

METHODOLOGIES IN THE OPEN ENDED GREEK SCENARIOS OF CONNECT EU PROGRAM

KALATHAKI MARIA kalathakimaria.edu@gmail.com

RESEARCH ANALYSIS

The following research methodology was a discourse analysis/content analysis by reading texts of archival material of the open ended educational scenarios in the CONNECT EU Program, to catch references to the educational methodology when they were implemented during the school year 2021-22.

In more detail and in particular, below is presented an overview of the designing process and how the scenarios was implemented (what, when, how, and where)

The studied implemented open-ended scenarios was 6 under the following titles and numbering which is used in the references below

- (1) Global Warming and Chemical Pollution. Which of the two is truly dangerous to life on Earth?
- (2) Renewable Energy Sources
- (3) Creating and using maps for problem resolving
- (4) Measuring Carbon Dioxide as a way to protect against covid19 indoors
- (5) Plastics and food
- (6) Polymers, Plastics

The extracted methods and techniques have been clustered into the structure CARE-KNOW-DO

RESULTS

The open-ended scenarios, which have been designed and implemented in Greece by teachers of Secondary and Primary Education, contribute to the CONNECT CATALOG of methods from public engagement for Research and Innovation restructured for Open Schooling. This catalog provides an overview of all the different resources developed and referred to in the suggested template. In general, all scenarios used Inquiry Learning Worksheets, Care and Know phase Questionnaires, discussions between students in groups and in the plenary of the class, discussions in their families and with experts, measurements and observations to draw conclusions, publications on the school website, use of digital tools, development of information and awareness campaigns in the communities with the assistance of local authorities. Objectives of the activities and actions were the cultivation of cooperation and communication skills, analysis and problem solving with the main objective to be the cultivation of active citizenship.

Scientists and parents are referred to have an active role in recording, interpreting results and visualizing solutions to the problem.

Digital & Audiovisual Material, Discussions, maps, scientific devices, teleconferences, office apps, etc are used to record and analyze data in order to solve a problem or to make suggestions for a problem solving and to negotiate the issue that they study in the school communities, the local authorities and the society.

More analytically, following are presented the references that isolated from the texts of teachers

CARE

Through a series of videos and texts, students are informed about....

Through the digital tools of mapping can provide solutions/suggestions

The students take photos of...

Parents are actively involved in conversations with their children....and record elements of the discussions regarding the... Children and parents develop discussions for ways families and neighborhoods can record their consumption

The students discuss with scientists the scientific framework for

Discussion in the class focusing on

Students discuss at home the use of...

Questions are formulated per axis and assigned to groups of students.

This is followed by an analogous discussion with their families, where they record the thoughts that developed

They record local problems and identify patterns of interest

The students recognize and record the environmental problems that...

They record the ways in which....

The students discuss in the plenary what impressed them the most and why they think this problem was created.

The students select those they wish to analyze through voting

Students create working groups by topic

Students are divided into groups....

Inquiry based learning Worksheets and Questionnaires were used

Questions are formulated per axis and assigned to groups of students

The axes of the school research are defined

The school research oriented towards bibliography, internet, interviews, visits, student work in groups etc

KNOW

Students calculate the....

Exploratory Learning Worksheets, Questionnaires are used by students to calculate the....

The students collect data with the help of the Municipality and experts.

The students and parents talk to an expert

Students and parents propose changes to the....

There is a compatibility check with the curriculum and familiarization with the map tools.

Students learn to interpret....support or refute propositions with opinion evidence and initiate propositions-solutions for this problem, apply basic knowledge... and weigh the evidence to verify or disprove a hypothesis

Scientists have an active role in interpreting results and visualizing solutions to the problem...

All material and experience is conveyed to families and friends through discussions.

There is a discussion with scientists in the classroom about the....

Literature research and information gathering, evaluation/classification of material, family discussion and meeting/discussion with experts

Students learn the ... process of creating....

Students make a historical review of the...

They study and comment on opinions

They identify the stakeholders involved with the issue, their interests and influence, contact and interview them accordingly, and teleconference with the experts in order to clarify the issue from multiple angles.

DO

Students come up with proposals that they think they should adopt. They discuss their proposals and prioritize the effects on the environment

Students share their findings on the school website.

Students work in groups, plan how to proceed, deal with the

They make suggestions

In the neighborhood, students count....

fill in a corresponding table with...

They present their studies to the class, talk to experts, discuss their proposals and prioritize the effects of... on their place and the planet

They share their findings on the school website.

The students create a digital map

They design and present their proposals to the general public, at an event at school or at the local Municipality.

Post-test questionnaire and Interview were selected in the evaluation

Build arduino sensors, take measurements, record in EXCEL, group and correlate data, draw conclusions

A consultation is made with municipal authorities, schools, agencies etc. for the implementation of a large event/teleconference

Creation of an action toolkit on how to use....

Preparation of a proposed set of.....

Students come up with proposals and behaviors to adopt, plan and organize a campaign to convince others that....

The students address open letter to the local newspaper, publish an article in the school's student newspaper for information - disseminating the results of their research to the rest of the school's students

EPILOGUE

In conclusion, all the above referred educational techniques can be used in all the phases of the scenarios implementation since they serve very well the inquiry based learning methodology in the framework of the Education for the Sustainable Development. The margins of the three phases which are suggested in the CONNECT EU Program are not strictly and clearly separated as the educational procedure is a continuous one which is expanded and unfolding indoor and outdoor, in the schools, the families, the communities, the society.