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## An attempt of integration of teaching contents of the subjects ecological education and English as a foreign language

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### Abstract

A great deal of research has been done in order to reveal “the truth” about which are the best ways to learn. Research has been performed in various countries about how children learn most effectively and many people agree that there are certain necessary factors and conditions if we want to help children learn.

It is most likely that we are trying to define what is qualitative in teaching and learning rather than teach in such a manner, and in this way we really complicate something that is in fact a very simple process.

Integrating teaching contents of different respective teaching subjects could be one of the effective ways for students to learn various teaching contents. This paper will show one attempt to do this with the teaching subjects’ Ecological education and English as a foreign language at the Pedagogical faculty in Shtip.

*Keywords:* integration, teaching contents, Ecological education, English language, learning;

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### 1. Introduction

Environmental deterioration involves changes in the natural resources and these changes are due to human actions rather than some natural cataclysm. Land-slides, deforestation, declining availability and quality of freshwater, air pollution, loss of biodiversity, degradation of marine and coastal resources and environmental degradation and industrial pollution are the results of development without environmental accounting. These problems will all intensify during the lifetime of students still at school and will affect their lives. If students are to participate fully in solving the environmental problems of today and of the future environmental education is essential (Stempleski, 2003; Ryan & Ray 1991). It is urgent, significant and appropriate that they form a major element of students’ education (Carson, 1978).

In the Macedonian education system, from primary to secondary levels, students are introduced to environmental issues through a range of core subjects. In the first six years of the national educational system, environment-related matters are introduced as part of science, ecology and local studies curricula. At secondary level, although environment and ecology are not taught as exam subjects, many environment-related themes are integrated into geography, Macedonian Students’ Perceptions of the Environment Contents in Their English Classes 175 biology, chemistry and language teaching. Schools are also furnished with teaching resources pertaining to environmental matters. Environmental activities support language learning as well. The most important reason for bringing environmental issues into the language classroom is the urgency of the environmental situation itself. Thus, in line



of a young person. During the process of creating ambient space (not in the meaning of satisfying optimal material conditions but preparing for work with those to be educated and their preparation for work during the lesson or in the field), the educator does not produce only the pupil but himself/herself as well. On one hand, the educator widens the field of students' sovereignty, and on the other hand it produces his/her own experiences, attempts and practical-theoretical knowledge. What teachers need to facilitate is *the natural development* of the child to an adolescent and a mature person, not dependent on teachers, and this provides a part of the prerequisites for the adoption of the increasingly complex knowledge, habits and abilities. Hence, the process of education is per se an ecological activity (Milenko S. Stojnic, 2009.).

The fast development of the Internet with its network of users who cooperate, as well as a number of tools to facilitate this cooperation, provides educators with new opportunities to introduce those who learn into such an "ecology" of learning and to bring them in contact with other people who speak English in order to develop their communicative competence through authentic interaction.

### What is ecological education?

If we start from the root of the word, ecological education could be generally defined as environmental, and even home education, formation of a personality in the direction of a good host. Our educated ecologist could be interpreted as a host, local person, environmentalist, righteous resident of the ecosystem; the one who takes care of the house in the long run; economically takes care of the house and environment, has thorough knowledge of the environment and acts towards it in a lawful way, a resident of the local environment and ecosystem. He/she uses the scientific achievements of original (biological) ecology and technology in proportion with his/her power of acting, and the expanded knowledge in accordance with their interests. As early as in the period of preschool education children had a saying: "get to know your homeland so that you love it more". Staying on the foundation of ecological education, we can here notice two essential elements that determine it. On one side there is the pupil as the measure of everything, and on the other side is the environment as the area of his/her interest. (Milenko S. Stojnic, 2009).

United Nations list six aims of ecological education (UNESCO-UNEP 1976):

1. Awareness of ecological problems
2. Basic understanding of the environment and its problems, and the role of man in the environment.
3. Concern about ecological problems.
4. Skills for solving ecological problems
5. Ability to assess the proposed solutions of ecological problems
6. Taking part in solving ecological problems

Educational objectives determine the educational tasks. Analogously, different objectives dictate different tasks. From the pedagogical point of view, the goals and tasks have only one common denominator that was formulated by the French psychologist Giles Pajo. The ultimate goal is not "lessons", because they are by their nature partial and have little sense on their own. The ultimate meaning of educational contents is education, i.e. an educated or formed person. Such a person is expected to continue being active as a self-conscious ecological being. In this context definite (concrete) educational goals of ecological education are formulated:

1. Acquisition and expansion of knowledge about natural and social phenomena, issues, rules and processes.
  2. Acquisition and expansion of knowledge about the achievements of ecology and related sciences.
  3. Acquisition and expansion of knowledge about the dialectical connection between the acquired knowledge and the survival of human kind.
  4. Encouraging (exercising, shaping willpower) pupils to incorporate new knowledge into existing beliefs and transform habits in the direction of practical action in accordance with sustainable development.
  5. The creation of preconditions (customizing) for self-education and scientific attitude towards the environment.
- (Milenko S. Stojnic, 2009)

"Ecological education is the learning process that increases the knowledge of people and their awareness of the environment and related challenges, developing the necessary skills and expertise to answer the challenges, nurse

attitudes, motivation and commitment in order to make informed decisions, and take responsible actions” (UNESCO, Declaration of Tbilisi, 1978).

“Ecological education is a lifelong process that deals with inter-relational components of the natural world and the one created by man, leading to responsible environmental management” (Pennsylvania, Department of Environmental Protection).

## *2.2. Advantages of shared processing of teaching contents*

Shared processing of teaching contents has advantages both for the teaching of English language, and for the teaching of environmental education.

Positive effects in English language teaching are the following:

- It facilitates learning the meanings of new words

If some content is previously processed in mother tongue, then one of the most important goals of studying new words in the English language is achieved, i.e. in the study of the meanings of these words (e.g. learning some concepts in a class of environmental education, such as biotope, biocenosis, eco-system, etc.). As for students, it will facilitate their understanding of these concepts in English.

- It extends the duration of the students’ concentration in class

Experiences from practice show that, when content is being re-processed, as in our case with environmental education and English language, it facilitates the prolongation of concentration. Prolonged concentration of those who learn also means easier adoption of new concepts in both native and foreign language. If there is no concentration, activities that are taking place during lessons will be boring, uninteresting, and, in the end, everything will be useless.

- It reduces the tension and fear of foreign languages

As we previously mentioned, treatment of known content not only extends concentration, but significantly reduces the tension and fear of foreign languages. Garner and Macintyre define this fear as "fear" that we feel when we are asked to use words in English that we do not know well (cited in Mihaljević Djigunović 2002). This fear is manifested as a feeling of discomfort, tension and uncertainty that overwhelm us when we need to talk, read or write in English, or when we need to understand someone else who speaks English.

Positive effects in ecological education are:

- It increases the motivation of students

Connecting the newly acquired knowledge in practice and its application in everyday life has motivational character. When a child notices that using a newly acquired concept makes it easier to learn another subject, then the child will be more stimulated to learn. Motivation will be further emphasized when the child realizes that these concepts are not needed only by him/her, but also by other people who use the language different from their mother tongue.

- It facilitates access to foreign literature and various media aiming to extend knowledge.

With the satellite television and the Internet, today's students need to know foreign languages even more than in the past so that they could use the abundance of professional literature that is not translated into their native language. For ecological education as a natural science, it is of special importance to timely exchange new information, which is much easier if you know a foreign language, especially English

- It improves the image of yourself

When students are good at one subject because of their previous knowledge of the content from another subject (in our case, environmental education and English language interaction), such students will get a better picture of themselves and their abilities as students

- A possibility is created for processing some contents of environmental education in English prior to their processing in mother tongue.

Susan Halliwell (1992) explains this possibility for teaching some content of environmental education in English before it is taught in mother tongue. The topics in question are very visual and seek great activity.

Example of a practical lesson:

Teaching subject - Ecological education

Teaching unit: "Circulation of water in nature"

Teaching subject - English language teaching unit: "Circulation of water in nature"

The students of the Pedagogical faculty in Stip realize their practical teaching in primary schools and kindergartens. They apply the knowledge they acquire in respective teaching subjects for realizing their practical teaching lessons. For example, they ask the pupil:

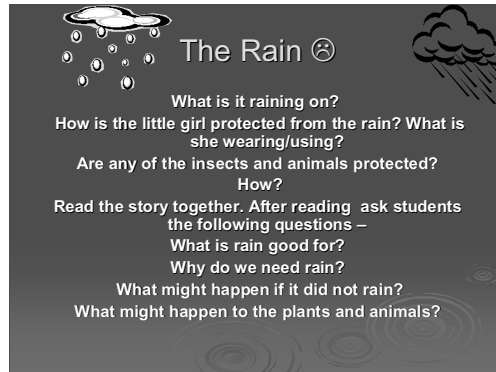


Figure 1. Gray clouds with no sun, rain, rain with peeking clouds

Show students pictures that are similar to the book. (blue sky with white clouds and a yellow sun, gray clouds with the sun partially hidden, gray clouds with no sun, rain, rain with sun peeking behind clouds, rainbow). Let students discuss what they see in each picture and place the pictures in such an order that they show the sequence of the story; Shared Reading – re-read and let students be your echo after each page/line.

Pass out either a colored sheet or a colored word to each student. Tell students to find their partners by matching the colors and colored words; each pair of students will be asked to read the story about the rain in Macedonian and English.

Talk about which of the colors in the story actually make up a rainbow. You may wish to read a book about rainbows such as *All the Colors of the Rainbow* (Rookie Read-About Science) by Allan Fowler. Brainstorm ways in which the class could make their own rainbow (paint, color, etc.) Then ask if they think it is possible to plant a rainbow.

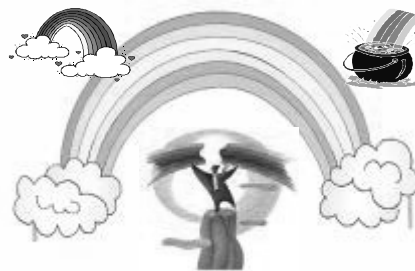


Figure 2. Make rainbow crayons

Table 1. Words and actions

<i>Words</i>	<i>Actions</i>
I plant a little seed in the dark, dark ground.	<i>Bend down, dig hole, push seed into ground and cover with dirt.</i>
Out comes the yellow sun big and round.	<i>Hold arms up over head in a circle.</i>
Down comes the rain, soft and slow	<i>Hold arms out over head, with fingers moving. Move arms slowly down to the floor.</i>
Up comes the little seed.	<i>Squat down. Touch fingers to floor and come up slightly.</i>
grow, grow, GROW!	<i>Move body up as though you are the flower, until you are standing with arms up.</i>

### 3. Conclusion

Being educators of future educators of young generations, we should have a serious approach to work with clear goals. This kind of teaching and cooperation between two teachers of different subjects purposefully reduces the processing speed and connects the teaching contents of both subjects; it unloads pupils because the knowledge acquired in one subject is positively used for acquiring new knowledge in another subject, which in turn facilitates permanent learning of certain concepts. Thus pupils' motivation is enhanced; they achieve higher aims, get higher marks that are the measure of their success in learning.

Generally, the students feel that the use of environmental topics to teach English has helped to develop and improve their language skills. But this improvement is only secondary, as they seem to have learned more content knowledge and ideas about the environment through these topics than language skills. This is in line with the findings of Ratnawati's (1996) and Pillay's (1995, cited in Pillay & North, 1997) studies. They found that teachers were teaching the topics instead of the language skills.

Vocabulary is important in a language learning program and findings show that respondents believe they have improved in this area too. This is mainly due to the opportunities present in the English lessons for the introduction of useful vocabulary by the teacher. But more importantly, it could be due to the opportunities students had to practice the meaningful use of new vocabulary.

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