

PDF - MAKING PREDICTIONS AND CONSTRUCTING EXPLANATIONS: AND INVESTIGATION INTO INTRODUCTORY CHEMISTRY, STUDENT UNDERSTANDING OF STRUCTURE PROPERTY RELATIONSHIP IN SOME SELECTED SECONDARY SCHOOLS IN NIGERIA - researchcub.info

CHAPTER ONE

The recent developed course science in cultural context which introduce students to the spirit of science (and chemistry in particular) as a process as opposed to a specific body of knowledge by employing the multi-disciplinary tools of philosophy, history and geography of science (American chemical society, 2003).

Most students perceive chemistry as a difficult subject; I see three main reasons for its difficulty.

1. The abstract nature of the material which is not readily applied to real-life situations.
2. The need to learn a whole new vocabulary of terms and symbols that are almost never used in everyday life.
3. The heretical character of scientific reasoning which doesn't come naturally to humans (Croner, 1995)

The challenges of teaching non-science major are some what different from the challenges of teaching science majors. Many educators including a former president of the National Science Teacher Association (NSTA) have indicated that all efforts to instill rational thought into non-science students have been largely fruitless (Shamos 1995). This is attributed to the fact that so much of modern science defies common sense.

Therefore, the goal of a general education course in the sciences should be perhaps not so much the attainment of a certain level of scientific knowledge. And terminology as the effort to impact to our students the spirit of the scientific enterprises which will help them appreciate science. In a similar manner, we teach art appreciation without expecting our students to necessarily create art.

In other words, we could try to teach not chemistry oper say as a practice but rather to teach about chemistry as a science unlike to pieces of art, through whose beauty is not a matter of experimental evidence, the appreciation of the products of science like pharmaceutical drugs or nuclear power required a specific level of comprehension of the laws that govern the behaviour of matter in this universe. Teaching of chemistry and general science through the multi-disciplinary prism of philosophy, history and geography, a science is only one of many ways we all try to teach or reach our general education offerings in three (3) of its aspects (Trefil and Hazeb, 2006).

Firstly, the emphasis is on areas of study that are usually associated with the humanities. Secondly, the level of chemistry knowledge and quantitative reasoning is at its bare minimum. Thirdly, instead of a laboratory experience, the course contains an

optional travel abroad component. During the first class meeting students take a long survey which explores their philosophical world view of science in general and that of chemistry as the science of matter. Survey questions to determine students familiarity with the scientific way of investigation, the experimental method, the organization of knowledge, the difference between social and natural science, the historical development of science, the roles of gender and ethnicity e.t.c. In addition, students have contained views concerning the impact of chemistry on society. Students have often indicated that the process of taking the survey itself is an important learning and though provoking exercises. The survey in its entirety is allocated to it as a separate document.

AIM OF CHEMISTRY EDUCATION

The aims of chemical education are;

- 1) To provide a course which is complete for students not proceeding to higher education while it is at

the same time reasonable adequate foundation for a secondary chemistry course

2) To facilitate a transition in the use of scientific concepts and technique acquired in integrated science with chemistry

3) To show chemistry and its link with industry, everyday life, benefit and hazards.

4) To provide the students with basic knowledge in chemical concept and principle through efficient selection of content and sequencing

5) To show chemistry in its inter-relationship with other subjects.

1.2 STATEMENT OF THE PROBLEM

It was observed that the general knowledge of science advancement and explores some of general aspects of modern science, its predictive power, the uncertainty of measurement, the impossibility of completely specifying the initial state of a system (Position of a molecule) the philosophical aspects of science, its special impact and relationship to other way of knowing its recentness, completeness, objectivity and its unity. The most important aspect is to introduce the idea that science is not a body of knowledge but a process, a way of thinking which is the search for a consensus of rational opinion among all competent researchers which contains the recognition that an external reality exists out there independently of our minds and independently of any super natural force.

1.3 PURPOSE OF THE RESEARCH

This research intends to find out the Making predictions and constructing explanations: and investigation into introductory chemistry, student understanding of structure property relationship in some selected secondary schools in Ogun State.

1.4 RESEARCH QUESTIONS

1) How do the instructional materials affect the learning of chemistry?

2) What is the impact of chemistry education in the educational system?

3) Does the attitude of teacher affect the teaching of chemistry?

1.5 RESEARCH HYPOTHESIS

1) The effects of teacher's methodology on students learning which may reduce learning of competent student, where by improving student's knowledge and quantitative reasoning.

2) The effects size of teaching science with the style of consistency influence across the studies thereby improving their performance.

3) Reading and communication skills with their effects on students, learning will bring and bridge their greater impact on student's educational out-comes and also demonstrate the aspects of communication skills

4) The combination approach of teaching chemistry in combination with history, geography and philosophy of science may help students appreciate and understand the nature of scientific process in a tie manner.

1.6 SIGNIFICANCE OF THE STUDY

To a developing country like Nigeria, the significance of the study is to reveal the foundation of the technological and scientific knowledge which will be helpful to those who are interested in having a good sound knowledge of chemistry in our secondary schools, so that they can develop interest in learning chemistry in our secondary schools.

1.7 DEFINITION OF TERMS

EFFECTS: This is a change that sometimes cause changes in something **METHODOLOGY:** This is a set of methods and principles used to perform a particular activity

LEARNING: This is the process of learning something, the knowledge we get from reading and studying.

MAKING PREDICTIONS AND CONSTRUCTING EXPLANATIONS: AND INVESTIGATION INTO INTRODUCTORY CHEMISTRY, STUDENT UNDERSTANDING OF STRUCTURE PROPERTY RELATIONSHIP IN SOME SELECTED SECONDARY SCHOOLS IN NIGERIA

The complete project material is available and ready for download. All what you need to do is to order for the complete material. The price for the material is NGN 3,000.00.

Make payment via bank transfer to Bank: Guaranteed Trust Bank, Account name: Emi-Aware technology, Account Number: 0424875728

Bank: Zenith Bank, Account name: Emi-Aware technology, Account Number: 1222004869

or visit the website and pay online. For more info: Visit <https://researchcub.info/payment-instruct.html>

After payment send your depositor's name, amount paid, project topic, email address or your phone number (in which instructions will be sent to you to download the material) to +234 70 6329 8784 via text message/ whatsapp or Email address: info@allprojectmaterials.com.

Once payment is confirmed, the material will be sent to you immediately.

It takes 5min to 30min to confirm and send the material to you.

For more project topics and materials visit: <https://researchcub.info/> or For enquiries: info@allprojectmaterials.com or call/whatsapp: +234 70 6329 8784

Regards!!!