

**Improving Geography Curriculum in the
Light of Science, Technology and Society
Approach to develop some of The
Components for 1st Environmental
Literacy grade secondary school students**

By

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Abstract

Title : Improving Geography Curriculum in the Light of Science, Technology and Society Approach to Develop Some of the Environmental Literacy Components for 1st grade secondary school students

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Date : 2007

The problem: What is the program proposed to develop geography curriculum in the light of science, technology and society approach to develop some of the environmental literacy components for first grade secondary school students?

Methods & Procedures:

both the descriptive and the semi experimental methods

the experimental method used the two groups design (control & experimental)

three tests were applied (achievement test, attitude measurement, solving environmental problems measurement)

An Achievement test for the three cognitive levels (knowledge – comprehension – Application)

Findings:

1– There is statistically significant differences on the level of 0.01 between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of achievement test. .

2-There is statistically significant differences on the level of 0.01 between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of attitude test.

3– There is statistically significant differences on the level of 0.01 between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of problem solving test

Keywords

**Geography Curriculum -Science, Technology and Society Approach
Environmental Literacy Components**

Summary

Research problem

In the past , there was a great balance between man's activities and the environmental system , but the technology and the science progress that man reached , and how he used the natural sources greatly, that had a negative effect on the environment.

The environmental problems have appeared such as pollution ,population increasing, using the natural sources greatly and other environmental problems Many conferences, held on an important points as :

1-There should be an environmental literacy for everyone in the society to protect the environment.

2-protect the environment is a part of development.

We can get an important idea that education plays a very important role in protecting the environment because it has a great effect on the citizens. Education develops the behavior of Persons. It makes values, concepts. It develops the talents to understand the environmental relations; it also cares the environmental sources for man's sake.

Educational curriculums have a big role in achieving the environmental literacy. and Geography as one of the educational curriculums, is aiming for achieving some of the environmental literacy components for students; through developing knowledge , environmental attitude , values and environmental ethics in order to solve the environmental problems.

Science, technology and society (STS) approach is considered one of the new educational approaches which enable us to develop some of environmental literacy components for students.

Research questions

What is the program proposed to develop geography curriculum in the light of science, technology and society approach to develop some of the environmental literacy components for first grade secondary school students?

The question it self includes the following questions

1-What are the standards of science, technology, and society approach, which can develop geography curriculum for first grade secondary school students?

- 2- To what extent does geography curriculum deal with such standards of science, technology, and society approach?
- 3- What is the suggested framework to develop geography curriculum for first grade secondary school students in the light of STS approach?
- 4-What is the effectiveness of the suggested framework in the light of science, technology and society approach to develop some of the environmental literacy components?

Research hypotheses

- 1- There are statistically significant differences between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of achievement test.
- 2-There are statistically significant differences between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of attitude test.
- 3- There are statistically significant differences between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of problem solving test

Research methods

- 1- Descriptive methods:
Which include analysis of geography content for first grade secondary school
- 2- Semi-Experimental methods:
Which include using the two group design (control and experimental)

Research procedures

- 1- Creating A list of the standard principles concerning by aims of STS approach.
- 2-Analysis of first grade secondary school geography content.
- 3- Improving geography curriculum in the light of science, technology and society approach to develop some of the environmental literacy components.
- 4- Preparing measurement for environmental literacy which include (achievement test, attitude measurement, solving environmental problems measurement)
- 5- Application of pre-test measurement on both control and experimental groups.

- 6-Teaching three units of the developed curriculum units according to STS approach.
- 7- Application of post-test measurement.
- 8- Finding presentation and discussing it.
- 9- Offering recommendations and suggestions

Findings

- 1- There are statistically significant differences on the level of 0.01 between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of achievement test. .
- 2-There are statistically significant differences on the level of 0.01 between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of attitude test.
- 3- There are statistically significant differences on the level of 0.01 between the average scores of the students of the experimental group and control group in favor of the experimental group in post-test of problem solving test.

The Tools of the Research

- [1] A list of the standards concerning by aims of STS approach.
- [2] A questionnaire of the determination objective science, technology, and society approach
- [3] A questionnaire of the determination important and suitability science, Technology, and society Issues to 1st grade secondary school students
- [4] A list of standards in the light of STS approach.
- [5] An instrument of analysis to analyzing of contemporary geography curriculum 1st grade secondary school students the light of standard principles of STS approach
- [6] The three unites for 1st grade secondary school students
- [7] The teacher's guide to teach the three units.
- [8] Environmental knowledge's test - environmental attitude test - environmental problems solving test).

The Sample

The sample chosen randomly from qalyube secondary school, and. The sample divided to experimental group (N=50), and Controlled group (N=52).

Recommendations

Through the results of the study we can give these recommendations :

The study showed that there is a decrease in the general level of environmental literacy of the studied, & this shows that Geography Curriculum doesn't help to the development of the Components of the environmental literacy for them .

Thus, the researcher recommends that the Components of the environmental literacy should be included within Geography Curriculum

Suggestions

- 1- Improving history Curriculum in the Light of Science, Technology and Society Approach to develop some of the Environmental Literacy Components for 1st grade secondary school students
- 2- Improving social studies Curriculum in the Light of Science, Technology and Society Approach to develop some of the Environmental Literacy Components in the preparatory stage
- 3- Improving geography Curriculum in the Light of Science, Technology and Society Approach to develop environmental values & ethics for 1st grade secondary school students
- 4-Improving geography Curriculum in the Light of Science, Technology and Society Approach to Develop environmental make diction for 1st grade secondary school students

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