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The philosophy of environmental education in the school environment: reality and expectations

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Abstract:

The study aimed to reveal the extent of congruence between the content of environmental education elements in civic education books for the primary stage and the aspirations of school principals, through environmental education indicators represented in environmental knowledge and information, learning environmental values, and organizing school environmental activities. The most important findings of the study are: there is a difference between the distribution of environmental knowledge and information in the dissemination of civic education, there is a difference between the distribution of environmental values in civic education books as a result, and there is a difference between the distribution of the organization of school environmental activities in civic education books as a result of his analysis and the distribution he defended.

Keywords: Environmental education, School environment, Environmental awareness.

1. INTRODUCTION

The importance of environmental education as one of the effective means of protecting the environment and facing its problems through the role it can play in preparing an individual who is aware of his environment and aware of its problems, there is a pressing need to include them in educational programs. As a preventive educational tool capable of increasing environmental awareness in individuals, environmental education is now more important than ever, by helping to justify environmental behavior, it achieves this goal, this can be achieved, in particular,

by concentrating on the primary school level and including environmental education into its educational programs in order to propagate proper environmental education both inside and outside the school environment.

The study's main goals are to find the relationship between the content of primary school environmental education programs and the development of students' environmental awareness, as well as showing the relationship between learning environmental values and skills in primary school and the development of positive environmental behavior in students, and trying to understand the relationship between the organization of environmental activities in and outside the school environment and its relationship to the development of students' environmental teamwork.

To achieve these goals, it is necessary to embody them through specific curricula, in the formulation of which the educational system participates when planning its curricula, by adding the ecological aspect to the cognitive, skill, and emotional aspects in an integrated manner, which makes the responsibility of the planners of educational programs and curricula, on the one hand, and educational institutions, on the other hand. Hence, the idea leads to the following main question:

- Is there a difference between the elements of environmental education in the civic education books for the primary stage (third, fourth, and fifth years) and what school administrators expect?

Based on the study's problems, the study's hypotheses were formulated as follows:

1. Information in books on the environment is not the same as what administrators have estimated.
2. Between learning about environmental values from books and what administrators have estimated, there's a big difference.
3. School environmental activities are organized differently in

books than they are in administrators' estimates.

Because of its suitability to the nature of the subject, the study used descriptive methodology to answer this problem.

The study sample consisted of 10 primary school administrators from the state of Saida, Algeria, they were purposefully selected to meet the requirements of the study sample. The contents of the civic books are also included as:

- The Civic Education Book for the third year of primary school.
- The Civic Education Book for the fourth year of primary school.
- A Civic education book for the fifth year of primary school.

2. THE STUDY TOOLS (Kayesa & Shung-King, 2021, pp. 2-3)

The tools used to collect data on the subject of the study will be dealt with, namely, the content analysis tools and the structured interview.

2.1. Content Analysis

The content of environmental education elements included in civics books for the years under study was analyzed. The elements of environmental education consist of 13 elements.

2.2. Structured interview

The following steps were used to create a list of the most important elements that should be included in civics books for the primary stage (third, fourth, and fifth years):

- Review studies, research and sources related to environmental knowledge and information.
- Asking administrators about the percentages of environmental education elements expected to be included in civics books for the grades under study. Through the previous sources, a list of environmental education elements was reached, numbering (13) and distributed into three areas: (Environmental

knowledge and information, learning environmental values and organizing school environmental activities).

3. STUDY CONCEPTS

In this topic, a set of study concepts will be addressed, which are the concept of environmental education, the concept of the school environment and the concept of environmental awareness.

3.1. Environmental education

In this part, the terminological and procedural concept of environmental education will be presented.

3.1.1. Idiomatically, environmental education

Environmental education is a process that allows students to learn about environmental issues, solve problems, and take action to improve the environment. As a result, students have a greater understanding of environmental issues and the ability to make informed and responsible decisions (Monroe, Andrews, & Biedenweg, 2007, pp. 205–216). is a learning process that expands individuals' knowledge and mindfulness about nature's domain and related difficulties, develops the necessary skills and mastery to address the difficulties, instills confidence and stewardship, and cultivates demeanor, inspiration, and responsibility to settle on educated decisions and make dependable moves in the field that they are working in (Arnstein, 1971).

3.1.2. The procedural concept of environmental education

Essentially, it's a process of education that aims to raise environmental awareness among primary school students, in its comprehensive sense and related participation, this is done by providing them with knowledge and developing their motivations, intentions, and skills to solve current environmental problems individually and in groups.

3.2. The procedural concept of the school environment

It's the complex structure of school administration,

teachers, and courses, and educational activities inside and outside the department, health and recreational programs, and other school components, where everyone works together in support and integration to achieve educational objectives, among them are the objectives of consolidating environmental education dimensions among students by working to develop their knowledge, values, and positive behaviors, as well as spreading an environmental awareness culture.

3.2.1. Idiomatically, the school environment

It is the school building in terms of area, division, location, and what it relates to the surrounding environment, As well as the design of classrooms, ventilation, lighting, heating, and everything related to the outdoor yard (Torgerson & Torgerson, 2008). It is another point of view. We find that the school environment includes a set of conditions and factors that are available within the school (teacher, curriculum, students, activities, diverse services, peer groups, buildings and equipment, as well as internal relations and other factors associated with and surrounding the pupil, which influence the pupil with the aim of forming an integrated and interactive personality (Erawan, 2015, pp. 513–521).

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4. ENVIRONMENTAL EDUCATION

The elements, entrances, and methods of environmental education in the school syllabus will be discussed in this section.

4.1. Elements of environmental education (Korotkova & Zakirova, 2021, pp. 111-113)

In this part, the elements of environmental education will be presented, which are empiricism, understanding, management, ethics, aesthetics, commitment, and comprehensiveness.

4.1.1. The experiment

Any observation, measurement, recording, interpretation, and discussion of environmental phenomena objectively.

4.1.2. Understanding

A growing awareness of how ecosystems work.

4.1.3. Administration

Knowing how to work in groups to get things done, how to estimate and mobilize resources, and how to implement them.

4.1.4. Ethics

The ability to make conscious ethical choices about social development in its interaction with the environment, and how to make a choice that is compatible with one's goals and values, and at the same time respects the goals and values of others.

4.1.5. Aesthetics

Appreciating the environment for itself, using the environment for recreation, beauty, art, inspiration, and achieving one's ultimate goals.

4.1.6. Commitment

Develop a sense of personal concern and responsibility for the well-being of human society and the environment, and the willingness to participate in the problem-solving process from start to finish, time after time, despite its difficulty and the corresponding discouragement.

4.1.7. Inclusiveness

Students' awareness of the interrelated nature and the need to comprehensively identify them with their mutual issues.

4.2. Objectives of environmental education in the curriculum (Judy, 1993)

4.2.1. Awareness

Assist students in developing an awareness and sensitivity to the overall environment and its problems; developing the ability to perceive and differentiate among stimuli; processing, refining, and extending these perceptions; and applying this new skill in a variety of contexts.

4.2.2. Knowledge

Assist students in acquiring a fundamental understanding of how the environment behaves, how people interact with the environment, and how issues and problems related to the environment arise and how they can be resolved.

4.2.3. Attitudes

Assist students in developing a set of values and feelings of care for the environment, as well as the motivation and commitment to participate in environmental maintenance and improvement.

4.2.4. Skills

Assist students in developing the ability to recognize and explore environmental issues, as well as contribute to their resolution.

4.2.5. Participation

Assist students in putting their newly learned knowledge and abilities to good use by adopting meaningful, positive activities to address environmental issues and problems.

4.3. Methods used in Environmental Education (Sundar, 2007, pp. 64-66)

In this part, the discussion method, project method,

problem solving method, observation method, dramatization, and fieldtrip project method, problem solving method, observation method, dramatization, and fieldtrip will be presented.

4.3.1. Discussion Method

The strength of the discussion lies in the broad participation of members of the group. It is the responsibility of the teachers to encourage the students to participate in discussion. For effective utilization of this technique, the teacher should give sufficient background information about the subject so that the students are ready to use it in discussions. In this method, the teacher can discuss some environmental related issues, like-scarcity of water in cities, water pollution in the sea, and disposal of garbage. There are four types of interaction in discussion. The use of discussion. The environment is a serious issue. This method makes the topic more clear to students.

4.3.2. Project Method

A project is an activity undertaken by pupils for the solution of a problem which leads to learning. The project should involve activities which are either mental or motor. It should be purposeful; it should be a felt need of the pupils. The projects undertaken should provide a varied types of experience for the pupils-manipulative, concrete, mental etc. The Project method helps students to acquire knowledge about a particular topic through their active involvement. It not only helps them to gather knowledge, but also ensures self-learning. In the project method, students are given some particular topic or area to work on. Through observation, interviews and other means, students gather data on the selected theme and prepare their project.

The teacher should help the students with selecting an appropriate subject and formulating the objectives of the project, checking students' progress regularly, suggesting modifications etc. A number of environmental projects can be assigned to students in school situations, such as, plantation on school

campus, visits to places of pollution, trips to wild life sanctuary, agricultural practices in rural areas, disposal of houses, etc.

4.3.3. Problem Solving Method

Environmental education is a program that aims to make people aware of environmental degradation. The students are encouraged to take active part in the program by working on their own problems. Problem solving method is a method that is used by the teacher to help the students to solve problems by themselves. In this method, the students are expected to understand, understand, analyze, interpret and find solutions. Problem solving is the act of defining a problem, determining the cause of the problem, identifying, prioritizing, and selecting alternatives for a solution, and implementing a solution. In this method, students are given some problems, which they need to solve by finding alternative solutions. The report is presented followed by the solutions. This method helps in developing a brainstorming approach to learning concepts. It is a process from practice to theory, not vice versa.

4.3.4. Observation Method

Another method used in environmental education is observation. When we observe our surroundings, it helps us to know better as well as establish harmony with nature. This will help us to realize the importance of the environment and how we can save it from disasters. The information obtained under this method relates to what is currently happening.

A student should be allowed and asked to observe simple phenomena of the earth and the sky so that he/she acquires awareness of living and non-living components. The child gradually begins to form positive feelings and attitudes towards environmental protection. Observation, under the careful guidance of the teacher, of the immediate natural surroundings, geographic facts and relationships prove invaluable for the

teaching of environmental education.

4.3.5. Dramatization

The dramatization technique emphasizes engaging students through interactive activities. Teachers can use it to help students gain deeper insights into topics, build on concepts and themes. A dramatic performance is also used as a means to test student knowledge. The enactment of a play illumines the responsibilities of democratic citizenship and provides children with an understanding of the problems of community living.

The role of the teacher is critical when utilizing theatre to teach environmental education. Children gain much-needed information and abilities by engaging in play, which allows them to explore the activities and interactions of human existence in their own unique way. The dramatization technique aids the children's understanding of its significance.

4.3.6. Fieldtrip

School fieldtrips are the best way to give students a chance to learn about the environment through education. Environmental education can be efficiently taught through field trips or the educational excursion method. This is the most practical method of teaching students about the environment. It delivers true awareness through local, regional, and national observation, geographical conditions observation, historical places and remains observation, industrial area observation, and natural vegetation observation.

Field trips are one of the best methods of teaching environmental education to students. The observation method involves finding the cause-and-effect relationship between environmental components. Field trips also develop the ability to appreciate the natural environment and interpret one's own experiences and observations. Every student should prepare a report about his observations, which is followed by a group discussion.

5. FIELD STUDY

5.1. Validity of the tool

The tool's validity was confirmed after it was shown to a group of primary school principals in Algeria, Saida state, they were asked to express their views on the elements of environmental education included in the study tool in terms of their importance. It was divided into sections that corresponded to each of the sections' paragraphs, adding new paragraphs or removing some ineffective paragraphs that are not related to environmental education, as well as any other suggestions they consider appropriate. Based on their feedback, the study tool was modified by redistributing some topics among the three sections, 5 paragraphs were removed, reaching a total of 13 paragraphs in its final form, distributed over three sections: Environmental knowledge and information (4) paragraphs, learning environmental values (5) paragraphs, organizing school environmental activities (4) paragraphs. Thus, the most important elements of environmental education that should be available in civic education books for the primary stage (third, fourth, and fifth year) were identified, which represent the answer to the main question of the study.

5.2. Statistical analysis

Frequencies and percentages were calculated in order to reveal the availability of environmental education elements in the content of civics books for the primary stage (third, fourth, and fifth year). The $\chi 2$ (Compatibility Quality Test) was also used to see how similar the distribution of environmental education elements in books was to the distribution estimated by school principals after analyzing their content.

5.3. Analyze, interpret, and discuss study data

Content analysis was used for the curriculum of civics books for the primary stage (third, fourth, and fifth years), which

included the elements of environmental education, whereas a questionnaire was used to record the frequency and percentages of environmental education (observation) elements in each book, and analyze the content of the interview with the principals to estimate the percentages of (expected) civic education elements. Use the SPSS program to measure the extent of compatibility (χ^2) between:

- Percentages of environmental knowledge and information observed from civic education books as a result of their content analysis and the percentages estimated by school principals.
- Percentages of learning the environmental values observed from civics books as a result of their content analysis and the percentages estimated by school principals.
- Percentages of organizing environmental activities observed from civic education books as a result of analyzing their content and the percentages estimated by school principals.

5.3.1. The first hypothesis test results

The hypothesis will be tested:

Null hypothesis (H_0): There is no statistically significant difference (a = 0.05) between the distribution of environmental knowledge and information in civic education books for the primary stage (third, fourth, and fifth years) as a result of analyzing their content and the distribution estimated by school principals.

Against the hypothesis:

Alternative Hypothesis (H_1): There is a statistically significant difference (a = 0.05) between the distribution of environmental knowledge and information in civic education books for the primary stage (third, fourth, and fifth years) as a result of analyzing their content and the distribution estimated by school principals.

(χ^2) test was used to show the level of congruence between the distribution of environmental knowledge and information in civic education books for the primary stage in order to test the hypothesis (third, fourth, and fifth years), the results of the content analysis (observed) and the distribution estimated by the (expected) school principals also showed it, and Table 1 shows the results.

Table 1. Shows the extent of congruence (χ^2) between the percentages of Elements of environmental knowledge and information observed from civic education books as a result of analyzing their content and the percentages expected from school principals

Elements of environmental knowledge and information	Observation		Expected	
	Frequency	%	Frequency	%
Concepts, components, and elements of the natural medium	270	42.58%	159	25%
The relationship between living organisms and the importance of ecological balance	144	22.74%	159	25%
Environmental problems (environmental pollution, waste pollution, air pollution) and their effects	164	25.84%	253	40%
Environmental events (Arbor Day)	56	8.84%	63	10%
The total	**634**	**100%**	**634**	**100%**

Calculated (χ^2) value = 112.284, degrees of freedom (df) = 3, P-value = 0.000

Table 1. shows that the calculated (χ^2) value (112.284) at the degree of freedom (3) and P-value (0.000), which is less than the significance level (a = 0.05), This leads us to (rejection of the null hypothesis H0), consequently, there is a mismatch between the distribution of environmental knowledge and information in civic education books for the primary stage (third, fourth, and

fifth years) as a result of analyzing their content and the distribution estimated by school principals, and that the books under study do not contain the specific percentages of the distribution of environmental knowledge and information that should be included in the books, and this explains the inconsistency between what actually exists and what is expected.

This difference between school principals, who appreciated the importance of including environmental knowledge and information in books, is due to the fact that principals originally had experience teaching civic education curricula, so the difference came between what is in the books and what is hoped for.

5.3.2. The second hypothesis test results

The hypothesis will be tested:

Null hypothesis (H_0): There is no statistically significant difference at the significance level (a = 0.05) between the distribution of learning environmental values in civic education books for the primary stage (third, fourth, and fifth years) as a result of analyzing their content and the distribution estimated by school principals.

Against the hypothesis:

Alternative Hypothesis (H_1): There is a statistically significant difference at the significance level (a = 0.05) between the distribution of learning environmental values in civic education books for the primary stage (third, fourth, and fifth years) as a result of analyzing their content and the distribution estimated by school principals.

The (χ^2) test was used to show the level of congruence between the distribution of learning environmental values in civic education books for the primary stage in order to test the hypothesis (third, fourth, and fifth years), as the results of content analysis (observed) and the distribution estimated by the (expected) school principals also showed it, and Table 2 shows

the results.

Table 2. Shows the extent of congruence (χ2) between the percentages of Elements of environmental knowledge and information observed from civic education books as a result of analyzing their content and the percentages expected from school principals-

Elements of learning environmental values	Observation		Expected	
	Frequency	%	Frequency	%
Estimating and developing attitudes towards the environment.	186	28.75%	194	20%
Appreciate the efforts made to protect the environment.	41	06.34%	33	05%
The value and cleanliness of the school environment.	118	18.23%	129	20%
Aesthetic values and the importance of plants and trees.	174	26.89%	162	25%
The value and importance of saving water and preserving it.	128	19.79%	129	30%
The total	647	100%	647	100%

Calculated (χ^2) value = 51.51, degrees of freedom (df) = 4, P-value = 0.000

Table 2. shows that the calculated (χ^2) value (51.51) at the degree of freedom (4) and P-value (0.000), which is less than the significance level (a = 0.05). This leads us to (rejection of the null hypothesis H0). Consequently, there is a mismatch between the distribution of elements of learning environmental values in civic education books for the primary stage (third, fourth, and fifth years) as a result of analyzing their content and the distribution estimated by school principals, and that the books under study do not contain the specific percentages of the distribution of elements of learning environmental values that should be included in the books. This explains the inconsistency between what actually exists and what is expected.

This difference between school principals who appreciated

the importance of including elements of learning environmental values in books, is due to the fact that principals originally had experience teaching civic education curricula, so the difference came between what is in the books and what should be.

5.3.3. The third hypothesis test results

The hypothesis will be tested:

Null hypothesis (H_0): There is no statistically significant difference at the significance level (a = 0.05) between the distribution of learning environmental values in civic education books for the primary stage (third, fourth, and fifth years) as a result of analyzing their content and the distribution estimated by school principals.

Against the hypothesis:

Alternative Hypothesis (H_1): There is a statistically significant difference at the significance level (a = 0.05) between the distribution of learning environmental values in civic education books for the primary stage (third, fourth, and fifth years) as a result of analyzing their content and the distribution estimated by school principals.

The (χ^2) test was used to show the level of congruence between the distribution of learning environmental values in civic education books for the primary stage in order to test the hypothesis (third, fourth, and fifth years), as the results of content analysis (observed) and the distribution estimated by the (expected) school principals also showed it, and Table 2 shows the results.

Table 3. Shows the extent of congruence (χ^2) between the percentages of Elements of environmental knowledge and information observed from civic education books as a result of analyzing their content and the percentages expected from school principals

Elements of organizing school environmental activities	Observation		Expected	
	Frequency	Percentages	Frequency	Percentages
Celebrating environmental events on Christmas Day.	32	24.62%	39	10%
Doing theatrical activities.	18	13.85%	13	30%
Taking care of the school garden and organizing nature excursions.	25	19.23%	26	20%
Writing about the environment and doing competitions about the environment.	55	42.31%	52	40%
The total	130	100%	130	100%

Calculated (χ^2) value = 39.29, degrees of freedom (df) = 3, P-value = 0.000

Table 3. shows that the calculated (χ^2) value (39.29) at the degree of freedom (3) and P-value (0.000), which is less than the significance level (a = 0.05). This leads us to (rejection of the null hypothesis H0). Consequently, there is a mismatch between the distribution of Elements of organizing school environmental activities in civic education books for the primary stage (third, fourth, and fifth years) as a result of analyzing their content and the distribution estimated by school principals, and that the books under study do not contain the specific percentages of the distribution of Elements of organizing school environmental activities that should be included in the books. This explains the

inconsistency between what really is and what ought to be.

This difference between school principals who appreciated the importance of including the organization of environmental activities in books, is due to the fact that principals originally had experience teaching civic education curricula, so the difference came between what is in the books and what should be.

6. CONCLUSION

The study concluded by analyzing the content of civic education books for the primary stage (third, fourth, and fifth years), and a number of primary school principals expected a set of results, the most important of which are:

- There is a statistically significant difference at the significance level (a = 0.05) between the distribution of environmental knowledge and information in civic education books as a result of analyzing their content and the distribution estimated by the principals.
- There is a statistically significant difference at the significance level (a = 0.05) between the distribution of learning environmental values in civic education books as a result of analyzing their content and the distribution estimated by the principals.
- There is a statistically significant difference at the significance level (a = 0.05) between the distribution of the organization of school environmental activities in civic education books as a result of analyzing their content and the distribution estimated by the principals.

Based on the findings of the study, the researchers recommend the following:

- Planning curricula, preparing textbooks, and giving this field a weight commensurate with its importance.
- Organizing the civic education curriculum for the primary stage (third, fourth, and fifth years) in light of the elements of global

and local environmental education and balancing them.

- The focus of books and curricula on the concepts of environmental education elements that help reduce environmental pollution, such as the importance of recycling to reduce pollution, rationalization of wood consumption, and the search for alternatives.
- The necessity of equipping school environments with the means and material capabilities necessary for environmental activity, such as gardening tools, as well as establishing green clubs, workshops for collective environmental work, and rooms for showing environmental documentaries and others.

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