

## **Abstract:**

**Based on the continuous need to develop academic curricula, especially the (subject of science ) as a curriculum is preparing for students of the second intermediate grade in the city of Mosul (Iraq) for the academic year (٢٠١٩-٢٠٢٠), So, the current research aims to identify the two levels of Scientific Curiosity and Understanding the Nature of Science among second -grade intermediate students. From both of gender (male - female), To determine the extent of the need to prepare perceptions for both of (male and female) teachers of that subject of science, adopt the method of integration among this curriculum with technology and the environment to achieve development in Scientific Curiosity and Understanding the Nature of Science among those students.**

**Accordingly, the researcher used two tools: (a ready scale for Scientific Curiosity prepared by (Campbell), translated by (Zaytoun /١٩٩٦), because it is suitable for the subject of science in its branches :( chemistry, physics and biology), consisting of (٣٠) items with three emotional alternatives. and a new Understanding the Nature of Science Test, consists of (٣٤) items of the type of multiple choice of four alternatives, one of which is correct and the rest false.**

**After verifying the objectivity of these two tools according to the two specifications (Validity and Reliability), the researcher proceeded to apply them to a random sample of second-grade intermediate students amounting to (٤٨٢) male and female students from schools on the left Bank of the city of Mosul.**

**The results of the application indicated a decline in the levels of Scientific Curiosity and Understanding of the Nature of Science among second -grade students of both (male-female) with a significant difference at the level of (٠,٠٥), and this reveals a clear deficiency in the current curriculum of the science curricula and confirms The urgent need to reconsider it by preparing a tool in the Perceptions of science curricula teachers that adopts the method of integration between the curriculum with technology and the environment to achieve development in Scientific Curiosity and Understanding the Nature of Science among students of the second intermediate grade.**

**After verifying the psychometric properties of the Perceptions tool and being assured of its objectivity in measuring what it was set for, it was applied in its final form consisting of (١١٤) items with (٦) specific fields on**

the Basic sample (the final application sample) of (٢٣١) teachers , and It is worth noting that the application process was carried out via the electronic platform (Google Drive) due to the exceptional circumstances resulting of the (covid-١٩) pandemic and to ensure the accuracy of the answers of those teachers.

Note that the sample took into account four variables: (gender (female - male), scientific specialization (chemistry - physics - biology), academic qualification (bachelor - master - doctorate) and years of service (١- ١٠ / ١١-٢٠ / ٢١- over) ) Year].

The results of the (Perceptions) tool were characterized by a high level of moral significance due to the strength of their degree of Sharpness and their percentage weights, which reveal a high ambition and serious desire of teachers in the importance of achieving integration of science curricula with technology and the environment, as these Perceptions were characterized by comprehensiveness and diversity in the requirements of this type of integration , And that this kind of integration may help in developing ( Scientific Curiosity and Understanding the Nature of Science) among students of the second intermediate grade in Mosul city schools.

Consequently, the research came out with a set of conclusions related to its results and then made appropriate recommendations, including:

١- Utilizing the tool (Perceptions) of science curricula teachers on the integration of the curriculum with technology and the environment to develop Scientific Curiosity and Understand the Nature of Science among of the second intermediate grade school students with the following concerned authorities: -

a - The General Directorate of Education in Nineveh Governorate, to be taken into consideration when setting future plans to develop a science curriculum for the second intermediate grade in the city of Mosul.

b - The administrations of middle school schools in the city of Mosul to assess the level of ambition of science teachers in developing scientific inquiry and Understanding of the Nature of Science among their second-grade intermediate students.

c - Scientific researchers and postgraduate students in the disciplines of curricula, teaching methods, and educational sciences in general, in order to complete the current research process in other useful aspects in order to enhance the students 'development plan in their mental, psychological and educational capabilities.

**٢- Adopting the project teachers' Perceptions in making educational and educational decisions and not overtaking or neglecting them.**

**٣- Following up on teachers 'perceptions as one of the tools for assessing students' level of love for Scientific Curiosity inquiry and their Understanding the Nature of science.**

**And to complement the current research process, suitable proposals have been made, including:**

**١- The effectiveness of the integration of the science, technology and environment (CTE) curriculum for the development of Scientific Curiosity and Understanding the Nature of Science among second-grade intermediate students .**

**٢- Teacher's Perceptions (other grades and stages of study) of integrating mathematics in the second intermediate grade with technology and the environment to develop of Scientific Curiosity and Understanding the Nature of Science among students.**

**٣- Perceptions of other groups such as (supervisors, school administrations, parents, environmental experts ... etc.) in integrating curricula with technology and the environment to develop scientific inquiry and understand the nature of science among students. ٤- The effect of integrating other academic subjects with contemporary variables such as (e-learning, globalization of education, virtual education ...) to developing of Scientific Curiosity and Understanding the Nature of Science among students.**