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The Effect of Field Trip on Students' Academic Performance in Biology at Secondary Level

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Abstract:

This study observed the effect of field trip on students' academic performance in Biology at secondary level. Quasi experimental design was adopted for the study. Two research questions and two hypotheses constructed during the study. The population of the study comprised all secondary students of selected schools in the districts of West Bengal, India.. The sample comprises of 200 students from four classes in the four selected co-educational schools in the area. The instrument used for data collection was Biology achievement test (BAT). Mean and standard deviation were used to answer the research questions Z test was used to test the hypotheses at 0.05 and 0.01 level of significance. The result of the study disclosed that field trip enhances students' academic performance in Biology than traditional method. The result also revealed that there is no significant difference in the of girls and boys students who went to the field trips. The study suggested that field trip should be adopted in the curriculum as a teaching learning method and also recommended to promote further research on the benefit of field trip.

Keywords: *Field trip, Secondary Level, Achievement, Performance.*

Introduction;

Field trips are essential learning ambiances for students because it is observed that a well-organized trip provides chances for students to work collaboratively and also enables them to establish relationship between reality and theory at a higher level. Besides, unlike traditional class environments, field trips enhance student's eagerness and extend opportunities for students to make learning enjoyable and provide an implicit and practical learning encounter for students. It was disclosed by the studies that field trips open opportunities both for cognitive and psycho motor learning; they also grow thinking skills, expand motivation, encourage social skills, and make ready a substructure for succeeding learning.

One effective way to get people excited about science and develop a positive attitude towards it is to take them on a field trip. The purpose of teaching biology as a science in school is to produce students, some of whom might go on to careers in the field or not. However, it is anticipated that their Biology knowledge will be valuable throughout all areas of their education, regardless of their eventual career path.

Research in the biological sciences includes both theoretical and practical components. Counting, recording, observing, and doing experiments are all part of a biology practical, as are field trips and other learning experiences that include these activities. In contrast to the theoretical labour that entails sitting through lectures, these pursuits actually involve doing things. One of the most prevalent mistakes made by secondary school teachers is to not incorporate certain practical work tasks into their lessons, even though these are an essential part of studying biology. The field trip component of subject-specific practical lessons is even less taken into consideration (Ajaja, 2010).

Field trip is an out of classroom activity where students are cooperated by the teacher to an environment where objects of learning are noticed in their natural setting. It is an excursion taken outside the classroom for the purpose of making pertinent observations and obtaining particular knowledge. A well-planned field trip affords students the opportunity to become actively engaged in closely observing, collecting, classifying, studying relationships and manipulating objects. It is usually intended to take students to places of interest and areas where relevant materials, information or knowledge is available for better teaching and learning of a particular subject matter (Amosa, Ogunlade and Atobatele, 2015). At present it is imperative to use different teaching methods and learning processes as well as strategies to ensure student understanding. Amosa, Ogunla de and Atobatele (2015) explained that field trip can be used as a chance to collect data for later analysis, to generate artwork and stimulate discussions both on site and back at schools and universities in tutorials, seminars and workshops. recommended that in pursuit of better and satisfactory student performance in science in the study of science subjects should be supplemented by visits to well established government and private experimental and commercial establishment, agricultural research institutes and other institutions that are science-oriented. This suggestion has become an accepted practice as part of the curriculum and or extra- curricular activities in many secondary schools across the states of West Bengal.

Rationale of the Study:

Biology is one of the major natural science subjects that is studied in secondary schools. Biology has to do with the study of life and living organisms, including their structures, functions, growth, evolution, distribution, taxonomy, interrelation between living things and their environment with the social implications of what we know about living things. Farah (2011) observed that with biology, one can study any of the health science courses, a science teacher, laboratory assistant and can conduct research on elated fields of botany, ichthyology, zoology among others. Wada (2010) highlighted the following as objectives of biology curriculum in secondary school:

i) Good laboratory and field skills in biology

ii) Meaningful and relevant knowledge in biology

iii) Ability to apply scientific knowledge to everyday life in matters of personal and community health, and agriculture.

iv) Reasonable functional scientific attitude and

v) Emphasis of content and context of the syllabus is placed on field studies, guided-discovery and biology as inquiry.

Field trip necessitates various organized outdoor knowledge process taken in factories, companies, farms,

hospitals etc. to enable the students get a initial experience of what they have been taught in the theory.Field-based approach to learning will create a platform for social learning amongst students, thereby providing an opportunity to involve students, parents and teachers in the instructional program (Ezechi,2018).Jeremiah and Alimina (2017) stated the follow guidelines for a successful field trip.

i) Visit the field trip site or location yourself and get relevant information.

ii) Talk to the contact person who will be there on the day the student will visit and call for verification the day before the field trip.

iii) Explain how many students will be involved in the visit, age of the students, class, time of visit etc.

iv) Explain to the students the need to explore, see and touch where necessary during the visit.

v) Find out the site rules and regulations

vi) Find out the accommodation for the students if need be.

vii) Determine arrangement for lunch or snacks.

Wada (2011) highlighted the following as importance of field trip:

i) It enables students to have a first-hand experience of real things. Thus, it is considered as providing learning experiences which cannot be brought into the classroom practically.

ii) It tends to relate things studied in the classroom with actual activities outside the classroom that are in the society and community. This makes classwork or subject matter and instruction more meaningful and enhances students understanding of the subject matter.

iii) It affords valuable opportunities to develop interest in some subject area and career opportunities.

iv) It helps to arouse students‟ interest and increases their motivation to learn a subject and related subjects.

v) It makes the students to be more imaginative and inquest live observers. Hence, they acquire skills for careful observation and objective report.

vi) It creates opportunities for the students to interact with the experts and enhances effective learning and teaching process.

Definition of Keywords:

Field trip: -Field trip orb excursion is a journey by a group of people to a place away from their normal environment.

Performance: An act of presenting or processing a task or function.

Statement of the Problem:

Learning Biology is hoped to be free from such problems as lecture method of teaching, inadequate infrastructure facilities, and lukewarm attitudes of teachers towards using field trip. Student performance in Biology has been substandard over 4 the years, specifically in the area of practical application. Ideally, in the teaching of Biology, the theory is expected to be minimal because it is equally a practically oriented subject as it is theoretically oriented. Here we are going to study on the impact of field trips on students' academic performance at secondary level.

Objectives of the Study:

The main purpose of the study is to ascertain the significance of field trips on the students' academic performance in secondary school in Kolkata,West Bengal. Specifically, the following are the objectives of the study:

1. To acquire knowledge about the importance of field trip.
2. To determine the extent at which field trips enhance students' attendance in Biology lesson in Secondary level.
3. To determine the extent to which field trips enhances students' engagement in Biology lesson in Secondary level field trips.

Research Questions:

The following research questions will be formed for the study:

1. Is there any significant impact of field trip on students' academic performance?
2. Is there any significant difference between the impact of field trip on academic performance of girls and boys students?

Research Hypotheses:

The following null hypotheses were formulated by the researcher to guide the study-

H01: There is no significant impact of field trip on students' academic performance.

H02: There is no significant difference between the impact of field trip on academic performance of girls and boys students.

Need and Significance of the Study:

The finding of this study if adopted would be useful to students thereby making them active participants and also giving them firsthand experience of the learning process. It will expose them to acquire more and relevant skills required for the study of biology.

It will also be useful to curriculum planners so they can structure the science (biology) curriculum to bring out the required science process skills from students. It will also expose students, teachers, parents and relevant bodies to the importance of field trips in the teaching and learning process.

Scope and Delimitation of the Study:

Scope:

The study on the effect of field trip on biology students' achievement is limited to districts (North 24 Parganas and South 24 Parganas) of West Bengal, India.

Delimitation:

The present study is delimited in the following aspects:

- The present study is delimited to the students of North 24 Parganas and South 24 Parganas districts in West Bengal, India.
- There is limited sample size.

- Time is very short to conduct the study.
- Insufficient fund tends to impede the efficiency of the research in sourcing for the relevant materials, literature or information and in the process of data collection (internet, questionnaire and interview).
- The researcher will simultaneously engage in this study with other academic work.This consequently will cut down on the time devoted for the research work.

Review of Literature:

A literature review is a scholarly paper which includes the current knowledge including substantive findings as well as theoretical and methodological content to a particular topic. The phrase' review of literature' consists of two words, review and literature. The term review means to organize the knowledge of specific areas of research to evolve an edifice of knowledge to show that the proposed study would be addition to this field. The term 'literature' in research methodology refers to the knowledge of a particular area of Investigation of any discipline which induces theoretical, practical and its research studies.

The purpose of an integrative literature review is to generate new knowledge on a topic through the process of review, critique and then synthesis of the Literature under investigation.

A literature review can ensure that it serves to situate the current study within the body of the relevant literature and to provide context for The reader in such case. The review usually precedes the methodology and result section of the work.

Reviews:

1. Significance of Field Trip on Biology Students Acquisition of Science Process Skills in Abua/ Odual Local Government Area OMEODU, M.D. & ODUH, Victor-Aghudumenaan Nathaniel Department of Science Education Rivers State University, Nkpolu – Oroworukwo Port Harcourt, Nigeria-International Journal of Innovative Social and Science Education Research 9(1):37-45.Jan-Mar..,2021.

Objective of the Study:

To investigate the significance of field trip on Biology Students acquisition of science process skills in Abua/Odual Local Government Area of Rivers State.

Method:

A set of structured questionnaire titlled „Significance of Field Trip on the Acquisition of Science Process Skills Questionnaire" (SFTASPSQ) formed the research instrument. The study adopted the use of descriptive survey design. The study was carried out with, three research questions and three null hypotheses formulated.

Analysis:

For data analysis, the research questions were analyzed using mean and standard deviation, while the hypotheses were tested with z-test statistics.

It was discovered that students rarely go on field trips. This has affected their acquisition of science process skills.

Result and Conclusion:

It was recommended that field trip should be made part of biology curriculum which students should be exposed to, and that the goals/aims of field trip should be the one to promote the acquisition of science process skills so as to equip the students for the study of science in general. which students should be

exposed to, and that the goals/aims of field trip should be the one to promote the acquisition of science process skills so as to equip the students for the study of science in general.

2. Biology Teachers' Views on the Importance and the Means of Incorporating Field Trips into the Curriculum,Yulia Ovtracht;Dina Tsybulsky;March 2018;Conference: New Perspective in Science Education 2018;At: Florence, Italy.

Objectives of the Study:

To understand Israeli high-school biology teachers' views on the importance and the means of incorporating field trips into their curriculum.

Method:

One hundred thirty-five high school biology instructors from all throughout Israel made up the study's sample. The teachers were interviewed using semi-structured interviews and given open-ended questionnaires to gather data.

Analysis:

A qualitative cognitive-thematic approach was used for data analysis. The significance of field excursions, the qualities of an excellent field trip, and the challenges encountered by educators in organising and leading field trips were correlated with teachers' demographic data (degree, seniority). From the responses of the teachers, three groups were formed about the value of field trips in the biology curriculum: the cognitive, the emotional, and the values-oriented. The significance of incorporating environmental values into field excursions was found to be negatively correlated with instructors' degree and years of experience.

Result and Conclusion:

The following were listed by teachers as characteristics of an excellent field trip: engaging, relevant to the biology curriculum, extensive classroom preparation and review, and a fun and informative outing. The significance and curricular relevance of the field trip were found to be negatively correlated with the teachers' years of experience. Teachers brought up the idea of taking students on field trips to places like nature preserves and science museums. Teachers' years of experience had little bearing on whether or not they took their students on field trips to natural areas. The necessity to "cover all the topics in the curriculum," along with organisational and financial constraints, posed the greatest challenges to organising and leading field trips. Teachers' levels of education were found to be inversely related to the necessity of including precise field trip numbers in lesson plans.

In order to improve the teaching of biology and expand the importance of field trips in school curricula, it is necessary to address the perspectives, needs, and challenges of biology teachers. This will lead to more frequent and more effective field excursions. There are several challenges that need to be addressed in order to organise and execute a good field trip. Some of them include the components considered in the current study, which include mixing cognitive and affective parts, preparation and summary, budgetary problems, and other organisational limits.

Influence of Field Trip in Teaching And Learning of Biology;

EZECHI, NNENNA GRACE

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Enugu State College of Education (Technical), Enugu; Corresponding Author Email Id: ezechinnenna@gmail.com;Article Received: 5th October, 2018 Article Revised: 10th October, 2018 Article Accepted:20th October, 2018

Objectives of the Study:

To investigate the influence of field trip in teaching and learning of biology in Enugu East LGA of Enugu state, Nigeria.

Three research questions guided the study.

Method:

Survey design was used for the study. The sample size was one hundred (100) senior secondary school II (SS2) students. The instrument used for data collection was questionnaire made up of 15 items. The instrument was validated by three experts. The reliability coefficient of 0.79 was obtained for the instruments using crom bach alpha.

Analysis:

The findings revealed that teachers use field trip once a year and that some teachers do not use it all in teaching and learning of biology. The findings also revealed among others that field trip is an effective method of teaching since it helps students acquire useful knowledge while having fun and relaxation at the same time.

Result and Conclusion:

The researcher recommended that extensive field trip should be organized by schools so as to expose the students to events outside the classroom.

4. Field Trips: A Viable Tool For Students' Achievement In Biology; Nnenna Grace Ezechi,

Ph.DKnowledge Review Volume 39 No.1,June,2022: ISSN 1595-2126.

Objective of the Study:

To focus on field trips: A viable tool for students' achievement in Biology.

Method:

The study was guided by two specific objectives and two corresponding research questions.The study adopted survey research design. The population of the study comprised all Biology teachers and students in public secondary schools in Enugu Education Zone, numbering 18,027, out of which 391 were sampled. A structured questionnaire was used for data collection. The questionnaire was face validated by three research experts.

Analysis:

Reliability of the instrument was determined using Spearman Rank Correlation Coefficient which yielded an index of 0.84. Mean was used for answering the research questions. The findings of the study revealed that field trips influence students' attendance, students engagement and examination performance in Biology.

Result and Conclusion:

Based on these, the researcher recommended that parents/guardians should encourage their children to participate in field trips by way of sponsoring them whenever necessary. In the same manner, budgetary allocation to science education in secondary schools should be increased significantly; this will make way for sufficient finance for schools to arrange field trips for science subjects like Biology.

5. Effect of Field-Based Instructions on Students' Understanding of Ecological Concepts in Public Secondary Schools, Benin City, Nigeria: An Experimental Study, Eromosele Oghosa Eunice;Ekholuenetale Michael

1. Department of Curriculum and Instructional Technology, Faculty of Education, University of Benin, Benin City, Edo State. Nigeria .
2. Women's Health and Action Research Centre, Km11, Lagos-Benin Expressway, Igue-Iheya, Benin City.Nigeria. IOSR Journal of Research & Method in Education (IOSR-JRME) e-ISSN: 2320–7388,p-ISSN: 2320–737X Volume

6, Issue 4 Ver. V (Jul. - Aug. 2016), PP 47-58.

Objective of the Study:

To examine the effects of field-based experiences on students' understanding of ecological concepts and biology achievement.

Method:

The study employed the quasi-experimental (pre-test and post-test) and control group design. The reason for the adoption of this design is hinged on the fact that intact students were randomly assigned to experimental and control groups respectively.

Result and Conclusion:

The major findings of this study included: students' understanding of ecological concepts was below standard (mean= 38.14, t= -12.38, $p<0.001$); students' understanding of ecological concepts with field-based was higher at end line test when compared to baseline measurement (t= -9.41, $p<0.001$); The achievement of students in field- based group was higher than the traditional(control) group (mean-experimental= 54.71, mean-control= 45.07 t= 4.30, $p<0.001$).

It was concluded that field-based experiences improved students' understanding of ecological concepts, enhanced students' understanding of ecology and significantly influenced their achievement.

6. The Impact of Class Size and Field Trip on Academic Performance of Biology Students in Senior Secondary Schools in Oke-Ero Local Government Area, Kwara State, Nigeria.Olayinka, Folasade Oluyemisi Ph.D, Musa, Peter Eson 9

Ph.D & Ejimonu, mmanuela Ifeyinwa, Federal University; London Journal of Research in Humanities and Social Sciences;Volume 22;Issue 22;Compilation 1.0;2022.

Objective of the Study:

The objective of this study is to discover how biology students' academic performance is affected by factors such as class size and field trips at senior secondary schools located in Oke-Ero Local Government Area, Kwara State, Nigeria.

Method:

To direct the investigation, the study provided two(2) research questions and three(3) hypotheses. This study utilised a descriptive research strategy based on survey data. All secondary school biology students in the Oke-Ero Local Government Area of Kwara State, Nigeria, served as the study's population. We used a simple random sampling strategy to pick 480 biology students from SSS II. Use of proforma and structured questionnaires allowed for the collection of the data.Using a simple random sampling technique, 480 SSS II

biology students were chosen from a pool of fourteen (14) public secondary schools in the LGA, with an eye towards achieving a diverse representation of class sizes. A combination of proforma and structured questionnaires was used to collect the data. To ensure that students provided truthful responses regarding their demographics, classroom experiences, and field trip experiences, the questionnaire was distributed to them at school.Using the Proforma, we were able to assemble the students' final biology results from both terms. The survey had two parts: one that asked participants to provide basic personal information, and another that probed their experiences on field trips and in biology class with fifteen questions. The questionnaire's reliability was assessed using a test-retest methodology. Over the course of two weeks, twenty high school biology students from a school outside the research area were administered the instrument twice.

Analysis:

A correlation value of 0.783 was obtained from the data that was analysed using a Pearson Product Moment Correlation.They then gave the pupils the research tools. The data was collected and examined when the instruments were retrieved from the respondents. Descriptive and inferential statistics were employed for the data analysis. We used a 0.05 level of significance to evaluate our hypothesis.

Results and Conclusion:

The study's results showed that biology students' academic performance in high school was significantly affected by class size. Additionally, it discovered that senior high school biology students' academic performance was significantly affected by field trips. Additionally, students' biology grades were significantly affected by class size and the frequency of field trips, according to the study. Among other things, the study's authors suggested that school administrators and educators limit class sizes to no more than 35 kids and promote educational field trips as a means of enhancing children' academic development. School officials should relieve overcrowding in classrooms so that children can concentrate, organise field trips for pupils at least once a semester, and back teachers and parents in their efforts to help students succeed in school.

7. Effect Of Field Trip And Demonstration Methods On The Achievement Of Secondary School Students In Biology,December 2021.Authors: Tubonemi Mgbomo,Martha Ijok Adibe Njoku Ignatius Ajuru University Of Education.

Martha Ijok Adibe Njoku

& **Tbonemi Mgbomo Department Of Biology, Ignatius Ajuru University Of Education**

Rumuolumeni, Port Harcourt, Nigeria. Corresponding Author: Martha I. A. Njoku Email: Martha.Njoku@Iaue.Edu.Ng .Received: September 22, 2021 Accepted: November 3, 202.

Objective of the Study:

To investigate the effect of field trip and demonstration methods of teaching on students' achievement in Biology.

Method:

The study utilised a quasi-experimental design. The investigation was predicated on two inquiries and three assumptions. All second-year students from a few chosen public, coeducational high schools in the Obio/Akpor LGA of Rivers State made up the study's population. Two hundred kids from four complete classes at four local coed schools make up the sample. This data was gathered using the Biology Achievement Test (BAT).

Analysis:

A correlation coefficient (r) of 0.79 was obtained using the Pearson Product Moment Correlation technique, indicating that the instrument was reliable. The study questions were answered using the mean and standard deviation. The hypotheses were tested using analysis of covariance (ANCOVA) at a significance level of 0.05.

Result and Conclusion:

The result of the study revealed that field trip teaching method better enhanced students' achievement in Biology than demonstration method. The result also indicated that there is no significant difference in the achievement of male and female students who were taught Biology using field trip. The study recommended among others, that teachers should adopt field trip as a teaching method.

8. Effect Of Field trip Strategy On Senior Secondary School Students' Academic Achievement In Geography In Numan Educational Zone, Adamawa State, Nigeria;January 2016 Doi:10.5281/ Zenodo.208229 Authors:Suwopoleme Silas Estawul; Linus K Sababa;Jacob Filgona;Modibbo Adama University Of Technology, Adamawa State;Silas Suwopoleme.

Objective of the Study:

To investigate the Effect of Field trip Strategy on Senior Secondary School Students' "academic achievement" in Geography in Numan Educational Zone, Adamawa State, Nigeria.

Method:

The study investigated two hypotheses and two research questions. A quasi-experimental research design was utilised in the study. The study utilised a sample size of 138 students from two public senior secondary schools in the Numan Educational Zone who were taking a geography course. For six weeks, each of the two groups—the experimental and the control—received instruction. The Geography Achievement Test (GAT), Fieldtrip Facilities Inventory (FFI), and Teachers' Qualification Assessment Checklist (TQAC) were the study tools that were utilised to gather data.

Analysis:

By applying the Guttmann Split-half Statistic, we were able to ascertain the GAT's reliability index. A dependability coefficient of 0.70 was the result. We used percentages and counts to answer the study questions, and we used the Kolmogorov-Smirnov two-sample test to test our hypotheses.

Result and Conclusion:

The majority of geography instructors in the Numan educational zone have bachelor's degrees rather than the more fundamental credentials required to teach. Field trip facilities in the Numan educational zone were also found to be inadequate, according to the report. The academic achievement of students taught geography utilising a fieldtrip strategy was significantly different from that of those taught using a conventional method. The experimental group's male students outperformed the female students in geography. Students' better performance in Geography after implementing a field trip technique led to the recommendation that the government hire certified geography education graduate teachers to instruct the subject.

9. "Global Social Sciences Review (GSSR) Vol. IV, No. IV (Fall 2019) | Page: 93 – 98 Investigating the Impact of Field Trips on Secondary School Students' Attitude to Learning of Sciences Muhammad Shabbir Ali Assistant Professor, Department of Education, University of Education, Lahore, Punjab, Pakistan. Email: shabbir.alisaleemi@ue.edu.pk Nasrin Akhtar Assistant Professor, Department of

Education, University of Okara, Punjab, Pakistan. Muhammad Arshad SST Science, School Education Department, Govt. Fazilka Islamia Model High School Pakpattan, Punjab, Pakistan".

Objective of the Study:

The main objective of the paper was to determine the impact of the study tour on students' attitudes at secondary level.

Method:

The research study was experimental. One hundred thirty-three tenth grade science students from a private school in the Okara district, Sahiwal division, Punjab province, made up the study's population. In order to gather data, researchers utilised the Attitude to Science Questionnaire (ASQ), which includes questions about physics.

Analysis and Findings:

With the help of professional advice, the research instrument used in this study was able to increase its validity and reliability, which was determined to be 0.81. The results showed that the experimental group had a more optimistic view of science than the control groups. Additionally, research has shown that kids' attitudes and interests in science are positively impacted by field visits.

Conclusion:

The school administration may manage field trips for the promotion of scientific attitude in the students.

10. "The Impact of Field Trips on Students' Creative Thinking and Practices In Arts Education.

1.Yassir M Mahgoub, BA(hons), MA, PhD and 2Abeer A Alawad, HND, BA(hons), MA, PhD 1Associate Professor King Faisal University, Faculty of Education, Department of Art Education. 2.Assistant Professor, King Abdulaziz University, Faculty of Home Economics, Department of Housing and Home Management, track of Interior Design;Email: aalawad@kau.edu.s Journal of American Science 2014;10(1) http://www.jofamericanscience.org".

Objective of the Study:

The purpose of this study is to investigate how students' imaginations and artistic abilities might be enhanced by participating in field trips. Specifically, it took into account the following research issue: Would students' innovative approaches and methods of problem-solving improve after participating in field trips?

Method:

Sixty female students from Rofaidah basic school in Khartoum, Republic of Sudan, who were enrolled in the third level of the African Council schools system during the 2011–2012 school year made up the study sample.This study investigates the potential of taking art classes on field excursions to industrial and natural settings to inspire students' imaginations and improve their technique. The research employs descriptive, analytical, and experimental approaches.

Analysis:

Scientific studies in the field of environmental psychology have shown that people's mental and physical well-being improve when they spend time outdoors. A lot of artists and designers also go to nature for ideas and inspiration when they're working on big projects.

Result & Conclusion:

The results demonstrated that the experimental and control groups' performance on an art task differed significantly. The research team came to the conclusion that taking art classes on field trips to places of natural and industrial interest helped students learn more effectively and encouraged them to think creatively. As part of its contribution to new knowledge, this study drafted guidelines for all participants to follow while dealing with education-related topics, especially art 13. ducational opportunities presented by field trips to both natural and industrial settings. Whenever feasible, the experts said, art classes should incorporate educational travel. [Yassir M Mahgoub, and Abeer A Alawad. The Impact Of Field Trips On Students' Creative Thinking And Practices In Arts Education. J Am Sci 2014;10(1):46-50]. (ISSN: 1545-1003).

10. "Importance of field trip in Indian education system'..Dr.Ashwani Kumar Gupta-Asst. Professor, Dept. Of Zoology Regional Institute of Education, Ajmer; International Journal of Research and Engineering; ISSN:2348- 7860(O);2348-7852(P);Vol.04.No.10;October 2017;PP.258-259/copyright 2017 by authors and International Journal of Research and Engineering".

Objective of the Study:

- To analyse the importance of field trip.

Method of Study and Research:

Method of study during field trip can be -Observation Method, Interaction, Investigatory Method, Historical Research and Interview.

Techniques in Field Trip:

The following techniques can be used during field trip:

1. Questioning Techniques -Redirection.
2. Questioning Techniques -Prompting.
3. Questioning Techniques - Probing.

Data Collection during Field Trip:

The researcher would have to decide which sort of data (primary or secondary) he would be using (thus collecting) for his study and accordingly he will have to select one or the other method of data collection.

Discussion and Conclusion:

Many different kinds of diversity, including cultural, geographical, and biological, are available in India. Consequently, activities such as picnics, field trips, and tourism also play significant roles in people's lives. In India, educational institutions may benefit from field trips in a variety of contexts, including research, field work, study tours, spot studies, excursions, and field studies. Teaching and learning activities can also take place on field trips. Various sources of information on the environment can be found in places like research centres, botanical gardens, zoos, societies, and other resources. During visiting hours, researchers and learners use collection tools to gather a range of data. Investigation, discovery, inventory, and other types of fieldwork all contribute to better educational outcomes. Researchers compile information using various instruments.

Critical Observation:

- According to Victor Aghudumenaan(2018) field trip should be made part of biology curriculum which students should be exposed to,and that goals/aims of field trip should be the one to promote the acquisition of science process skills so as to equip the students for the study of science in general.
- According to Yulia Ovtracht and Dina Tsybulsky (2018),there is a negative correlation was found between the teachers' years of experiences and the importance of field trip and its relevance to the curriculum. Financial, organisational, and the requirement to "cover all the topics in the curriculum" were other challenges they encountered when planning and executing field trips. Improving the effectiveness and regularity of field excursions is possible by listening to and responding to the concerns, wants, and opinions of biology educators.
- Ezechi (2018) recommended that extensive field trip should be organized by schools to expose the students to the outside world and parents/guardians should encourage their children to participate in field trips.
- According to (Eromosele Oghosa Eunice;Ekholuenetale Michael (2016) field-based experiences improved students 'understanding of ecological concepts, enhanced students' understanding of ecology and significantly influenced their achievement.
- Tubonemi Mgbomo and Martha I.A. Njoku (2021) recommended there is no significant difference in the achievement of male and female students who were taught Biology using field trip.

According to Silas Estwul; Linus K Sababa; Jacob Filogna & Modibbo Adama,there was a significant difference in the academic achievement of students taught geography using field trip and conventional method.

- Through their study reveal that the experiment group who participated in the field trip had positive response as compared to others who do no participate in field trip.It was also found that field trips promote science attitude and develop positive interest of the students in science.
- Yassir M Mahgoub & Abeer A Alawad after doing their research revealed that there was a significant difference between the performance of students on an art task within the experimental and control groups.It was concluded that field trips to natural and industrial locations were a beneficial learning aid and a means of fostering students' creativity and practices in art education.

So after all this discussion we can say that Field trip must have some impact on the performance of students in creativity and learning different subjects and to do better in achievement test.

Methodology:

This design of the study was quasi-experimental design. This is because the study established cause and effect relationship. The target population consists of all secondary students of standard X of districts (North 24 Parganas and South 24 Parganas) of West Bengal, India. The sample consists of 200 secondary students among them 100 girls and 100 boys, drawn from the same class. Two schools were assigned where students went for field trip (50 boys and 50 girls) while the remaining two schools (50 boys and 50 girls) were assigned where students did not go for field trip . The **instrumen**t used in this study was a self-designed **Biology Achievement Test (BAT)**. The BAT contained 25 items, 4-options multiple choice objective questions with only one option as the correct answer for each question. The BAT was used as to test students' knowledge of Biology along with the field trip concept according to their standard (X) and the test was taken for both the group (with field trip and without field trip group) . The marks obtained from the BAT were used as data and collected data were subjected to appropriate statistical analyses.

Results:

The order of the presentation of the result obtained in this study is in accordance with the research questions and hypothesis constructed to guide the study.

Research question one: Is there any significant impact of field trip on students' academic performance?

Table 1: Mean and standard deviation on students' academic performance in Biology.

Group	No.of students	Mean	SD
Students with field trip	100	19.61	2.70
Students without field trip	100	13.66	3.11

Research Question two: Is there any significant difference between the impact of field trip on academic performance of girls and boys students?

Table 2: Mean and standard deviation of girls and boys students' (with field trip) academic performance in Biology.

Group	No.of students	Mean	SD
Girls	50	19.68	2.60
Boys	50	19.54	2.82

The result in Table 2 shows the mean and SD of girls and boys with field trip. The mean and standard deviation of girls is 19.68 and 2.60 respectively and the mean and standard deviation of boys is 19.54 and 2.82 respectively. Based on the above scores, the girls students scored little higher than the boys in biology achievement test.

Null Hypothesis one: There is no significant impact of field trip on students' academic performance.

Table 3: z test score on students' academic performance in Biology.

Group	No.of students	Mean	SD	Z score
Students with field trip	100	19.61	2.70	14.17
Students without field trip	100	13.66	3.11	

The critical values at 0.05 and 0.01 level of significance (two tailed test) are 1.96 and 2.58 and the value we got is 14.17 which is greater than the above mentioned value.So,we can say that field trip has significant impact on the academic performance of Biology students at secondary level. Therefore, null hypothesis is rejected.

Null Hypothesis two: There is no significant difference between the impact of field trip on academic performance of girls and boys students.

Table 4: z test score of girls and boys students' (with field trip) academic performance in Biology

Group	Sample	Mean	SD	Z score
Girls Boys	50 50	19.68 19.54	2.60 2.82	0.25

The critical values at 0.05 and 0.01 level of significance (two tailed test) are 1.96 and 2.58 and the value we got is 0.25 which is less than the above mentioned value. This shows that there is no significant difference between the impact of field trip on academic performance of boys and girls students'. Therefore, the null hypothesis is accepted.

Discussion:

The purpose of the study was to examine how social studies students in West Bengal fared academically after participating in a field excursion. Students' academic performance in biology classes that participated in field trips performed significantly better than classes that did not, according to the study's results (tables 1 and 3). When compared to the crucial values of 1.96 and 2.58, the computed Z-value of 14.17 is larger.This results is in line with the conclusions drawn by Ajaja (2010) and Oka and Samuel (2020) from their respective studies, which found that students' learning was strengthened and their achievement in Biology was greatly impacted by field trip experiences.

There was no statistically significant difference in the academic performance of boys and girls when it came to field trip exposure, as shown in Tables 2 and 4.With a crucial value of 1.96 and 2.58, the computed Z-score of 0.25 fell short.Brown (2018) discovered no significant influence of gender on students' performance in a study that examined field trips, video technology, and social studies learning outcomes. This conclusion is in line with those findings. The project received further backing There was no statistically significant difference in the performance of male and female students when using cooperative instructional strategies in social studies, according to Yusuf (2008), who tested his hypothesis in a study he conducted in Ilorin.

Conclusion:

This study's results provided empirical support for the value of field trips in the biological sciences. It has an effect on many different groups, including those responsible for making policies, creating curricula, and administering tests. The utilisation of field trips by biology teachers has several potential benefits, one of which is the enhancement of student performance in the subject by igniting and maintaining students' interest in the topic. An expert instructor can utilise this strategy to help students of all genders and socioeconomic backgrounds succeed in biology class.

Suggestions:

The results presented above allow for the following recommendations:

1. The Indian Ministry of Education ought to place a strong emphasis on supporting biology field trips in secondary schools. In order to strengthen and improve the teaching approach, they should organise conferences, workshops, and seminars for biology teachers.

2. To enhance the teaching and learning process in Biology, students should have the opportunity to go on field trips as part of the curriculum.

3. Before a field trip is implemented, thorough and tangible preparation should be made.

4. Additional study on the use of field trips as a teaching approach should be supported by the government and other professional organisations.

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