ENHANCING THE UNDERSTANDING LEVEL OF USING GOOGLE EARTH LOCATING HISTORICAL PLACES IN SOCIAL SCIENCE TEACHING AMONG UPPER PRIMARY TEACHERS

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Introduction:

Google Maps and Earth have revolutionized how we see the world. Google Maps navigates unknown cities in real time, and Google Earth operates on a larger scale. Google Earth takes us on an immersive virtual tour of our planet from above. You don't need to splurge on a powerful computer to enjoy curated tours if you use the web version of Google Earth. You can experience stunning aerial views even on the most affordable Chrome books.

Google Earth is a computer program that renders a 3D representation of Earth based primarily on satellite imagery. The program maps the Earth by superimposing satellite images, aerial photography, and GIS data onto a 3D globe, allowing users to see cities and landscapes from various angles. Users can explore the globe by entering addresses and coordinates, or by using a keyboard or mouse. The program can also be downloaded on a smartphone or tablet, using a touch screen or stylus to navigate. Users may use the program to add their own data using Keyhole Markup Language and upload them through various sources, such as forums or blogs. Google Earth is able to show various kinds of images overlaid on the surface of the Earth and is also a Web Map Service client. In 2019, Google revealed that Google Earth now covers more than 97 percent of the world, and has captured 10 million miles of Street View imagery.

In addition to Earth navigation, Google Earth provides a series of other tools through the desktop application, including a measure distance tool. Additional globes for the Moon and Mars are available, as well as a tool for viewing the night sky. A flight simulator game is also included. Other features allow users to view photos from various places uploaded to Panoramio, information provided by Wikipedia on some locations, and Street View imagery. The web-based version of Google Earth also includes Voyager, a feature that periodically adds in-program tours, often presented by scientists and documentarians.

Google Earth has been viewed by some as a threat to privacy and national security, leading to the program being banned in multiple countries. Some countries have requested that certain areas be obscured in Google's satellite images, usually areas containing military facilities.

Teachers often only associate Google Earth with social studies lessons. While it is a fantastic tool for social studies lessons, it can also be used in science, math, and language arts. Google earth helps students to explore more and more, it makes teachers methodology easy to explain the content easier and innovative.

Some ways to make social sciences fun for students:

1. Connecting the Past and Present:
2. Using Technology:
3. Project-based Learning:
4. By Using Graphic Tools:
5. Planning field trips:
6. Incorporating games:
7. Acting out historical events:
8. Encouraging journaling:

Types of teaching methods

Differentiated instruction. Differentiated instruction is the idea of creating tailored education plans for students based on differing needs. ...

Lecture-based learning. ...

Technology-based learning. ...

Group learning. ...

Individual learning. ...

Inquiry-based learning. ...

Kinesthetic learning. ...

Game-based learning.

Google Earth e- theory behind Google Earth is simple: create a virtual earth similar to a classroom globe, but make it able to display more information.

benefits of Google Classroom:

- It's free. ...
- It's easy to use. ...
- It's integrated with other Google products. ...
- It's mobile-friendly. ...
- It promotes paperless learning. ...
- It provides real-time feedback. ...
- It encourages collaboration. ...
- It's customizable.

Google Earth can be used:

- to support hands-on inquiry by students in computer classrooms.
- as a basis for homework assignments.
- for dynamic presentations during class lectures.
- for inquiry during class presentations.
- to create imagery and maps for PowerPoint, Word, and other presentation tools.

How Google is useful for teachers?

Google for Education gives teachers the freedom to spend more time personalizing the learning experience, and less time managing it. Students can learn 21st-century problem-solving and the skills they'll use in their future careers, with accessibility features that help every student do their best work.

Purpose of Google Earth

Google Earth provides search capabilities and the ability to pan, zoom, rotate, and tilt the view of the Earth. It also offers tools for creating new data and a growing set of layers of data, such as volcanoes and terrain, that reside on Google's servers, and can be displayed in the view

Benefits of Google Earth for students

Students can search for specific locations or quickly zip manually across the globe. Students can see cities, the countryside, and famous landmarks in three dimensions. Street View allows students to explore areas from the ground.

Google Earth project

Teachers and Students can create a project on any subject of your choosing, drawing place marks, lines and shapes, adding rich contextual information to your places (text, links, images, videos, 3D views and Street View), and organizing the project into a narrative flow. They can share their project and collaborate with others.

Does Google Earth use Internet?

And if you'd like to use Google Earth on your laptop, in a location that has no Internet connection, using cached data is your only option; Google Earth can access and use cached data when no Internet connection is present or available.

How do wem record a project on Google Earth?

Record a tour

1. Open Google Earth.
2. Click Add Tour, or, in the bar above the globe, click Record .
3. To start recording, go to the lower left corner in the media player and click Record/Stop .
4. To record audio, click Microphone .

5. Where does Google Earth save projects?
6. Google Drive
7. Any projects you create in Google Earth for the web are stored in Google Drive. Make sure you are signed into the account you used to create the projects, open Google Drive (https://drive.google.com/drive/), and you should find a folder entitled Google Earth.
8. Where does Google Earth save my places?
9. Opening Placemarks

Placemark is the name given to the points created in Google Earth Pro. These are saved in files called kml or kmz files. These files can be saved in the same way as any other file in your 'My Documents', department shared area or hosted on your VLE.

NEED FOR THE STUDY

"Education is the most powerful weapon which you can use to change the world." – Nelson Mandela

In our modern, globally interconnected society, it is more important than ever that we understand the world around us. Google Earth and Google's mapping tools aren't just about geography. "Place" is universal, spanning disciplines, cultures, and nature, connecting us all to the surrounding world.

With Google Earth and mapping tools you can learn about diversity across biomes and cities, measure how a river has changed shape overtime, or create a project highlighting architectural styles across the ages. Using Google Earth and maps in classrooms can help visualize abstract concepts across a global canvas, allowing students to connect what they learn inside to what they experience in their daily lives, community, and to the larger world.

OBJECTIVES OF THE STUDY

- To know the importance of Historical Places in History
- To describe the role of the teacher to teach realistic history to students
- To practice the ICT among students by handling themselves to learn history with more easy.

TITLE IN DETAIL

"ENHANCING THE UNDERSTANDING LEVEL OF USING GOOGLE EARTH LOCATING HISTORICAL PLACES IN SOCIAL SCIENCE TEACHING AMONG UPPER PRIMARY TEACHERS"

LIMITATIONS OF THE PROBLEM

The Action Research has the following limitations

- District : Vellore
- Block : Vellore Rural and Vellore Urban
- Class : Upper Primary{6-8 Social Science Handling Teachers
- No of Teachers : 15

METHODOLOGY

1. **To Assess the prior knowledge about historical places with the help of ICT**

Teachers are asked to find historical places with the help of ict related to their handling lesson in social science subject and asked them to explain how to use that in classroom Teaching.

2. Conduct a workshop how to teach history with the help of ICT

Take a tour of new and interesting places.

This is the most basic activity that you can do in Google Earth. The web and mobile versions of Google Earth have pre-made tours called "Voyages" that your students can view. Stops on the voyages include notes about the notable landmarks in the tour. The desktop version of Google Earth also has pre-made tours. We can also find tours made by others and use them in Google Earth. by watching video to learn how to do that.

https://youtu.be/klK27l3unng?si=2dOqG8RIv0mWffRz

Teachers are asked to download and install Google Earth in their Mobile Phones.

3. Play ***Where is Taj Mahal?***

Google added a version of the classic computer game, *Where in the World is Taj Mahal?* to Google Earth. The game can be played in the web version of Google Earth as well as the iOS and Android versions. *Where in the World is Taj Mahal.*

Teachers are asked to find the wonders of the world in google earth and take a screen shot and save it in their mobile.

.Layer Images Over Maps.

The desktop version of Google Earth lets you layer images over a view of the world. Adjust your zoom level to cover more or less of the map with your image. Adjust the image's opacity to let the map faintly show through the image. This is a great way to show students a comparison of a historical map with a contemporary map. Teachers are asked to Try using this method to show how coastlines and waterways have changed over time in their mobiles.

Explore the Moon or Mars.

The desktop version of Google Earth includes a moon view and a Mars view. Select the moon view or the Mars view then click on some of the placemarks in the NASA layer.

Find Historical places with the help of Google Earth

With the help of google earth Teachers are asked to do a project in their mobile and take a micro lesson with the help of Google Earth instead of Power Point Teachers make the students With Google Earth, can learn all about the lives and cultures of people around the globe and compare and contrast others lifestyles to their own.It makes students learning may live longer andtudets give more intresting in social science studies.

IV. TEACHERS GUIDE PREPARED

Teachers guide prepared with all the Points related Google Earth to teach in classroom Teaching more interesting

RESEARCH TOOLS

The investigator used the same tool for both Pre-Test and Post-Test Questionnaire consists of different 30 questions related to Google Earth.

1. Pre-Test

The Investigator conducted Pre-Test among selected 6 to 8 standard handling 15 teachers in Vellore Rural and Vellore Urban Block. Pre-test consisted of 30 different questions to assess the acquired knowledge in using Google Earth.

2. Post-Test

After the intervention, Post-test was conducted. Post-test consisted of the same 30 different questions to assess the acquired knowledge in the concept 'in using Google Earth'. The test was administered to all the 15 6 to 8 standard handling Social Science Teachers. After the data collected, data was analyzed to find the Teachers improvement. In the Topic using Google Earth..

STATISTICAL TOOLS

Mean, Median, Mode used to compare the pre and post- test scores.

DATA COLLECTION

The Pre-Test answer scripts were valued and analyzed on the basis of the components was conducted to Teachers.

A parallel question paper with equal defiantly was used for post-test. Each questions contain one mark and the scores were converted to hundred. This post-test mark was recorded as the mark of achievement test.

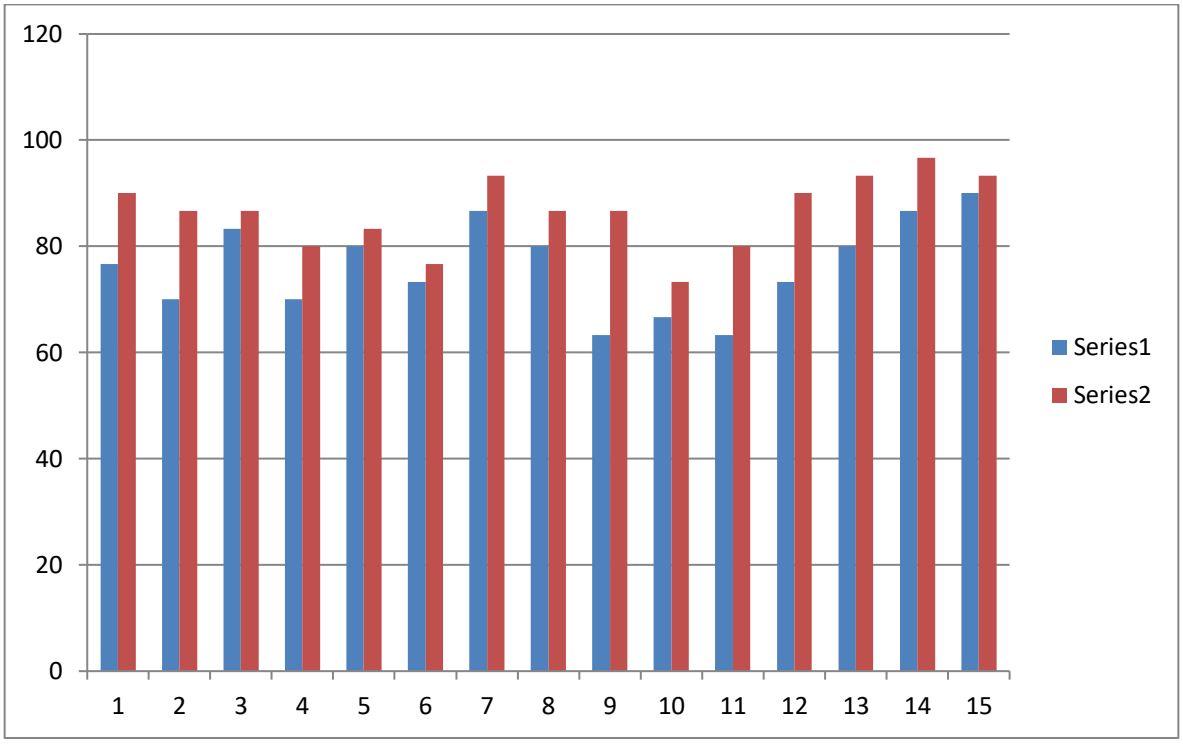
CALIBRATION

S.No	Name Of the Teachers	Pre - test marks(30)	Post - test marks(30)
1	MEGALA	23	27
2	V.GEETHA	21	26
3	T.BHUVANESWARI	25	26
4	GOPI	21	24
5	VRS.SHOBANA	24	25
6	KALAISELVI	22	23
7	NIRANJANA	26	28
8	UMA	24	26
9	SHANTHI	19	26
10	SHIELA ANNIE MARY	20	22
11	KAVITHA	19	24
12	VELU	22	27
13	SENTHIL KUMAR	24	28
14	S.KUMAR	26	29
15	J.DHANANJAYAN	27	28

Pre Test and Post test Mark Comparison

S.No	Name Of the Teachers	Pre - test marks(30)	Post - test marks(30)	Pre - test marks(100)	Post - test marks(100)
1	MEGALA	23	27	77	90
2	V.GEETHA	21	26	70	87
3	T.BHUVANESWARI	25	26	83	87
4	GOPI	21	24	70	80
5	VRS.SHOBANA	24	25	80	83
6	KALAISELVI	22	23	73	77
7	NIRANJANA	26	28	87	93
8	UMA	24	26	80	87
9	SHANTHI	19	26	63	87
10	SHIELA ANNIE MARY	20	22	67	73
11	KAVITHA	19	24	63	80
12	VELU	22	27	73	90
13	SENTHIL KUMAR	24	28	80	93
14	S.KUMAR	26	29	87	97
15	J.DHANANJAYAN	27	28	90	93
	Total	343	389	1143	1297

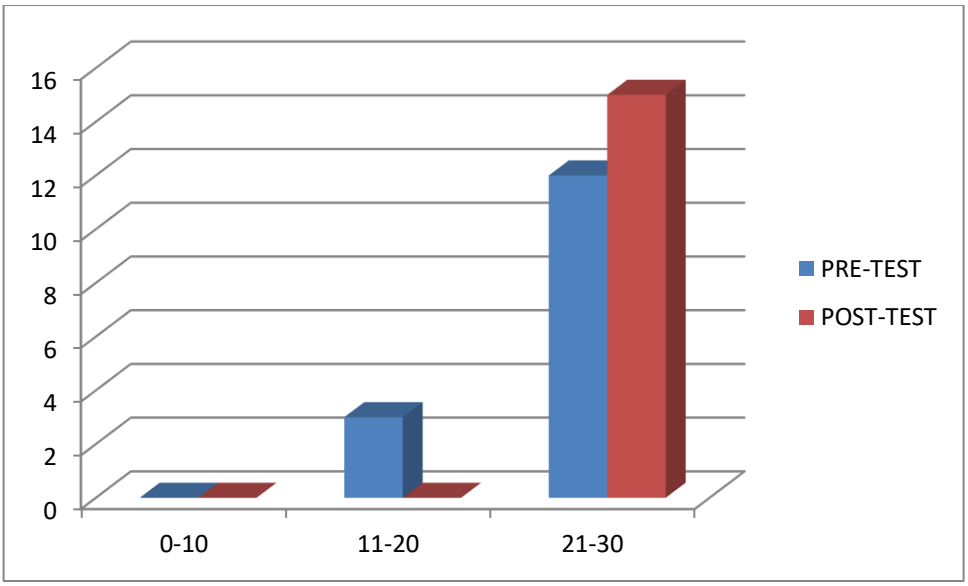
Bar Graph showing the difference between Pre Test and Post Test



DATA ANALYSIS

Data is analyzed using Mean Scores of Pre-test & Post-test

S.NO	CLASS INTERVAL	PRE-TEST	POST-TEST
1	01-10	00	00
2	11-20	03	00
3	21-30	12	15

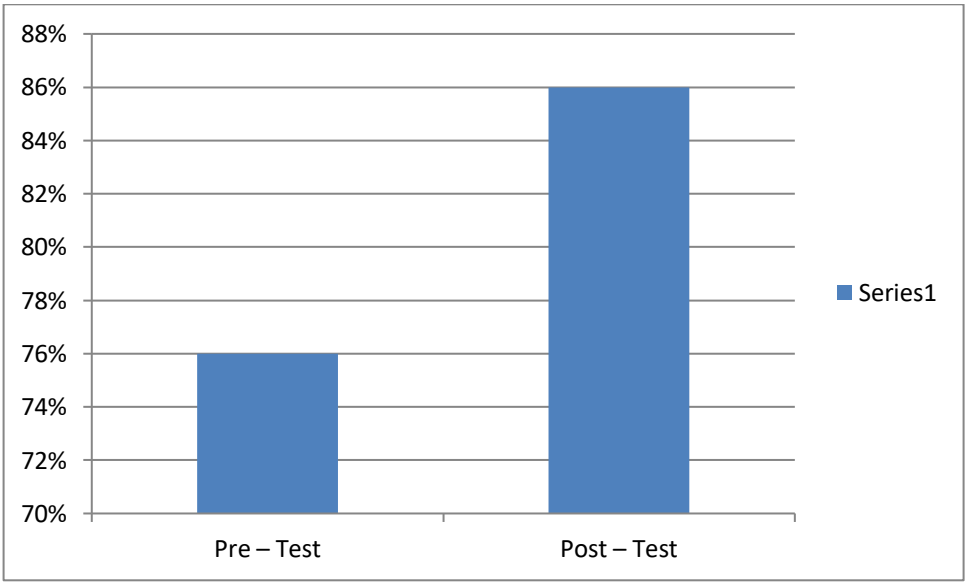


Comparison of Pre- Test and Post-Test percentage

S.No	Name Of the Test	Average
1.	Pre – Test	76%
2.	Post – Test	86%

Graph shows the Comparison of Pre- Test and Post-Test percentage

AVERAGE



FINDINGS

The pre-test and post-test data were collected and analyzed. The inferences were derived logically. The Arithmetic mean of pre-test is 76. The Arithmetic mean of post-test is 86. So the score were increased. As there is a significant difference between pre and post test.

EDUCATION IMPLICATIONS

- Google Earth ICT Related activities helps to update Teachers Knowledge.
- Can be include more lively activities through online give more interest to the Teachers.
- Teachers can give more activities to all kind of students.
- Google Earth related teaching gives more interest to Teachers.

FOLLOW UP

- Can be disseminated to other schools Teachers of Vellore block.
- Can be disseminated to other schools Teachers of Other blocks of Vellore district
- Can be disseminated to other subjects also .
- Can be introduce in lower and Higher classes also.

ANNEXURE

Questionnaire

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Google Earth

1. What is Google Earth?

a) A social media platform

b) A virtual reality game

c) A geographical information system (GIS)

d) An online shopping website

2. What type of imagery does Google Earth primarily use to display the Earth's surface?

a) Artistic illustrations

b) Aerial photography

c) Hand-drawn maps

d) Satellite imagery

3. Which feature of Google Earth allows users to explore ground-level panoramic images of streets and locations?

a) Street View

b) Sky View

c) Voyager

d) 3D Terrain View

4. How does Google Earth display buildings in major cities to add depth and realism to urban environments?

a) As flat 2D images

b) As blueprints

c) As 3D models

d) As text descriptions

5. What is the primary purpose of Google Earth's Voyager feature?

a) To allow users to explore stars and planets

b) To provide guided tours and interactive stories about different locations and themes

c) To allow users to measure distances and areas on the map

d) To display weather data in real-time

6. Which Google service is integrated with Google Earth, allowing users to save and share locations, create custom maps, and access additional information?

a) Google Maps

b) Google Translate

c) Google Drive

d) Google Photos

7. What can users explore in Google Earth's Sky View mode?

a) Ocean depths and underwater life

b) Stars, planets, constellations, and other celestial objects in the night sky

c) Historical satellite imagery

d) Real-time traffic and road conditions

8. What type of tours and educational content can users find in Google Earth's Voyager feature?

a) Real-time news updates

b) Virtual reality games

c) Curated guided tours and interactive stories

d) Music playlists and concerts

9. How can users measure distances and areas on the map in Google Earth?

a) Using the Sky View feature

b) By enabling 3D Terrain View

c) By using measurement tools

d) By submitting photos and reviews

10. What is the purpose of the "Historical Imagery" feature in Google Earth?

a) To provide historical weather data

b) To showcase how certain locations have changed over time through past satellite imagery

c) To display historical landmarks and monuments

d) To show historical roadmaps and transportation routes

11. Which feature of Google Earth allows users to explore the world as if they were physically

present at specific locations?

a) Sky View

b) Street View

c) Voyager

d) 3D Terrain View

12. What is the primary advantage of using Google Earth's mobile app?

a) Access to online shopping features

b) Ability to explore virtual reality environments

c) Convenient exploration of the world on the go

d) Access to Google Earth's offline mode

13. What can users access through Google Earth's offline mode?

a) Live weather updates

b) Real-time satellite imagery

c) Virtual reality tours

d) Downloaded maps and imagery for specific areas

14. Which of the following is NOT a type of imagery provided by Google Earth?

a) Satellite imagery

b) Aerial photography

c) Hand-drawn maps

d) Historical imagery

15. How can users access Google Earth?

a) Only through a desktop application

b) Only through a web-based version

c) Both through a desktop application and a web-based version

d) Only through a mobile app

16. What can users find in Google Earth's "Voyager" section?

a) User-submitted photos and reviews

b) Interactive stories and guided tours

c) Real-time traffic information

d) Virtual reality games

17. What is the purpose of Google Earth's measurement tools?

a) To calculate distances, areas, and perimeters on the map

b) To measure the size of buildings in 3D Terrain View

c) To estimate the speed of moving objects

d) To convert distances and areas between different units of measurement

18. Which Google service is integrated with Google Earth, allowing users to access their saved locations and custom maps?

a) Google Photos

b) Google Drive

c) Google Maps

d) Google Translate

19. What is the primary purpose of Google Earth's "3D Terrain and Buildings" feature?

a) To display virtual reality environments

b) To showcase 3D artwork and illustrations

c) To view landscapes and buildings in three dimensions

d) To provide a virtual tour of historical landmarks

20. How does Google Earth provide a realistic view of cities with 3D buildings?

a) By displaying cardboard cutouts of buildings

b) By using artistic illustrations

c) By showcasing real-time images of cities

d) By rendering 3D models of buildings

21. What is the primary benefit of using Google Earth's mobile app compared to the desktop application?

a) Access to offline mode for exploration without an internet connection

b) Access to guided tours and interactive stories in the Voyager feature

c) Availability of higher resolution satellite imagery

d) Integration with Google Drive for storing and sharing maps

22. What feature of Google Earth allows users to explore stars, planets, and constellations?

a) Street View

b) Sky View

c) Voyager

d) 3D Terrain View

23. What is the purpose of Google Earth's "Historical Imagery" feature?

a) To provide a real-time view of certain locations

b) To display historical landmarks and monuments

c) To showcase past satellite imagery and how locations have changed over time

d) To allow users to view virtual reality environments

24. How can users explore ground-level images of streets and locations in Google Earth?

a) By using the measurement tools

b) By enabling 3D Terrain View

c) Through the Sky View feature

d) By using Street View

25. What can users explore in Google Earth's Sky View mode?

a) Historical satellite imagery

b) Stars, planets, constellations, and other celestial objects in the night sky

c) Real-time traffic and road conditions

d) Ocean depths and underwater life

26. Which Google service is integrated with Google Earth, allowing users to save and share locations, create custom maps, and access additional information?

a) Google Maps

b) Google Drive

c) Google Translate

d) Google Photos

27. What can users explore in Google Earth's Voyager feature?

a) Real-time news updates

b) Virtual reality games

c) Curated guided tours and interactive stories

d) Music playlists and concerts

28. How can users measure distances and areas on the map in Google Earth?

a) Using the Sky View feature

b) By enabling 3D Terrain View

c) By using measurement tools

d) By submitting photos and reviews

29. What is the purpose of the “Historical Imagery” feature in Google Earth?

a) To provide historical weather data

b) To showcase how certain locations have changed over time through past satellite imagery

c) To display historical landmarks and monuments

d) To show historical roadmaps and transportation routes

30. Which feature of Google Earth allows users to explore the world as if they were physically present at specific locations?

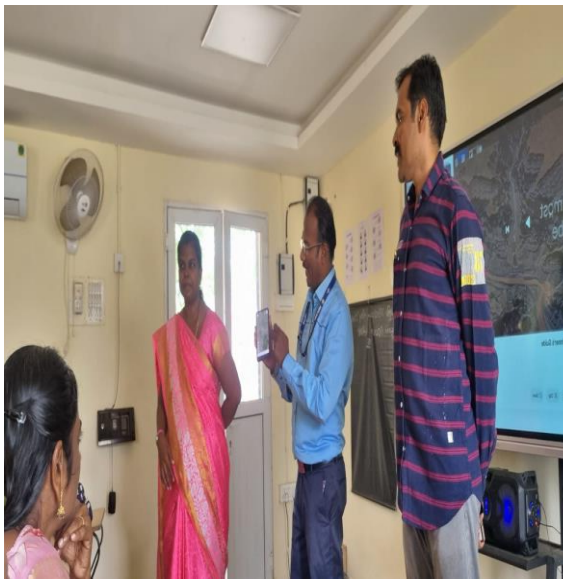
a) Sky View

b) Street View

c) Voyager

d) 3D Terrain View

PHOTOS



Reference links:

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