

Strengthening the Concept of Ancient Excavation Through Gagne Model At Primary Level in Kadambathur Block



SUBMITTED BY

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CERTIFICATE

This is to certify Mrs.Sharmila D, Senior Lecturer, DIET, Tirur, Tiruvallur District has successfully completed her Action Research entitled ‘Strengthening the Concept of Ancient Excavation Through Gagne Model At Primary Level in Kadambathur Block’ during the year 2023-2024 and whose findings will be used to enhance the quality of education.

Principal
DIET, Tirur

DECLARATION

I declare that the Action Research work on **‘Strengthening the Concept of Ancient Excavation Through Gagne Model At Primary Level in Kadambathur Block’** is my own work and it has not been taken from any of the research of its kind.

Sharmila D

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ACKNOWLEDGEMENT

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Abstract

- 1. Name of the DIET:** DIET, Tirur
- 2. Name of the Faculty:** Sharmila D
- 3. Title:** Strengthening the Concept of Ancient Excavation Through Gagne Model At Primary Level in Kadambathur Block

4. Introduction:

Social Science is a discipline that broadens the horizons of young minds. It not only lays a strong foundation for understanding the complexity of a society and its systems, but it also delves into its genesis. Various disciplines that are part of the social sciences aid students to understand real-world problems like unemployment, poverty, inflation, illiteracy, and climate change, and make them more socially conscious individuals. Social Sciences and humanities play a very important role in making children appreciate their history, culture, language, etc. This not only fosters creativity, critical thinking skills, and ingenuity in children, but also makes them well-rounded individuals.

5. Need for the study:

Gagne's model of instructional design is based on the information processing model of the mental events that occur when adults are presented with various stimuli and focuses on the learning outcomes and how to arrange specific instructional events to achieve those outcomes. Applying Gagne's nine-step model is an excellent way to ensure an effective and systematic learning program as it gives structure to the lesson plans and a holistic view to the teaching. The performance of fifth standard students in Tamilnadu in NAS exam 2021 on understanding sources of ancient excavation was very low (36%). To strengthen that concept the researcher planned to give orientation among teachers for better understanding of the content.

6. Objectives

- To enhance the understanding of the concept of ancient excavations through Gagne's Nine events of instructional model
- To provide a framework for designing effective instruction by outlining a sequence of events
- To strengthen the learning outcomes based on ancient excavations.

7. Sample:

20 Primary Teachers of Kadambathur block in Thiruvallur District form the sample of the study.

8.Tool:

A questionnaire comprising 10 open ended questions were developed and administered for both Pre-test and Post-test.

9.Methodology

Experimental method was adopted. Single group research design was followed. Pre – test – Treatment - Post - test method was employed. To enhance the concept of ancient excavation the following activities were designed. They are Treasure Hunt, Map of archaeological sites with the items excavated, Match the picture, Field trip to Poondi Archaeological museum, Virtual field trip to Archaeological museum

10. Major Findings

- ❖ The role of the department of archaeology and archaeologists in identifying and preserving the unearthen materials were clarified.
- ❖ Based on the mean scores teachers' performance was better in the post-test. The pre-test mean scores of teachers are 45.5% and the post-test mean scores are 89.5%.
- ❖ Learning outcomes on the concept of ancient excavation was strengthened by showing and explaining real artefacts in the archaeological museum.
- ❖ Teachers developed lesson plans by following Gagne's nine steps of instructional events
- ❖ It was found out that the teachers after getting orientation on teaching through the Gagne model, they were able to implement in other subjects too and got better results. It worked out well in teaching Tamil, English and Science.

11. Educational Implications:

Gagne's Nine Events of Instructional model is beneficial to educators, trainers, and instructional designers to structure their training sessions. The model is a systematic process that aids them in developing strategies and creating activities for instructional classes. The nine

events provide a significant framework for an effective learning process and development of a learner.

12. Recommendations:

Future research should introduce new models and methods to train teachers for curriculum development and modification introducing differentiated programs. The research study can be extended to other categories of students and teachers. Governments and higher education policymakers need to encourage and popularize other models of teaching in educational institutions.

13. Conclusion:

Gagne's nine events of instruction provide a framework to design instructionally-sound lesson plans that consider learners' needs and the logical flow of the content to effectively transfer knowledge and increase learners' retention and comprehension. It's not always possible to integrate all nine events into all contents. Nevertheless, We should at least consider them when developing the design.

Strengthening the Concept of Ancient Excavation Through Gagne Model At Primary Level in Kadambathur Block

1. Introduction

Social Sciences primarily aims at understanding analytically various phenomena in the immediate social environment. Social Sciences have an important role in generating sensitivity towards human values of compassion, empathy, trust, peace, cooperation, social justice, environmental protection and other concerns. It develops with one's own social environment, self, family and its interaction with various geographical, historical, social, economic, and political factors. Familiarizing the learner with the dynamics in the evolution process is necessary so that she/he develops sufficient awareness and necessary skills to understand these interlinked disciplines independently.

2. Gagne Model

Robert Gagne, the famous American Psychologist, put forward a theory of learning and instruction incorporating a behaviorist, eclectic approach to the psychology of learning and teaching. Learning, according to Gagne, may be considered a change in human disposition, or capability which can be retained and which is not simply ascribable to the process of growth. Gagne, through his theory of learning and instruction, emphasised that different internal and external conditions or events are necessary for each type of learning.

Gagne, while emphasising the need for a proper theory of instruction, proposed that such a theory of instruction must be based on the hierarchical structure of the events of learning. How the information is processed by the learner may work towards planning the task of instruction (either for self-learning or through an instructor or teacher). What goes on inside the learner's mind (in the shape of various cognitive processes) during the teaching-learning process may be

termed as internal events. These events must be fully taken into consideration (along with the external conditions or events in the shape of desired teaching-learning environment) while planning the corresponding instructional procedures.

In this way, as Gagne puts, the sequence of learning events (necessary conditions for learning) may serve as a useful and necessary base for designing instructions and selecting appropriate media for a teaching-learning process.

Table 12.6 Gagne's Learning Events along with their Corresponding Instructional Events

<i>Learning event (cognitive process in a learner's mind)</i>	<i>Corresponding instruction event</i>
Reception	Gaining attention
Expectancy	Informing learners of the objective
Retrieval	Stimulating recall of prior learning
Selective perception	Presenting the stimulus
Semantic encoding	Providing learning guidance
Responding	Eliciting performance
Reinforcement	Providing feedback
Retrieval	Assessing performance
Generalisation	Enhancing retention and transfer

3. Need for the study

Gagne's model of instructional design is based on the information processing model of the mental events that occur when adults are presented with various stimuli and focuses on the learning outcomes and how to arrange specific instructional events to achieve those outcomes. Applying Gagne's nine-step model is an excellent way to ensure an effective and systematic learning program as it gives structure to the lesson plans and a holistic view to the teaching. The performance of fifth standard students in Tamilnadu in NAS exam 2021 on understanding sources of ancient excavation was very low (36%). To strengthen that concept the researcher planned to give orientation among teachers for better understanding of the content.

4. OBJECTIVES

- To enhance the understanding of the concept of ancient excavations through Gagne's Nine events of instructional model
- To provide a framework for designing effective instruction by outlining a sequence of events
- To strengthen the learning outcomes based on ancient excavations.

5. METHODOLOGY

Experimental method was adopted. Single group research design was followed. Pre – test – Treatment - Post - test method was employed.

Sample:

20 Primary Teachers of Kadambathur block in Thiruvallur District form the sample of the study.

Tool:

A questionnaire comprising 10 open ended questions were developed and administered for both Pre-test and Post-test.

6. Strategies Adopted

Treasure Hunt

The activity was planned in a systematic process. Pictures were drawn and given as clues. treasures like maps, globe, antiquities were hidden inside the classroom. After finding out the answer for the picture treasure can be easily found out.

Map of archaeological sites with the items excavated



Heritage Hotspots and Telling Finds

KODUMANAL
Finds include a stepwell that can be approached from two directions, as well as inscribed potsherds, beads and terracotta

MAYILADUMPARAI
Three-legged jars recovered in the excavation. Findings suggest the inhabitants had begun agricultural activities as many as 4,000 years ago

ADICHANALLUR
A red-ware urn with a lid recovered at the site. In recent excavations (carried out between 2019 and 2021), a habitation area was studied. Some 847 objects, artefacts and numerous examples of pottery have been found. Potsherds inscribed with writing in the Tamil script and more than 500 potsherds with graffiti markers have been found here. Recoveries include copper and iron rings, gamesmen, ivory beads, rare and precious gemstones, glass and terracotta bangles and terracotta drainage pipes

SIVAGALAI
The urn burial site has been dated to around 1155 BCE. Considerable number of knife blades (as shown above) have been found here

GANGAIKONDACHOLAPURAM
A huge brick structure found here was probably part of the palace of Rajendra Chola-I. He is well known in legends for sea expeditions to conquer several southeast Asian countries

KEELADI
Finds include huge brick structures, burial urns and offering pots (above). Daniil-inscribed potsherds, semi-precious stones, silver punch-marked coins and northern black polished ware of the Gangatic Valley. A silver coin found recently embossed with symbols of the Sun, the Moon, the Taurus constellation and a few geometrical designs, has been dated to before the 4th century CE

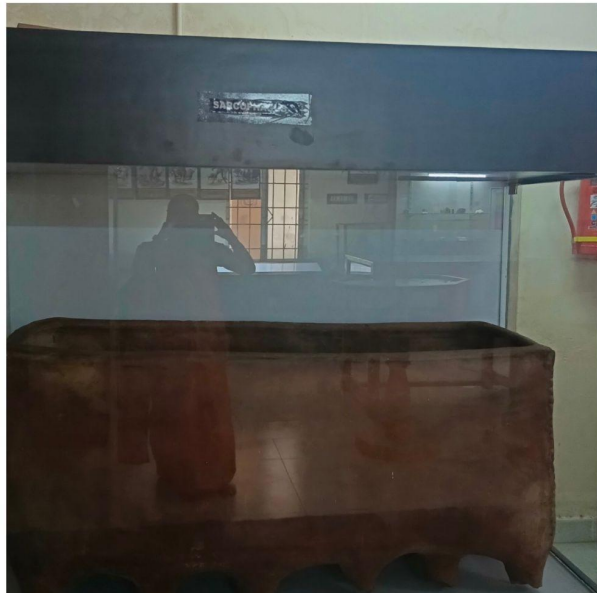
KORKAI
Hop-scootches recovered from the site. Northern black polished ware older than 5th century BCE has also been found here. This site may have served as an important port even before the 8th century BCE. There is ample evidence for a flourishing conch-shell bangle-making industry at the site

Graphic by TANMOY CHAKRABORTY

Match the archeological site

In this activity teachers were asked to match the archeological sites with the items. Picture cards were given and asked to match with its relevant site.

Field trip to Poondi Archaeological museum





Virtual field trip to Archaeological museum

Teachers were guided to browse the archaeological museum with their gadgets. They were motivated to show those relevant videos for their teaching.

TEACHERS LESSON PLAN BY FOLLOWING GAGNE'S INSTRUCTIONAL EVENTS

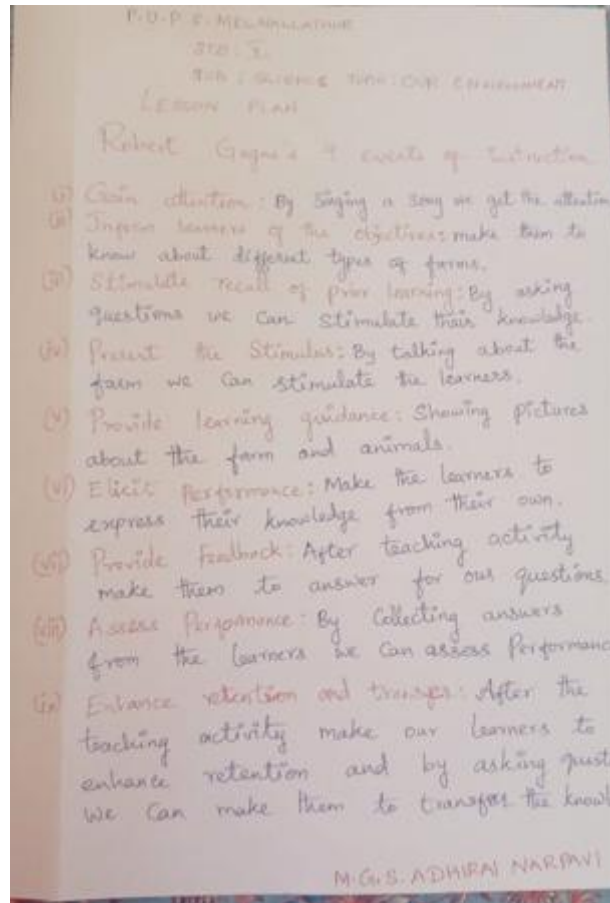


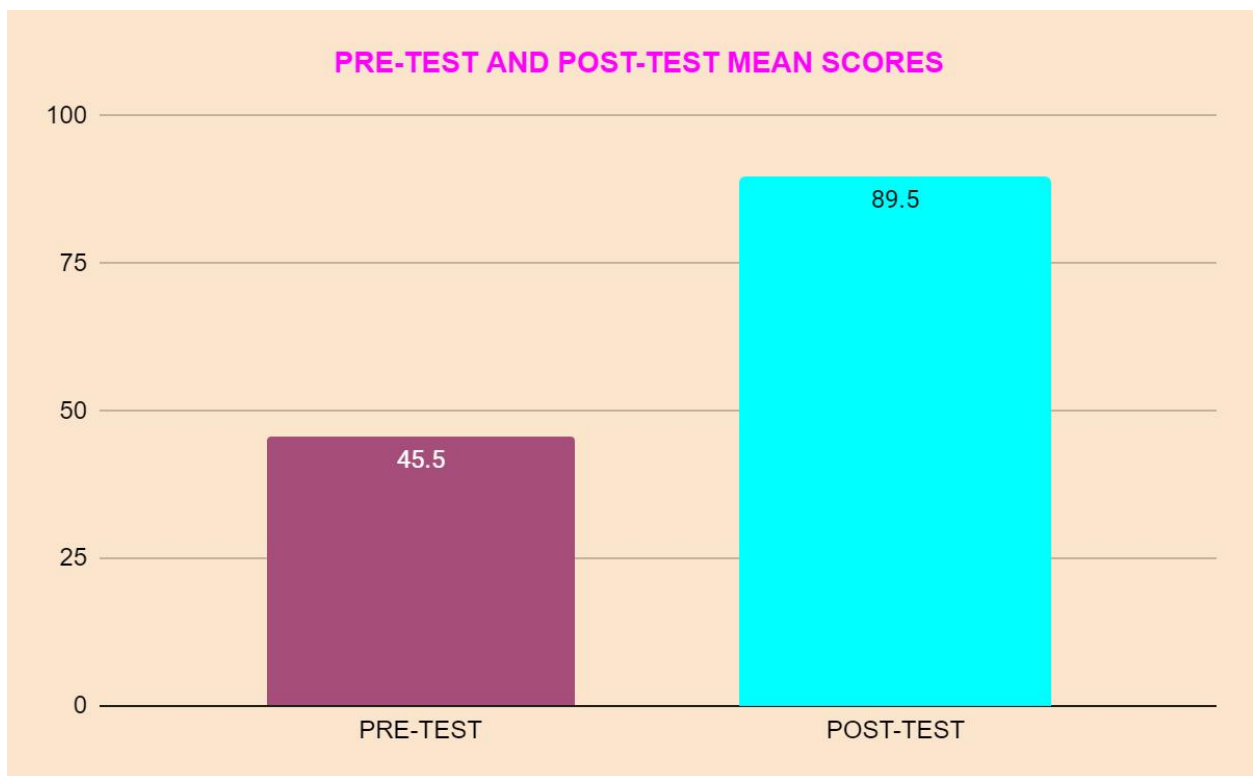
TABLE 1 - SHOWING THE PRE-TEST AND POST-TEST SCORES OF TEACHERS

S.No	Name of the Teacher	School Address	Pre-test scores	Post-test scores
1	M.G.S.ADHIRAI NARPAVI	P U P S MELNALLATHUR	60	100
2	M.POONGUZHALI	G ADW PS,NARASINGAPURAM.	50	90
3	R.SHEELA	PUPS IRULANCHERI	40	80
4	M.GEETHA	PUMS KADAMBATHUR NORTH, KADAMBATHUR BLOCK	50	80
5	T. KADHIRVELU	PUPS KANNIMA NAGAR	40	80
6	SAM MANOVAH I D	C S I PRIMARY SCHOOL SENJI	50	90
7	MALA	PUMS SATHARAI	50	100
8	G SAGAYA MARY FLORA	P U.M.S, VENGATHUR KANDIGAI	40	90
9	R. USHANANDINI	PUPS KOOVAM	40	90
10	R.B.ARUL MARY	P.U.M.SCHOOL, VENGATHUR.	40	90
11	A.JAYARUBI	TELC MAPPEDU	40	90
12	P.JACKULINE	R.C.M.MIDDLE SCHOOL KALLAMBEDU	50	90
13	J.MOTCHARAKKINI	ST.ANNES PRIMARY KILACHERI	50	90
14	V.LAKSHMIPRABHA	PUPS AGARAM	50	90
15	PD.JOSEPHINE	ST.ANNES PRIMARY SCHOOL, PANNUR	40	90
16	K JEEVA	P.U.MSCHOOL PUDUMAVILANGAI	40	80
17	B. SUJATHA	PUPS, SESHASALAVARAPURAM	40	90
18	C.S.BHARATHI	PUMS NARASINGAPURAM	40	90
19	A.VANAJA	PUPS PINJIVAKKAM	50	100
20	P.KAVITHA	P.U.M.SCHOOL.USSAIN NAGARAM	50	90

TABLE 2- SHOWING THE AVERAGE MEAN SCORES OF TEACHERS IN PRE-TEST AND POST-TEST

S.NO	PRE-TEST SCORES OF TEACHERS	POST-TEST SCORES OF TEACHERS
01	45.5%	89.5%

GRAPH 1- SHOWING THE PRE-TEST AND POST-TEST SCORES OF TEACHERS



From the above graph, it is clear that teachers' performance is better in post-test. Pre-test mean scores of teachers were 45.5% and the post-test mean scores are 89.5%

7.FINDINGS

- ❖ The role of the department of archaeology and archaeologists in identifying and preserving the unearthen materials were clarified.
- ❖ Based on the mean scores teachers' performance was better in the post-test. The pre-test mean scores of teachers are 45.3% and the post-test mean scores are 89.5%.
- ❖ Learning outcomes on the concept of ancient excavation was strengthened by showing and explaining real artefacts in the archaeological museum.
- ❖ Teachers developed lesson plans by following Gagne's nine steps of instructional events
- ❖ It was found out that the teachers after getting orientation on teaching through the Gagne model, they were able to implement in other subjects too and got better results. It worked out well in teaching Tamil, English and Science.

8.IMPLICATIONS

Gagne's Nine Events of Instructional model is beneficial to educators, trainers, and instructional designers to structure their training sessions. The model is a systematic process that aids them in developing strategies and creating activities for instructional classes. The nine events provide a significant framework for an effective learning process and development of a learner.

SNAPSHOTS DURING ACTION RESEARCH WORKSHOP



Teachers doing Pre-test



Teachers at Poondi Archaeological Museum



Teachers observing Rock antiquities from Gudiya cave



District Archaeology Officer
Mr.A.Loganathan explains about
Sarcophagus

REFERENCES:

1. [HTTPS://NCERT.NIC.IN/DEE/PDF/TILOPS101.PDF](https://ncert.nic.in/dee/pdf/tilops101.pdf)
2. [HTTPS://BOOKS.GOOGLE.CO.IN/BOOKS?ID=CCODDWAAQBAJ&PRINTSEC=FRONTCOVER&REDIR_ESC=Y#V=ONEPAGE&Q&F=FALSE](https://books.google.co.in/books?id=CCODDWAAQBAJ&printsec=frontcover&redir_esc=y#v=onepage&q&f=false)
3. [HTTPS://IN.PINTEREST.COM/PIN/INDIA--637681628464239242/](https://in.pinterest.com/pin/india--637681628464239242/)

CONCLUSION

Thus, Gagne, through his theory of learning, tried to provide a behaviouristic, eclectic approach to the psychology of learning. He proposed a set of events or conditions for the occurrence of learning and linked them to a set of instructional events. The hierarchical order which he proposed for the learning types, outcomes, and the instructional designs, says much about his dynamic approach and efforts to integrate teaching well with the learning process. His theory almost covers all aspects of human learning, and therefore, it can be safely applied to the design of instruction in all domains of human behaviour.



Appendix

Pre-test Questionnaire

Dear Teachers!!

I am D.Sharmila working as Lecturer in DIET, Tirur got the opportunity to do action research on the title '**Strengthening the Concept of Ancient Excavation Through Gagne Model At Primary Level in Kadambathur Block**'. The main objectives are to enhance the understanding of the concept of ancient excavations through Gagne's Nine events of instructional model, to provide a framework for designing effective instruction by outlining a sequence of events, to strengthen the learning outcomes based on ancient excavations. The responses provided by you will be kept confidential and it will be rightly used for action research purposes only.

Kindly fill in the below details.

Name of the Teacher :

Designation :

Email ID :

Mobile No. :

Answer all the questions:

- 1.What were the teaching methods used by you for classroom transactions?
2. Name the innovative method/s implemented in classroom teaching.
3. What are the Teaching Learning Materials used for classroom transactions?
4. Have you felt satisfied after teaching the content? If yes, how many times?
- 5.Have you taken children for a field trip? If yes, how many times?
6. Where do you collect the teaching resources?
7. Name the assessment techniques you are familiar with.
8. What is the difference between a teaching method and a model?
9. List down the reinforcement activities used for students.
- 10.List out the motivational activities used for teaching and learning.

Post-test Questionnaire

Dear Teachers!!

I am D.Sharmila working as Lecturer in DIET, Tirur got the opportunity to do action research on the title '**Strengthening the Concept of Ancient Excavation Through Gagne Model At Primary Level in Kadambathur Block**'.

The main objectives are to enhance the understanding of the concept of ancient excavations through Gagne's Nine events of instructional model, to provide a framework for designing effective instruction by outlining a sequence of events, to strengthen the learning outcomes based on ancient excavations. The responses provided by you will be kept confidential and it will be rightly used for action research purposes only.

Kindly fill in the below details.

Name of the Teacher :

Designation :

Email ID :

Mobile No. :

Answer all the questions:

1. What were the teaching methods used by you for classroom transactions?
2. Name the innovative method/s implemented in classroom teaching.
3. What are the Teaching Learning Materials used for classroom transactions?
4. Where do you collect the teaching resources?
5. Name the assessment techniques you are familiar with.
6. What is the difference between a teaching method and a model?
7. List down the reinforcement activities used for students.
8. List out the motivational activities used for teaching and learning.
9. Choose the option related to Archaeology
 - Archaeology tries to rebuild the whole composition of the society by integrating various data drawn from different sources of information.

- Animal remains are the first evidence used by the archaeologist to characterize the civilization.
- Pollen samples in the form of charred grains are being collected in archaeological excavations particularly in pits, storage bins, granary and cooking vessels.
- The preservation of Rock paintings, bronze objects, cleaning of monuments etc., are being carried out at the advice of conservationists.

10. No person shall carry on the business of selling any antiquity except under and in accordance with the terms and conditions of a license granted.