25	48	23
11	27	48	21
12	15	47	32
13	22	45	23
14	22	40	18
15	21	38	27
16	24	48	24
17	20	45	25
18	12	49	37
19	28	48	20
20	16	45	29
21	25	46	21
22	27	46	19
23	20	44	24
24	35	40	5
25	19	45	26
26	16	48	32
27	19	48	29

28	24	49	25
29	20	46	26
30	24	46	22
31	19	47	28
32	19	47	28
33	23	44	21
34	22	47	25
35	17	47	30
36	23	45	22
37	22	48	26
38	11	20	9
39	25	40	15
40	20	46	26
41	18	47	29
42	28	49	21
43	22	47	25
44	21	47	26
45	20	24	4
46	21	45	24
47	15	40	25
48	38	46	8
49	34	49	15

50	27	48	21
51	22	48	26
52	20	48	28
53	25	48	23
54	26	28	2
55	21	45	24
56	26	43	17
57	27	38	11
58	18	45	27
59	21	41	20
60	22	42	20
61	20	48	28
62	22	46	24
63	28	48	20
64	27	45	18
65	21	42	21
66	27	47	20
67	19	39	20
68	21	47	26
69	26	48	22
70	25	41	16
71	24	43	19

72	16	43	27
73	24	46	22
74	18	41	23
MEAN	**45.14**	**87.78**	**42.85**

Table -4.2

Enhancing the knowledge of ICTskillsofprimary teacherinPudukkottai District.

Value	**Pre Test**	**Post Test**	**Difference**
Mean	45.14%	87.78%	42.85%

The table 4.2 inferred that enhancing the knowledge of ICT skillsofprimaryteacherin Pudukkottai district pretestis45.14 and posttestis 87.78 the difference between pre and Post test is 42.85.

Fig – 4.2

Mean Value and Difference of pre and Post Test

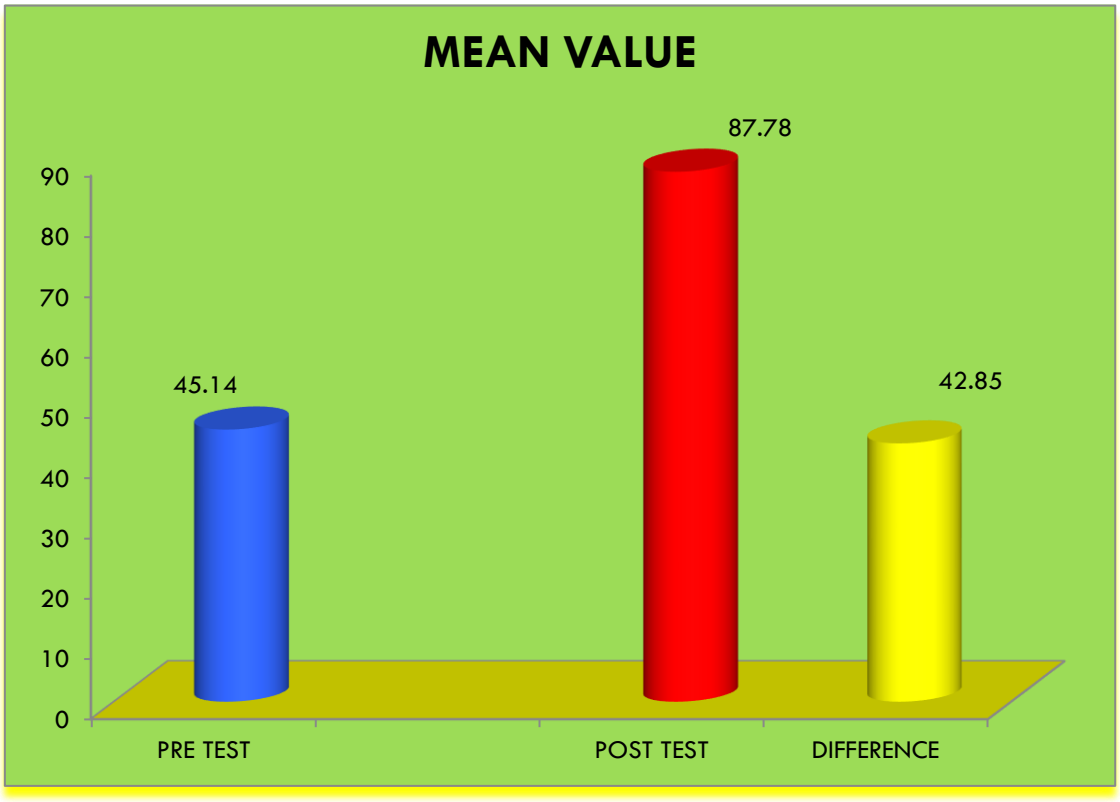


Table-4.3

There is no significant of difference between pre and post test of Enhancing the knowledge of ICT skills of primary teachers in Pudukkottai District

Test	N	Mean	SD	't'test	Level of significant at 0.05
Pretest	74	45.76	9.75	26.25	S
Posttest	74	88.97	10.27		

Significantat 0.05level (1.96) at df =146.

The above table shows that the mean scores of ICT skills ofpost test88.97 is higher than the mean scores of pretest45.76. The calculated‘t’value26.25 is greater than the table value 1.96 significant at 0.05 level. Hence, it isconcluded thatH_0 is rejected, there is significant of difference between pre and post test of theenhancing the knowledge of ICTskillsofprimaryteachersinPudukkottaiDistrict.

Fig – 4.3

Mean and Standard Deviation of Pre and Post Test

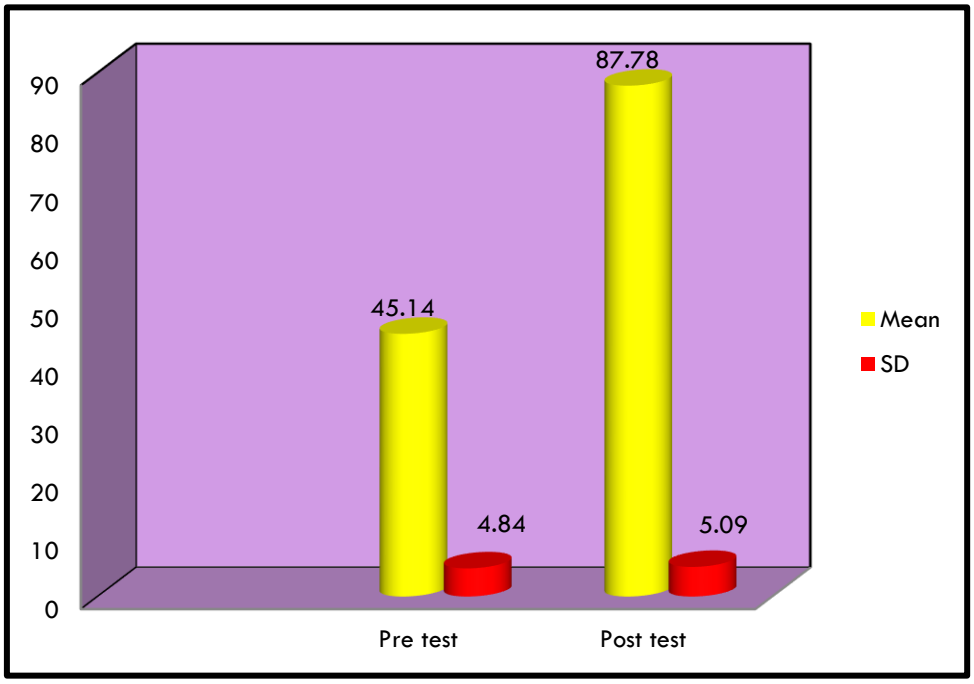


Table-4.4

There is no significance of difference between Pre test of Enhancing the knowledge of ICT skills of primary teachers in Pudukkottai District withrespect to Gender

Pretest	N	Mean	SD	‘t’test	Level of significant at 0.05
Male	25	47.92	10.45	1.37	NS
Female	49	44.65	9.30		

Significantat 0.05level (1.98) at df=72

Theabovetableshowsthatthemeanscoresof ICTskillsofPretest amongmales47.92 was higher than the mean scores of pretest amongfemale 44.65. Thecalculated 't' value 1.37 is less than the table value 1.96 significant at 0.05 level.Hence, it is concluded thatH_0 is accepted, there is no significant difference between Pretest ofenhancing the knowledge of ICT skills of primary teachers in Pudukkottai district with respect to Gender.

Fig –4. 4

Pre Test Mean and Standard Deviation of Male and Female Teachers

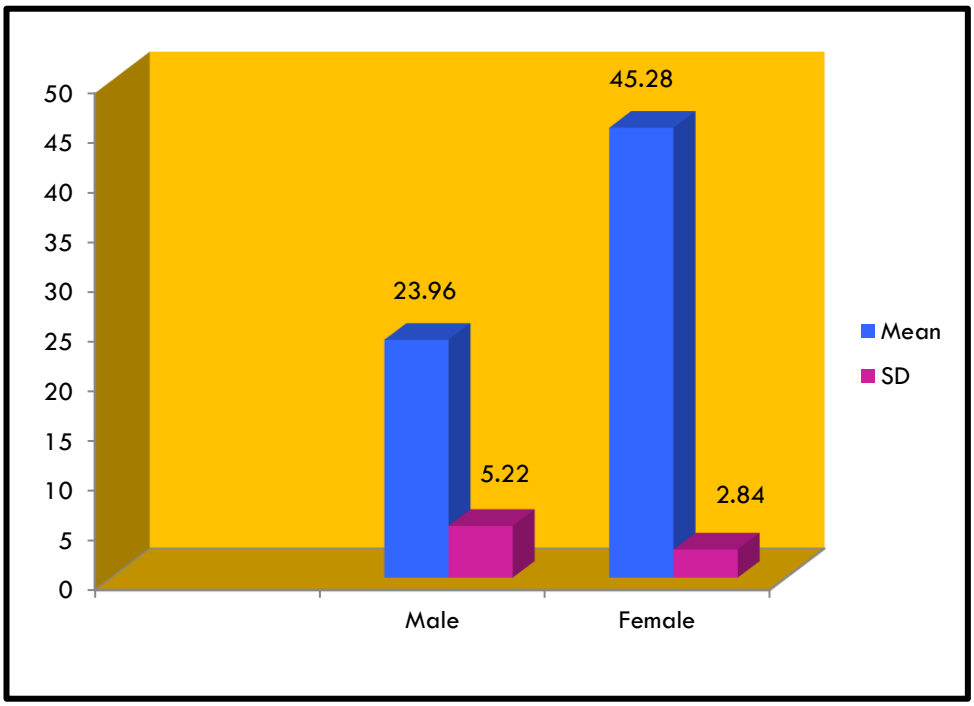


Table-4.5

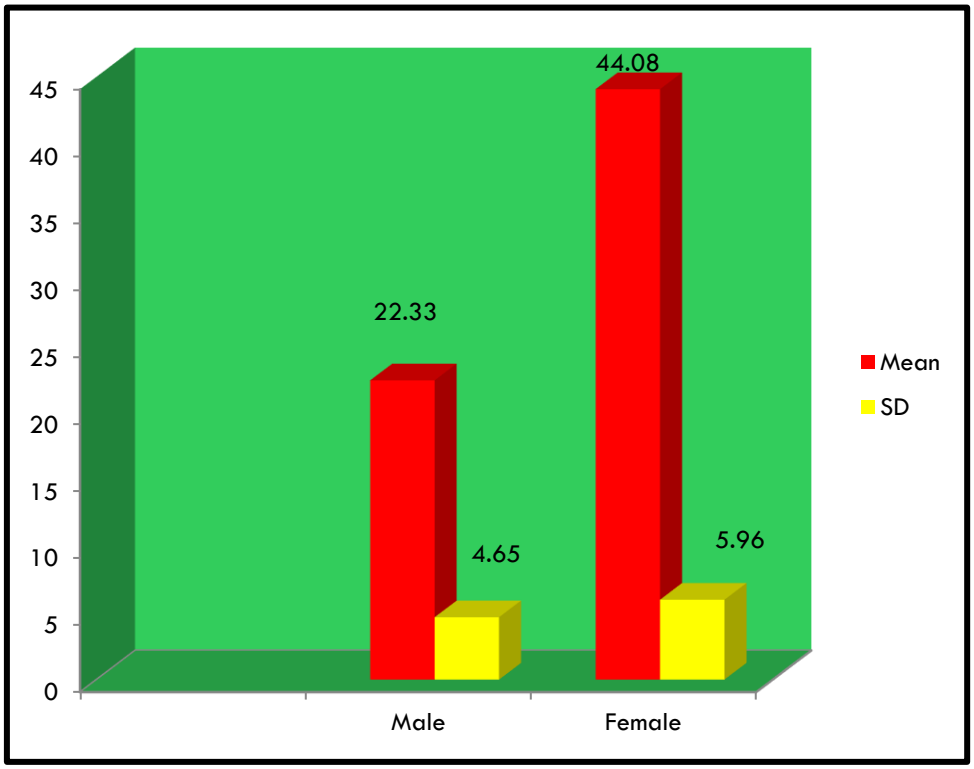
There is no significance of difference between post test of Enhancing the knowledge of ICT skillsofprimaryteachersinPudukkottaiDistrict withrespect to Gender

Posttest	N	Mean	SD	't'test	Level of significant at 0.05
Male	25	90.56	5.67	0.95	NS
Female	49	88.16	11.93		

The above table showsthat the mean scoresofICTskillsofPosttestamong male90.56ishigherthanthemeanscoresofposttestamongf e male 88.16.Thecalculated't'value0.95isgreaterthanthetablevalue1.96significantat0.05level.Hence,itisconcluded thatH_0 is accepted, there isnosignificance of differencebetweenPosttestofenhancing the knowledge of ICTskills ofprimaryteachersin Pudukkottai Districts with respect toGender.

Fig –4. 5

Post Test Mean and Standard Deviation of Male and Female Teachers



4.4 Conclusion

The statistical analyses and their interpretation are given in this chapter.Thediscussion on findings, recommendations, educational implications of the study andsuggestionsfor furtherresearcharediscussed in thesucceedingchapter.

CHAPTER -5

SUMMARY, FINDING AND CONCLUSION

5.1. Introduction

The most important part of any research is its finding. The finding leads the investigator in drawing conclusions and in offering appropriate suggestions and recommendations. This is a summary of the research work, including the statement of the problem, objective of the study, sampling procedure, methodology and conclusion of the study and suggestion and recommendations.

The Summary and Findings section is most important part of the research report, because it reviews all the information that has been presented in its previous sections. This section includes a brief restatement of the problem, a description of the procedure followed and discussion of finding and conclusions of the study.

5.2. Summary of the study

Summary of the study is presented in the following paragraphs:

1. The present study was on enhancing the Knowledge of ICT skills of primary teachers of Pudukkottai district.
2. The study was comprised a single group. Totally 74 primary school teacher samples were collected from all the 13 blocks of Pudukkottai District of using the random sampling method.
3. Out of 74, 25 male primary teachers and 49 female primary teachers were as samples for this research study.

4. As intervention of this study, an experiment is split into two phases: the experimental phase and the control phase. The experimental phase is given the experimental treatment (given the hands-on experience to the primary school teachers in one day orientation workshop for enhancing the Knowledge of ICT skills) and the control phase is standard treatment (without the hands-on experiences).
5. The investigator made achievement testtool (questionnaire) was used. The investigator and resource persons were conducted pre-test at the beginning of the study to the samples of control phase and a post-test was conducted after providing a suitable hands-on experience to the experimental phase of the same sample group.
6. The primary teachers filled out 50 item questionnaires consisting of three parts. Part I has personal information of teachers such as name, address etc. Part II consisted of 50 MCQ items related to the present research content enhancing the Knowledge of ICT skills.
7. The following statistical techniques are used in the study: Descriptive and inferential analysis mean, standard deviation and t– test.
8. In the control and experimental phases, the overall descriptive data results inferred that the post-test achievement is greater than the pre-test achievements.
9. This shows that the enhancing the Knowledge of ICT skills among the primary teachers has significant difference between pre and post-test mean scores.

5.3. Findings of the study

As per the statistical data, the following are the findings of the study:

1. Enhancing the knowledge of ICT skillsofprimaryteacherin Pudukkottai district pretestis45.14 and posttestis 87.78 the difference between pre and Post test is 42.85.
2. The above table shows that the mean scores of ICT skills ofpost test88.97 is higher than the mean scores of pretest45.76. The calculated‘t’value 26.25 is greater than the table value 1.96 significant at 0.05 level. Hence, it isconcluded thatH_0 is rejected, there is significant of difference between pre and post test of theenhancing the knowledge of ICTskillsofprimaryteachersinPudukkottaiDistrict.
3. Theabovetableshowsthatthemeanscoresof ICTskillsofPretest among males47.92 was higher than the mean scores of pretest amongfemale 44.65. Thecalculated ‘t’ value 1.37 is less than the table value 1.96 significant at 0.05 level.Hence, it is concluded thatH_0 is accepted, there is no significant difference between Pretest ofenhancing the knowledge of ICT skills of primary teachers in Pudukkottai district with respect to Gender.
4. The above table showsthat the mean scoresofICTskillsofPosttestamong male90.56ishigherthanthemeanscoresofposttestamongf e male 88.16.Thecalculated‘t’value0.95isgreaterthanthetablevalue1.96significantat0.05level.Hence,itisconcluded thatH_0 is accepted, there isnosignificance of differencebetweenPosttestofenhancing the knowledge of ICTskills ofprimaryteachersin Pudukkottai Districts with respect toGender.

5. This study reveals that Primary teachers with their experience of creating their Google forms MCQsand video content in their subject using ICT skill approach demonstrated significantly greater gains than in the control phase.

5.4. Recommendations

1. The focus on enhancing the Knowledge of ICT skills programmes was supported to Teachers' professional development.
2. The technological breakthroughs should be applied to the teaching learning process to reach easily the learning outcomes.
3. Teachers must develop and integrate the ICT skills in their theoretical instructions and experiments with online or offline resources.
4. Research on the developing and use of digital content should be conducted.
5. Training should be conducted to the all teachers on creating and using ICT skills.
6. This experimental study can be extended to students who are handling smart devices like Tab, Smart phone etc.

5.5. Suggestions for further research

The following suggestions are made by the investigator for the teachers to pursue further investigation.

1. The same study may be extended to all primary, upper primary, secondary and higher secondary school teachers in other, areas of Tamilnadu.
2. This study brought into focus on enhancing the knowledge of ICT skills and the same study can be extended to creating the e-evaluation worksheets using online resources to all the subjects.
3. This experimental study can be extended to students for their own purpose.

4. This experimental study can be extended to the other areas of Gamification and Game-Based Learning, Virtual Reality (VR), Artificial Intelligence (AI) and Adaptive Learning, Multimodal Learning, Collaboration and Social Learning, Mobile Learning, Data-driven Content Creation, Teacher-Student Co-creation, Continuous Improvement and repetition, it can continue to improve the quality, impact, and accessibility of educational digital content and better meet the evolving needs of learners.

5.6 Delimitations of the study

Thefollowingwerethedelimitationofthepresentstudy.

- ThepresentstudyislimitedtoPrimaryteachersworkinginPudukkottai district.
- Thepresentstudyislimitedto74PrimaryteachersinPudukkottai district.

5.7. Conclusion

From the present investigation, it can be concluded that the Teachers ICT knowledge have enhanced by applying the innovative and interactive strategies. In the present day the traditional evaluation method has become outdated to measure the teaching and learning process. Based on the study, the knowledge and level of ICT skills among the selected Primary teachers would be enhanced. Computers are used actively in education to improve the quality and learning outcomes. ICT helps teachers to interact with students effectively. OMR sheet creation and scanning helps the teachers as well as students. Skill based training increases the confidence of the teachers as a result which improves competency of an individual.

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BIBLIOGRAPHY

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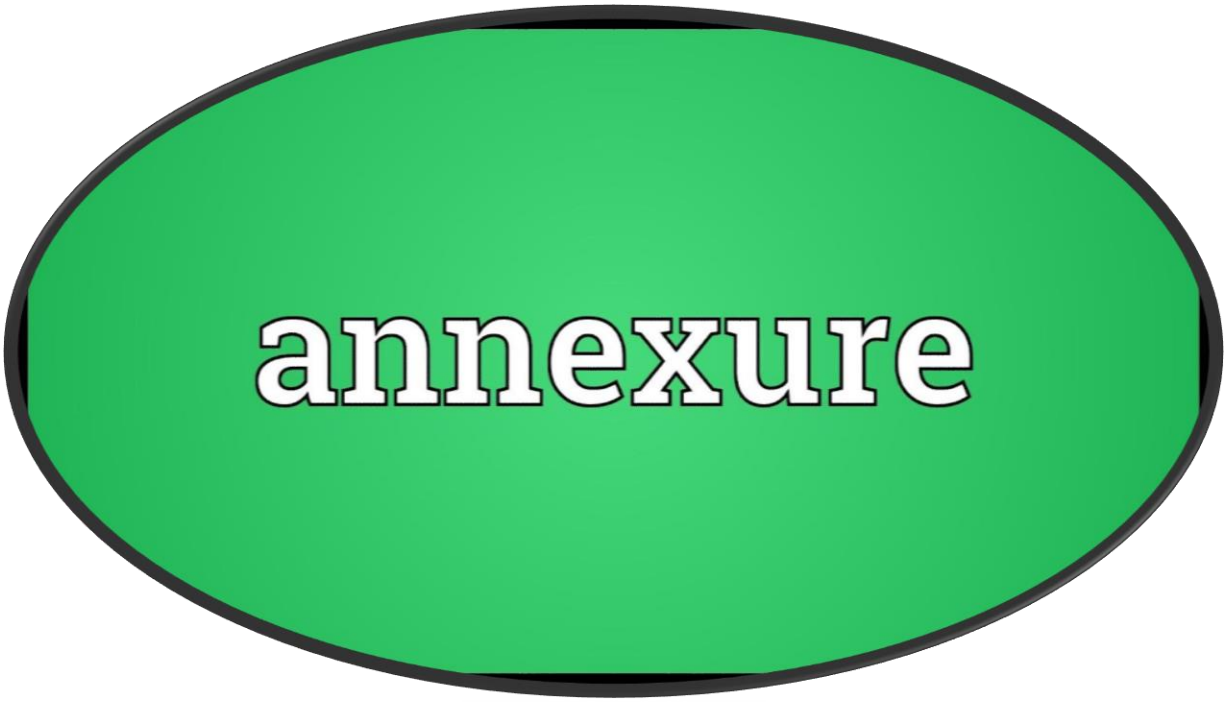
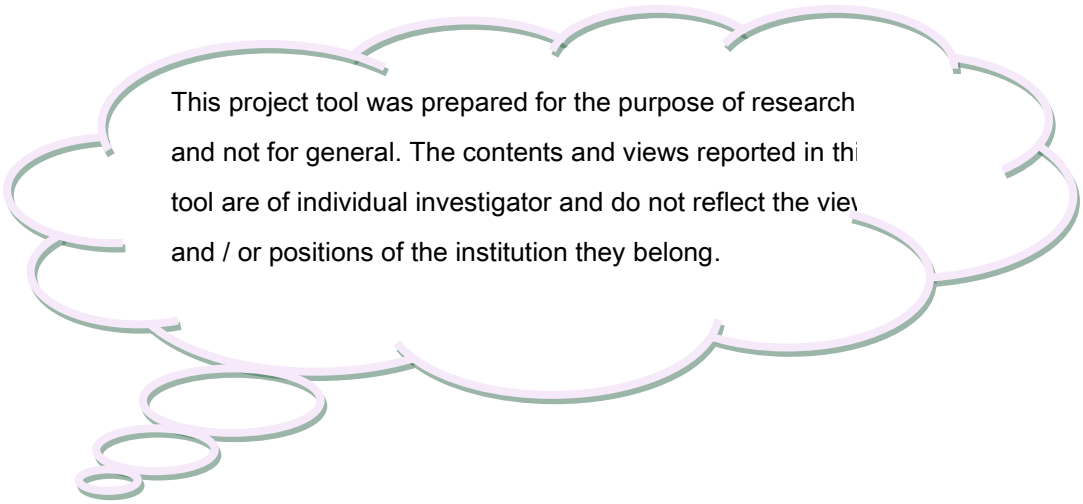

annexure


RESEARCH
TOOLS



Dear Teacher,

I'm **Mrs.U.BHUVANESWARI**, Lecturer in District Institute of Education and Training, Pudukkottai. Now, I am doing District Level Research Project with the following title "Enhancing the Knowledge of ICT Skills among Primary Teachers in Pudukkottai District". This too consists of two parts. Part I is Demographic data and Part II had 50 numbers of Multiple Choice Questions (MCQs) about ICT skills which are to be understood by the teachers, are given below. All the questions were designed in bilingual. For each questions A, B, C, and D options are given. Mark the Shadow against the correct answer in the response sheet. Shadow only one answer to a question. This is a questionnaire supplied and the data will be utilized only for research purpose. So, I request you kindly co-operate in my endeavor.

PART – I

PERSONAL BIO-DATA OF TEACHER

Name of the Teacher :
Designation :
Name of the School :
Block :
Qualification :
Sex : Male / Female
Age : 20 -30 / 31 - 40 / 41 – 50 / 51 - 60
Subject : Tam / Eng / Mat / Sci / S.S
Class Handling : 1 / 2 / 3 / 4 / 5
School Locality : Rural / Urban

1.Google

படிவங்கள்மூலம்நீங்கள்சேகரிக்கக்கூடியஅதிகபட்சபதில்களின்எண்ணிக்கைஎன்ன?

A. 100

B. 500

C. Unlimited

D. 1000

2. Google படிவத்தில்படங்களைச்சேர்க்கமுடியுமா?

A. Yes

B. No

C. Only in paid version

D. Only as part of questions

3.கூகுள்படிவத்தைமற்றவர்களுக்குஎந்தவழிகளில்அனுப்பலாம்?

A. Email only

B. Link sharing

C. Social media

D. All of the above

4. கூகுள்படிவங்களைஉருவாக்கியபிறகுகேள்விகளின்வரிசையைமாற்றமுடியுமா?

A. Yes

B. No

C. Only before sharing the form

D. Only if no responses have been collected

5. Auto grading வுடன்கூடியவினாக்களைஉருவாக்க Googleபடிவங்களைப்பயன்படுத்தமுடியுமா?

A. Yes

B. No

C. Only with an add-on

D. Only for multiple-choice questions

6. Google படிவங்களின்பதில்களைபகுப்பாய்வுசெய்யபின்வருவனவற்றுள்எதைப்பயன்படுத்தலாம்?

A. Microsoft Excel

B. Google Sheets

C. Adobe Acrobat

D. Notepad

7. Google படிவத்தின்தீம்மற்றும்தோற்றத்தைத்மாற்றமுடியுமா?

A. Yes

B. No

C. Only the font

D. Only the background

8. Google படிவத்திற்கானஇறுதித்தேதியைஅமைக்கமுடியுமா?

A. Yes

B. No

C. Only with an add-on

D. Only manually

9. Google படிவத்தில்உள்ளஅனைத்துகேள்வியைநீக்கினால்என்னநடக்கும்?

A. The responses are also deleted

B. The responses are saved in Google Sheets

C. The responses remain but are unlinked

D. The form becomes invalid

10.பதிலளிப்பவர்கள்

ஒருமுறைக்குமேல்படிவத்தைசமர்ப்பிப்பதைஎவ்வாறுதடுக்கலாம்?

A. By setting a password

B. By collecting email addresses

C. By using a CAPTCHA

D. By limiting to one response

11. பின்வருவனவற்றில்எது Google படிவங்களின்அம்சம்அல்ல?

A. Add collaborators

B. Real-time editing

C. Auto-save responses

D. Built-in version control

12. ஒரேகேள்வியில்பலவகையானபதில்களைச்சேகரிக்க

Googleபடிவங்களில்உள்ளஎந்தஅம்சம்உங்களைஅனுமதிக்கிறது?

A. Short answer

B. Paragraph

C. Linear scale

D. Checkbox grid

13. கூகுள்படிவத்தைஎப்படிவினாடிவினாஆக்குவது?

A. Use the settings gear icon to select the 'Make this a quiz' option

B. Share the form with students

C. Print the form

D. Add a title to the form

14.ஒவ்வொரு கேள்விக்கும்பதிலளிக்கப்படுவதைஉறுதிப்படுத்தGoogle படிவங்களில்எந்தஅமைப்பைப்பயன்படுத்தலாம்?

A. Data validation

B. Required question

C. Section header

D. Add image

15. Google படிவத்தில்எப்படிகேள்விகளைச்சேர்க்கலாம்?

A. Click the “+” button

B. Drag and drop a question box

C. Write a scrip

D. A and B

16. Block arrows, stars, banners மற்றும் callouts ஆகியவைஎதற்குஎடுத்துக்காட்டாகும்?

A. Different types of children’s building blocks

B. Auto shapes categories

C. Clip art categories located in the Microsoft Clip gallery

D. More technical terms that I don’t understand

17. Title, Subtitle Text, Pictures மற்றும் Tables

ஆகியவற்றின்தொகுப்புஎவ்வாறுஅழைக்கப்படுகிறது?

A. Presentation

B. B. Design

C. Scheme

D. All Layout

18. Slide Show செல்வதற்கான key எது?

A. F1

B. B. F2

C. F5

D. F10

19. ஒருபுதிய slide ஐ உருவாக்குவதற்கான shortcut key எது?

A. Ctrl+S

B. Ctrl + M

C. Ctrl + N

D. Ctrl + O

20. கீழ்க்காண்பனவற்றுள்எந்த effect slide background க்குகொடுக்கமுடியும்?

A. Gradient

B. Texture

C. Picture

D. All of above

21. MS powerPointஅதிகபட்ச zoom percentage அளவுஎவ்வளவு?

A. 400%

B. 300%

C. 200%

D. 100%

22. அனைத்துவிதமான command களும்காணப்படும்இடம்எது?

A. Menu bar

B. Standard toolbar

C. Formatting toolbar

D. Drawing toolbar

23. PowerPoint இல் default ஆகக்காணப்படும் page setup orientation வகைஎது?

A. Portrait

B. Landscape

C. Vertical

D. None of the above

24. Text Box, Picture, chart போன்றவற்றைஎந்த Menu லிருந்து Access செய்யமுடியும்?

A. View

B. Insert

C. Design

D. File

25. Text (title and bullets) மட்டும்தெரியக்கூடியpowerpoint view எது?

    A. Slideshow

    B. Slide sorter view

    C. Notes page view

    D. Outline view

26. Power point இல்அனைத்து Slides களும்ஒரேஇடத்தில்தெரியும்வகைஎது?

    A. View, Slide sorter

    B. View, Slide

    C. View, Master

    D. View, Slideshow

27. Current Slide லிருந்து Slideshow வைத்தொடங்கும் shortcut key எது?

    A. Shift+F1

    B. Shift+F2

    C. Shift+F5

    D. Shift+F10

28. ஏற்கனவேதயார்செய்த presentation இல்புதிய Slide ஐ சேர்க்கும்வழியாது?

    A. File, Add a new slide

    B. Insert, new Slide

    C. File, Open

    D. File, new

29. Powerpoint 2007 newer versions களில்உள்ள default file type வகையாது?

    A. .pptm

    B. .ppt

    C. .pptx

    D. .xppt

30. MS-PowerPoint இன் Normal View displays இல் Slide thumbnails காணப்படும்பகுதிஎது?

    A. Bottom

    B. Top

    C. Right

    D. Left

31. MS-PowerPoint இல்எந்தMenuவின்கீழ் Formatting text காணப்படுகிறது?

    A. Home, Paragraph

    B. Review, Paragraph

    C. View, Font

    D. Home, Font

32. MS-PowerPoint இல்எந்தMenuவின்கீழ் Themes காணப்படுகிறது?

    A. Transition tab

    B. Design tab

    C. Insert tab

    D. Animation tab

33. MS-PowerPoint இல் ‘Redo’ க்கான keyboard shortcut எது?

A. Ctrl+R

B. Ctrl+Z

C. Ctrl+Y

D. Alt+R

34. **கூற்று1**: Ctrl+Nஎன்பது presentation இல்ஒருபுதிய Slide ஐ Add செய்வதற்கான Shortcut key ஆகும்.

கூற்று2: MS-PowerPoint 2016 இல் presentation ஐ PDF ஆக save செய்யலாம்.

A. கூற்று1 மட்டும்தவறு

B. கூற்று2 மட்டும்தவறு

C. கூற்று1 மற்றும் கூற்று2 இரண்டும்தவறு

D. கூற்று1 மற்றும் கூற்று2 இரண்டும்சரி

35. Motion path என்பதுஒரு_____

A. A type of animation entrance effect

B. A method of advancing slides

C. A method of moving items on a slide

D. All of the above

36. கீழ்க்காண்பனவற்றுள் Home tab இல்காணப்படாத toolவகைஎது?

A. New Slide

B. Arrange

C. Paste

D. Input

37. Home tab இல்உள்ள SHAPES sectionல்காணப்படும் lines வகைகள்எத்தனை?

A. 10

B. 12

C. 18

D. 20

38. கீழ்க்காண்பனவற்றுள் FILE tab இல்காணப்படாத dropdown menu வகைஎது?

A. Save

B. Save As

C. Delete

D. Open

39. கீழ்க்காண்பனவற்றுள்எந்த effects ஐ Slide backgroundக்குகொடுக்கமுடியும்?

A. Picture

B. Gradient

C. Texture

D. All of the above

40. PowerPoint presentation இல்chartஐ insert

செய்வதற்கானசரியானவழிமுறைஎது?

A. File>chart

B. Insert>chart

C. View>chart

D. Edit>chart

41. Slide hyperlink கொடுப்பதற்கான shortcut keyஎது?

    A. Ctrl+H

    B. Ctrl+A

    C. Ctrl+K

    D. Not possible to insert hyperlink

42. PowerPoint Presentationஐ Printசெய்வதற்கானவழிமுறையாது?

    A. Ctrl+A

    B. Ctrl+P

    C. Ctrl+Shift+P

    D. All of the above

43. Slide sorter காணப்படும் Menu வகைளது?

    A. View

    B. Design

    C. Animations

    D. Insert

44. Slideஇல் textஐ Add செய்வதற்கானவழிமுறையாது?

    A. Custom Animation

    B. Note box

    C. Text box

    D. Comment box

45. PowerPoint Presentation ஐ video வாகமாற்றஇயலுமா?

    A. Yes

    B. No

    C. May be

    D. Can’t say

46. PowerPoint Presentation இல்helpகான Shortcut key எது?

    A. F1

    B. F2

    C. F3

    D. F4

47. PowerPoint Presentation இல்centeralignகான Shortcut key எது?

    A. Ctrl+R

    B. Ctrl+L

    C. Ctrl+E

    D. None of the above

48. PowerPoint Presentation இல்gridஐ show or hide செய்வதற்கான Shortcut key எது?

    A. Shift+Alt+F9

    B. Alt+F9

    C. Shift+F9

    D. Shift+F2

49. PowerPoint Presentation இல்ஒரு page என்பதுஎவ்வாறுஅழைக்கப்படுகிறது?

A. Sheet

B. Slide

C. Paper

D. None of the above

50. கீழ்க்காண்பனவற்றுள்sounds fileஎது?

A. LOG files

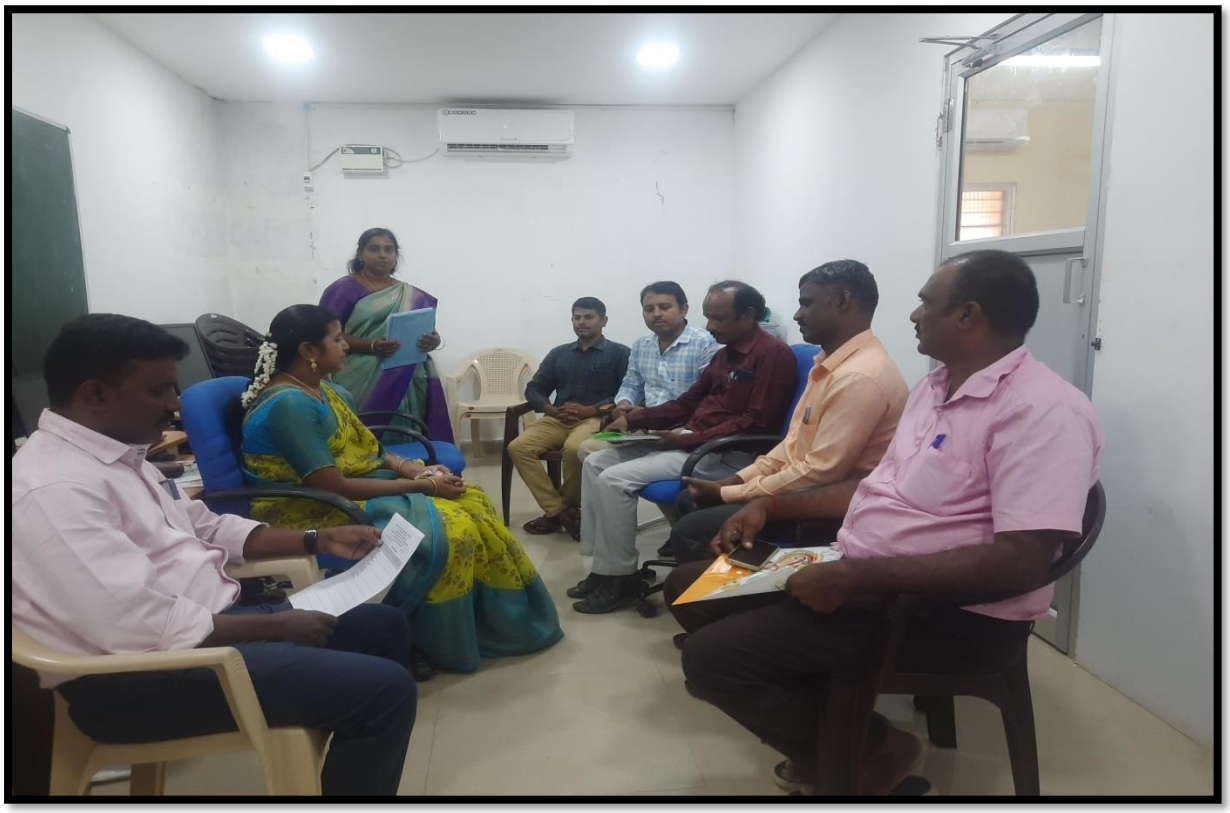
B. DAT files

C. WAV files

D. DRV files

PHOTOS

The Investigator proposed the research project proposal in front of Research Team.



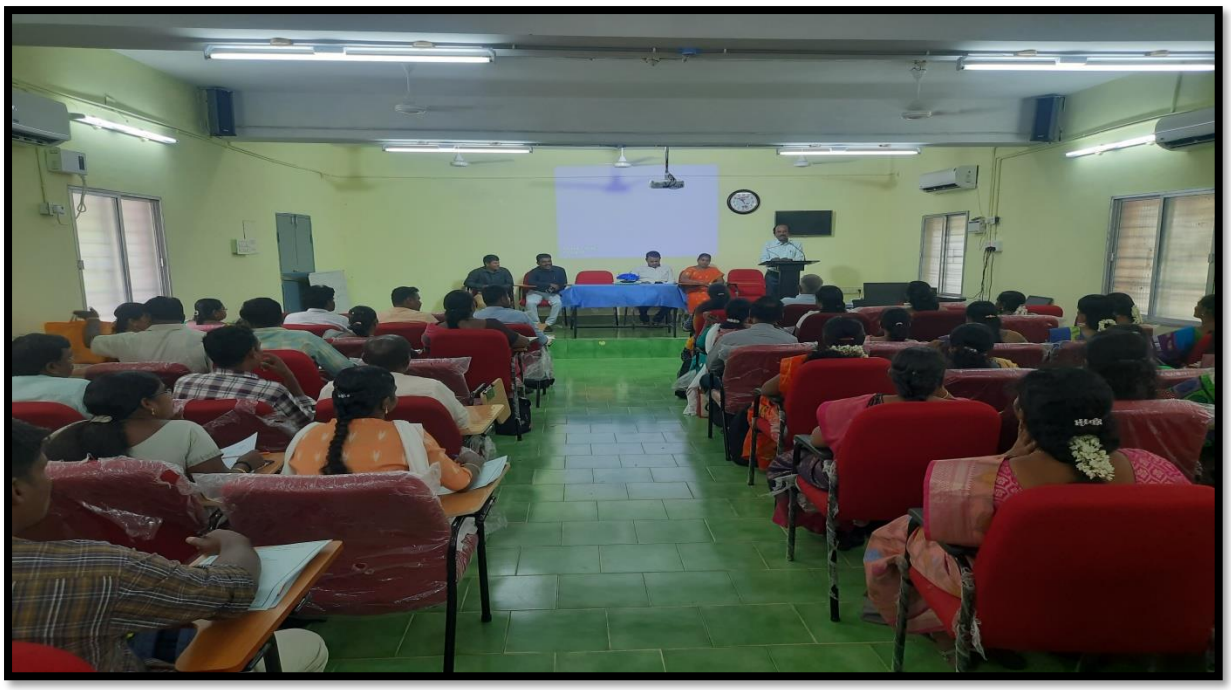
Research project tool preparation workshop held at DIET Pudukkottai.

Research project tool Submitted to Mrs.M.Punitham, DIET, Principal.

Research tool validated by Research team head Dr.Anbuchezhiyan Principal, GCE, Pudukkottai

Resource Person Mr. KasiRaja explained to create Google forms.

The Research Investigator collects the Post test questionnaire.



DIET, Principal (i/c) gives Special address about the workshop.

Resource Person explained to how to download free images.

DIET, Principal Honored our Resource Person Mr. Kasivijayan

DIET, Principal Honored our Resource Person Mr. Kasiraja

Participant gives feedback at the endof the session.

Participant gives feedback at the end of the session.

The Investigator collects the review from Kalaignar Centenary Library at Madurai.

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