JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

# Some obstacles and difficulties in understanding physics and chemistry

**[1]El Hassane TOULI, [2]Mohamed RADID, [2]Mohammed TALBI**

[1]Regional Center for Education and Training Professions-Casablanca-settat Morocco
[2]Hassan II University, Faculty of Sciences Ben m'sik-Casablanca Morocco

***Abstract :*** This research address some obstacles and difficulties in understanding physics and chemistry for Moroccan middle school student.
A questionnaire form was designed for learners. The defaulters in Third level of preparatory (80 learners) to know the reasons for the difficulty Understanding of physics and chemistry in middle school. After inventorying the data of the form, a group was obtained. From the results the most important of which is not teaching this subject according to modern approaches and relying on traditional methods.

***IndexTerms*** **- education, learning, physics, chemistry.**

## I. General introduction

Paying attention to the issue of learning has become an imperative necessity due to its great importance in our daily lives and determining status. Social for the individual, especially as we live at the beginning of the third millennium, which is witnessing scientific and technological development, and with the increase of this progress and technological development in various fields of life, countries are increasingly interested in education, searching for its problems and overcoming its difficulties, because searching for difficulties and knowing their causes and developing plans to treat them leads to increasing the effectiveness of the teaching and learning process. It also leads to achieving the desired goals, and thus helps in the development and progress of nations. With the increase in interest in education at all its stages, we see greater interest in the preparatory secondary stage, as this stage is considered a stage of preparation and formation, and through its students can acquire a set of knowledge and the skills and attitudes that help them adapt to society, in addition to helping them continue their education.

Physics and Chemistry are among the subjects required for middle school students, and are among the most important. Study materials that the learner needs to explain many natural phenomena that occur in his environment. But Despite this importance, many students find it a difficult subject to understand, as learners at all levels suffer. Educational difficulties in understanding them.

It has been shown through many studies and research conducted in many countries of the world that students They have difficulty understanding physics and chemistry, which negatively affects their achievement.

The completion of any topic cannot be accomplished without scientific or practical objectives that the researcher aims to achieve through many Stations and through the opening Based on previous concepts, research and references appropriate to the topic, these goals are manifested in:

- Submit this topic to complete the section educational research
- Identifying the difficulties faced by learners in understanding physics
- Find some suitable solutions to the research problem
- Interest in this research is due to its positive impact on the effectiveness of teaching and learning.
- Delving into research and acquiring new knowledge on this topic, whether for researchers or specialists in the educational field.

## II. RESEARCH METHODOLOGY:

The search that what is discussed here is an exploratory research on the most important reasons leading to the difficulty of understanding physics and Chemistry. In line with the nature of the research, I adopted the descriptive analytical approach, which is usually associated with clarifying the reality of incidents. And things, Clarifying or describing reality does not stop at stating its present facts as they are, but rather it deals with them through analysis and Interpretation for the purpose of drawing useful conclusions to correct this reality.

To study this phenomenon, he resorted toes to conduct a field study includes a procedural study to determine the reasons and motives that led to this phenomenonus by distributing the form to students the third preparatory this is in search of answers to some questions surrounding the students' inability to comprehend some of the completed lessons.

A questionnaire form was designed to address: Learners the troubled in third level of preparatory (80 learners) to know the reasons for the difficulty Understanding of physics and chemistry in middle school.

## III. RESULTS AND ANALYSIS:

- Question 1: Do you face difficulty when studying physics and chemistry??

%20 have suffered from difficulties, so the majority suffer from Difficulties in physics and chemistry

- Question 2: The difficulty of physics lies in the length of the curriculum.

equality percentage among those who say that the school book is one of the reasons Difficulty of physics and vice versa.

- Question 3: I think that the teacher has a role in my difficulty in physics. (Professor's explanation)

%80I think the professor is the reason why physics and chemistry are difficult.

- Question 4: The fact that physics and chemistry are related to mathematics is an obstacle for me.

46% have difficulty in mathematics, which affects their understanding of physics.

- Question 5: Some idea learners' negativity about physics made it difficult for me

47% give a pre-judgment about the difficulty of physics, which affects understanding even before learning. On it.

- Question 6: I have difficulty solving physics problems, because they depend on precise analysis.

56% have difficulty understanding physics and chemistry, and the reason is due to the nature of the subject that they depend on. In solving its problems, it is highly analytical.

- Question 7: I do not like studying physics because in my opinion it is a subject that has no use in life and is just laws. Solve problems

%86 the loves physics and chemistry and knows its benefits.

- Question 8: The lack of time prevents me from reviewing the lessons, which leads to their accumulation and inability to understand them all at once. one.

43% suffer from lack of time, which prevents them from reviewing lessons, 32% organize their time, and 25% sometimes suffer from an accumulation of lessons.

- Question 9: Lack of scientific experiments affects the process of understanding.

Based on the results obtained, the lack of scientific experiments affects the process of understanding for67%

- Question 10: Lack of modern educational tools.

Based on the results obtained, the lack of modern educational means for67% creates difficulty in understanding Physics.

## IV. DISCUSSIONS:

After learning about the most important reasons for the difficulty of understanding physics and chemistry, which lead to poor achievement in the subject We will discuss some suitable solutions.

**Firstly:** with regards for books Physics The reporter:

The necessity of including in physics curricula the objectives and importance of studying physics as the theoretical and applied basis. To study many sciences and technical developments and link physical concepts to important applied aspects in life. The daily learner through a statement of what the progress of physics has brought about in terms of development in communication systems, information transfer and exploration. Space, medical devices...and other fields.

- Work to present physical concepts in an interesting scientific way and in a clear style by using colors. Outlines and illustrations so that the student can distinguish between main and subsidiary concepts and concepts Concrete and abstract, with sufficient application activities to illustrate basic physical concepts.

**SECONDLY:** with regards for the learner:

- The need to focus on the learner's primary goal being learning, not succession the test and get Testimony only, by stating the merit of seeking knowledge and its importance.

- It is necessary to emphasize that physical concepts are not as difficult as some learners may imagine, and that understandable

Encouraging the learner to read externally in addition to the prescribed books and not resorting to summaries.

- Focus on basic initial concepts and fundamentals of mathematics while ensuring that the learner is provided with thinking skills. which helps him to distinguish and link between different physical concepts.

**THIRDLY:** with regards for the lab School And use means Educational:

- Providing teaching aids for physics and training teachers on how to operate devices, tools and display media. And others to clarify physical concepts and to increase their experience in designing or inventing means to fill their gaps in schools.

- Making learners carry out the scientific experiments prescribed in the physics courses themselves, and conducting the experiments. The process of obtaining information, not confirming its validity.

- Accustoming the teacher to formulating experiments and practical activities in an investigative and exploratory manner, and using the computer. Automation and its programs such as simulation models and others to represent the physical concepts studied in an environment Kinesthetic learner

**FOURTH:** with regards for the teacher:

- Training teachers on effective teaching methods such as discussion, practical investigation, cooperative learning methods, and problem solving. Problems...and Other Good Teaching Methods.

- Ensure the appointment of physics teachers who are specialized in physics and are aware of physics concepts and are educationally qualified in Principles of effective teaching in terms of planning, implementation and evaluation.

- Ensure that the teacher corrects the learners' misconceptions about physics and encourages them to carry out activities. The process and discussion of external topics related to physical concepts by activating the role of the educational supervisor and the job performance card

**FIFTH:** with regards for roads Teaching:

- Reducing the number of learners in the class to facilitate the process of individual follow-up of learners and the implementation of practical activities and focus. On teaching methods that develop critical thinking, innovation and competition among learners, such as discussion. Inquiry, practical, cooperative learning methods and problem solving.

- Conducting field trips to familiarize learners with natural phenomena in their environment, and to understand their implications and link them. With theoretical knowledge.

- Teaching learners in a way that ensures encouraging them to research, investigate, and use various physics references, and not Presenting concepts as established facts and addressing the methodology of scholars in arriving at those concepts.

## V. CONCLUSION:

Difficulty in understanding physics and chemistry. There is no doubt that anyone who looks at this simple effort in approaching This problem will touch on love and jealousy for the material, seeking to develop it and raise it to the level of materials that prepare with the interest of male and female learners at all educational levels, especially at the preparatory level, where the learner is in the cradle of discovering new worlds in a subject that combines theory and practice.

Wish by touch us this educational topic has be revealed us unveiling a group of Obstacles and difficulties facing the learner in understanding physics and chemistry lessons, and the goalus of course, it is the promotion of educational activity and the restoration of Consideration of living matter is, to say the least, the cradle of all the physical phenomena that make up this world.

**REFERENCES:**


- ARUN, Z.. Le passage des sciences physiques et naturelles à leur didactique : réflexions sur un cadre pour la formation des enseignants. European Journal of Education Studies, 6(2), 50-60. (2019)
- GRIGOROVITCH, A. Children's misconceptions and conceptual change in Physics Education: the concept of light. Journal of Advances in Natural Sciences, 1(1), 34-39. (2014).
- HOANG, V. L'enseignement de la physique à partir des représentations : un projet collaboratif. European Journal of Education Studies, 6(9), 306-315. Hoang, V. (2022). Recherche et développement d'activités scientifiques pour la petite enfance. European Journal of Alternative Education Studies, 7(1), 114-123. (2019).
- MABEJANE, M. R. Physical Sciences student teachers training: theoretical and practical aspects. Educational Journal of the University of Patras UNESCO Chair, 3(1), 123-134. (2016).