

THE SUSTAINABLE DEVELOPMENT OF PRIMARY SCHOOL EDUCATION UNITS. AS A CASE STUDY: THE MUNICIPALITY OF LARISA, GREECE

DOI: 10.26341/issn.2241-4002-2019-1b-5

George Nastos

Primary Education Teacher, MSc Sustainable Development

g.k.nastos.lar@gmail.com

Abstract

This research examines the sustainable development of primary school education units in the municipality of Larissa. It was carried out in a sample of 84 out of 116 primary school units which are primary schools (ages 6-12) and kindergartens (ages 4-5) through a special questionnaire which was given to their directors and supervisors. The consequences of the economic crisis are not only due to the repayment of accounts or maintenance of the building complexes, but also due to the general function and structures of the educational system. There is no satisfaction from the decoration offered, the comforts and the logistical infrastructure of the school. In addition, it is noted that the necessary funds are not available from the State to promote issues of sustainable development through environmental education.

The economic operator is acting as an inhibitor because there is no adequate financing. This fact, however, does not mean an unconditional resignation but marks an intensity of efforts for environmental education with what is available.

Keywords: *School units, sustainable Development, Larisa Municipality, Primary Education, environment, Economy*

Introduction

Sustainable or viable development is a concept that affects human societies not only because it cares about the environment and its preservation, but also because the developmental and environmental processes, of which it is composed, can make a decisive contribution to change the system of values of an entire society and this can be achieved by basic education.

This is precisely the reason for the choice of this issue, so that, through its profiling, a comprehensive picture of environmental issues is created, with the ultimate aim to raise awareness of the environment and to act in a relevant way. The study also seeks to explore individual issues that are part of the concept of sustainable development. Thus, this work was prepared with the aim of analyzing environmental issues in the context of the current economic reality and always in relation to how they affect the sustainable development of primary school education units.

To promote the concept of sustainable development, a term widely used from science and society to define the disturbance of the relationship between nature and man, which in the so-called ecological crisis, needs to study the conditions responsible for this crisis. In short, these are the climate change, the greenhouse effect, the constant soil, aquifer and atmosphere pollution, the reduction of natural resources and overcrowding.

In essence, sustainable or viable development describes the return of man to nature, whose harmony will allow him to continue living the way he has survived for centuries. In between, there has been a century where the intense industrialization, commerce and urbanization dominate while, in many cases, this still continues.

The concept of development did not exist from the early historical years but was gradually formed through the passage of centuries and various cultures. The first ideas of progress were

formed during the classical Greco-Roman period, but it was the Hebrew and Christian theology, giving expression to the linear perception of time as a directed succession of events, that changed the way of thinking about History and Progress (Du Pisani, 2006).

Environmental problems have led to the realization of the fact that not only technological knowledge is enough for a better life, but they should also be combined with the harmonious coexistence of man and nature. This is precisely the reason why environmental education plays such an important role, because it can contribute decisively to the shaping of citizens' environmental ethos and environmental education (Flogaist, Vasala 2002).

Environmental education is not just about the transmission of general information knowledge about the environment. Its main purpose is to promote the awareness and interest of the world population for the environment and the problems that arise every day. This targeting is about the action that will be developed through skills, attitudes and the disposition of people to work, not only individually but collectively, so that they can resolve current environmental problems and prevent any new (Papadimitriou 1998).

Environmental education does not remain stagnant in time, but has a dynamic character, since it assimilates all the cultural, economic, technological and social changes that are carried out in the lives of people, so that it can respond to all the environmental challenges that may arise (Tsamboukou – Skanavi, 2004).

In the conference on Environmental education that took place in 1997 in Thessaloniki, the term 'environmental education' was replaced by the term 'education for sustainable development'. The concept of sustainability, apart from the environment, includes the problems of poverty, population, health, food, democracy, human rights and peace. Ultimately, sustainability is a moral imperative, a check of values, in which cultural variations and traditional knowledge must be accepted with appropriate respect (UNESCO, 1997).

With regards to the definition of sustainable viable development, scientists dealing with the issue have not been able to agree on a common definition.

The most widespread definition has been given by Norwegian prime minister Gro Harlem Brundtland, in 1987, to the United Nations General Assembly. In her report entitled 'Our Common Future', known as the Brundtland report, it is stipulated that: "Sustainable development is the development that meets the needs of today, without negotiating the ability of the next generations to cover theirs" (Huckle, 2000).

Sustainable development is defined as the satisfaction of today's human needs, in such a way that the right of the coming generations is not compromised to meet their own needs (Lazaretou, 2002).

Sustainable development is: improving the quality of life within the carrying capacity of supportive ecosystems "(IUCN, UNEP and WWF, 1991).

In 1992, in Rio, the principles of sustainable development were formulated and a definition of sustainable development was given, defined as "the development that provides long-term economic, social and environmental benefits, taking care of the needs of this and of future generations ". While in 2001, during the European Council in Goteborg in 2001, it was defined as a continuous course of change and adaptation, and not a static situation, with the aim of meeting the needs of the present, but without reducing the possibility of future generations to satisfy their own needs, through the balanced and equal pursuit of the three pillars of sustainable development: economy – environment – society (BSE, 2012).

The main components of sustainable development are:

- the economic factor
- the environmental factor
- the social factor.

Due to the increase of the environmental problems, a new course was needed to address and resolve these. Thus, environmental education was transformed into sustainability education

and has redefined its objectives. The environment is now defined as a complex system consisting of subtle balances and relationships, which, if disrupted, can prove disastrous for both the environment and people. For this reason, students must be cultivated ecologically conscious and must have the concept of active participation in the continuous protection of the environment (Canyon, 2010).

At the same time, sustainability education should be adapted according to the political economy, culture and environments of the world map. This means that teachers must take into consideration the developmental processes that are appropriate for the particular place in which they want to awaken the ecological awareness of their pupils. It is practically impossible for an action plan that has been drafted in the United States and depicts its internal reality, to be implemented as it is in a country in Asia, whose residents are subject to different habits and perceptions (Huckle, 2012).

The structure of the administration and the operation of the primary education

The educational system consists of a set of elements, such as teachers, pupils and analytical programs, which are linked together, while at the same time they perform their own purpose. In Greece, the educational system includes 3 structures:

- Primary education, consisting of kindergartens and primary schools.
- Secondary education, i.e. high schools, general and vocational colleges and vocational schools.
- Tertiary education, consisting of higher educational institutions (HEIS) and higher technological educational institutions (a-TEI) (Sati, 2008).

The primary education is for kindergartens and primary schools. Kindergartens are divided into one-seater and two-seater. One-seater are those in which they attend from 7 to 30 infants and two-seater when attending from 31 to 60 infants. Primary schools are divided according to the number of pupils in one-seater, two-seater and can reach up to 12-seater. The ratio followed is 25 students to a teacher. In 1997 the all-day elementary school was created in order to help in the daily study of children and their safekeeping due to changes in the lifestyle of modern families (Efstratios – Sklavenitis, 2009-2012).

Municipality of Larissa

The general economic recession appears in the municipality of Larissa as well, where mergers of schools and the lack of funds create many questions not only for the quality of the educational work, but also for the resolution of everyday problems, such as the cleanliness and the heating of the school halls.

A major problem is that of transferring pupils to areas where access to schools is not easy. The ministry of Interior Affairs, due to general lack of funds, does not pay in time the necessary money for the transfer of students, so the municipality is burdened with this, whose funds are very much reduced, so the gap created among the people in charge affects and burdens the school population.

The coverage of the functional educational needs for primary education is a major problem, since the municipality has received the last installment of the school year of the last two years and only 1 of the 4 doses of last year's, resulting in the fact that the funds available are scarce

Regarding the coverage of vacancies, the Ministry of Education and Trade unionists disagree on the real needs of schools, especially primary education.

The association of primary education teachers "Konstantinos Koumas" notes that PYPE Larissa has 123 functional gaps of teachers, 39 of kindergarten, 23 of English language, 8 of physical education and 22 of music, while for secondary and various specialties such as mathematicians and philologists, there is a surplus of staff.

Research

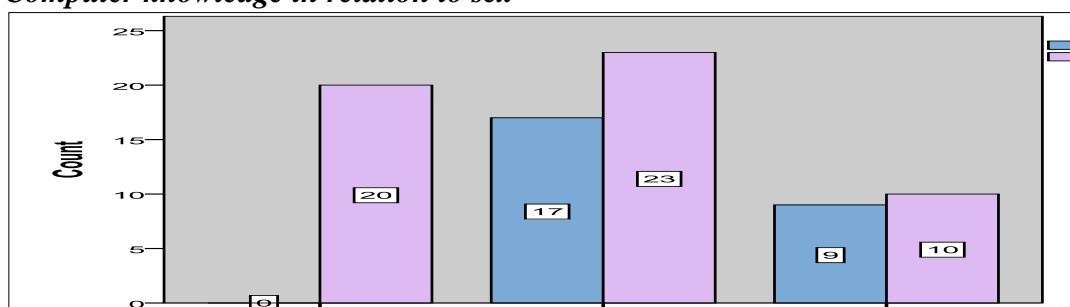
The survey was carried out in the year 2012 in 67 kindergartens and 49 elementary schools of the municipality of Larissa, a total of 116 school units. It is noted that the 84 school units that took part in the survey with the help of their directors and supervisors, constitute the 72% of the total population, which is a credible percentage on which conclusions can be drawn safely. The questionnaire, which was anonymously completed, belongs to the category of unstructured questionnaires, for example, it contains open questions mainly without a predetermined order. The type of question varies since there are closed-ended questions and others that require a free answer, which are answered by the person completing them. Their content covers both the influence of the environmental and the impact of economic operators on the sustainable development of school units. In addition, it contains some questions that help to understand the profile of the interviewees. The methods applied to the research and used for data analysis are descriptive statistics and factorial analysis.

Results

Gender, specialty, computer training and knowledge

Variable		Frequency	Percentage (%)
Sex	Man	27	32,1
	Woman	57	67,9
	Total	84	100
Specialty	Physical Education	4	4,8
	Kindergarten	41	49,4
	Teachers	38	45,8
	Total	83	100
Education	Universities	31	36,9
	Further training	14	16,7
	Second degree in UNIVERSITIES – TEI	17	20,2
	Graduate	17	20,2
	Phd	5	6
	Total	84	100
Computer knowledge	Yes	80	95,2
	No	4	4,8
	Total	84	100

Computer knowledge in relation to sex

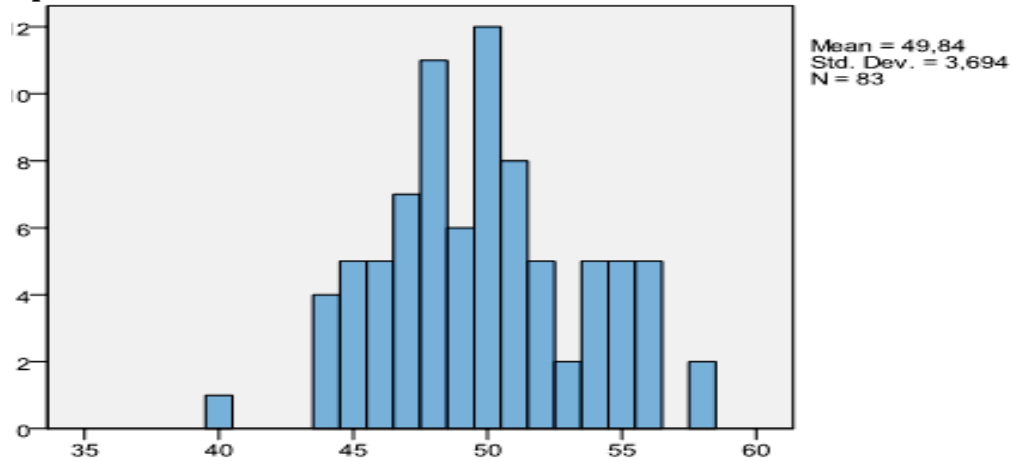


ACROSS: Level of computer knowledge DOWN: Count Sex: Men- Women

Computer knowledge in relation to sex

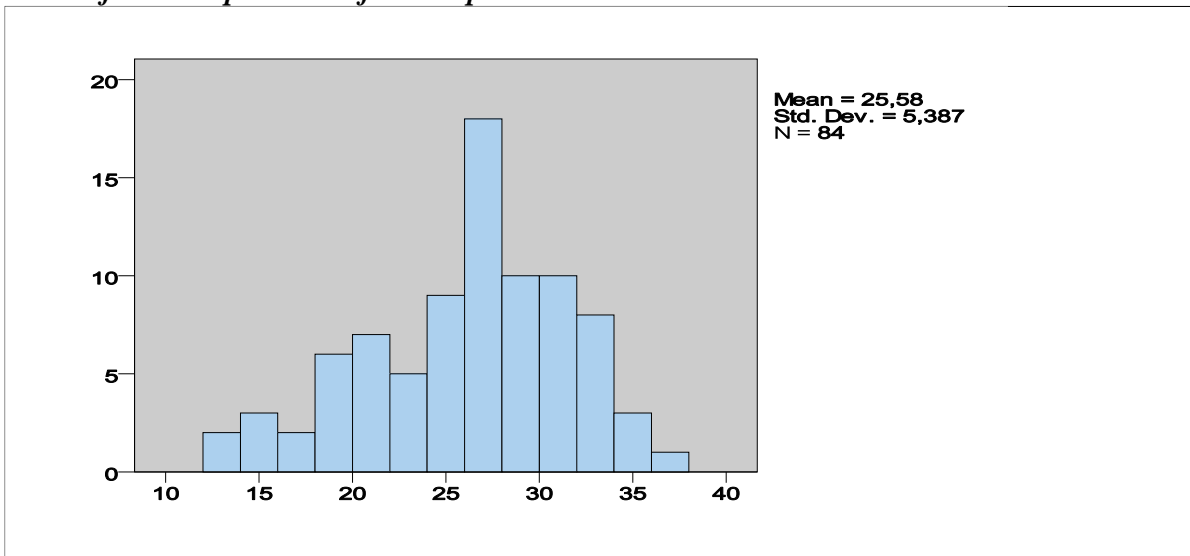
Men	0	17	9
Women	20	23	10
	medium	Good	excellent

Age of respondents



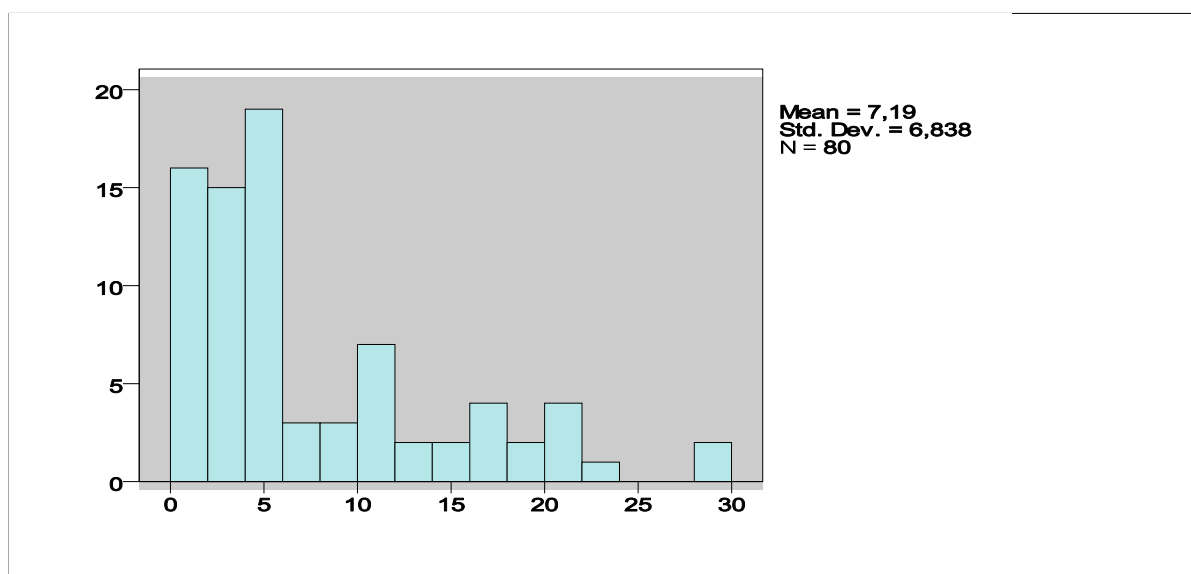
ACROSS: Frequency DOWN: Age

Years of work experience of the respondents



ACROSS: Frequency DOWN: Work experience

Years of work experience as a director/head principle

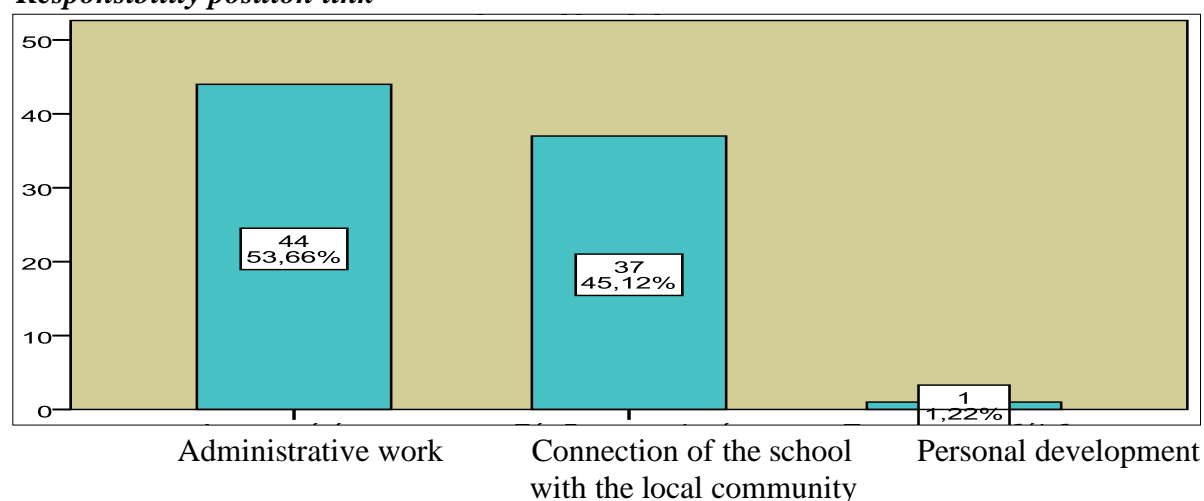


ACROSS: Frequency DOWN: Work experience as a school director

School Category

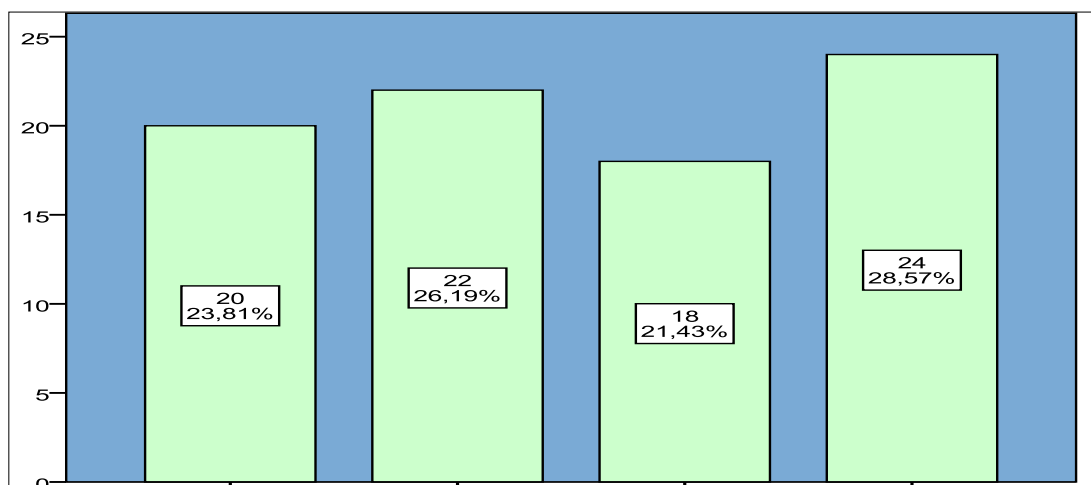
School Category	Frequency	Percentage (%)
One-seater	6	7,1
Two-seater	28	33,3
Three- seater	9	10,7
Four-seater	2	2,4
Six-seater	6	7,1
Eight -seater	2	2,4
Nine-seater	1	1,2
Ten- seater	3	3,6
Eleven-seater	1	1,2
Twelve-seater	25	29,8
Eighteen-seater	1	1,2
Total	84	100,0

Responsibility position link



ACROSS: Connection to the responsibility position DOWN: Frequency

School type bar chart



ACROSS: Type of school DOWN: Frequency

Pupils socio-economic status and its effect to the head principles of school units

Variable		Frequency	Percentage (%)
Socio - economic student status	Low	8	9,5
	Middle	74	88,1
	High	2	2,4
	Total	84	100
Effect from students socio - economic status	Yes	49	59
	No	34	41
	Total	83	100
Effect mode from students socio-economic status	Strengthens my intention to work intensively	23	46,9
	Prevents me from further actions to improve the school unit	17	34,7
	It makes me work when appropriate	9	18,4
	Total	49	100

Average price and standard deviation for square meters of surfaces

	Number of comments	Avg. price	Standard deviation
sq. m. of housing	59	734,73	709,053
Sq. m. of courtyard space	57	1425,47	1398,979
Sq. m. of green space	58	266,50	347,543
Sq. m. of outdoor sports facilities	50	309,00	525,736

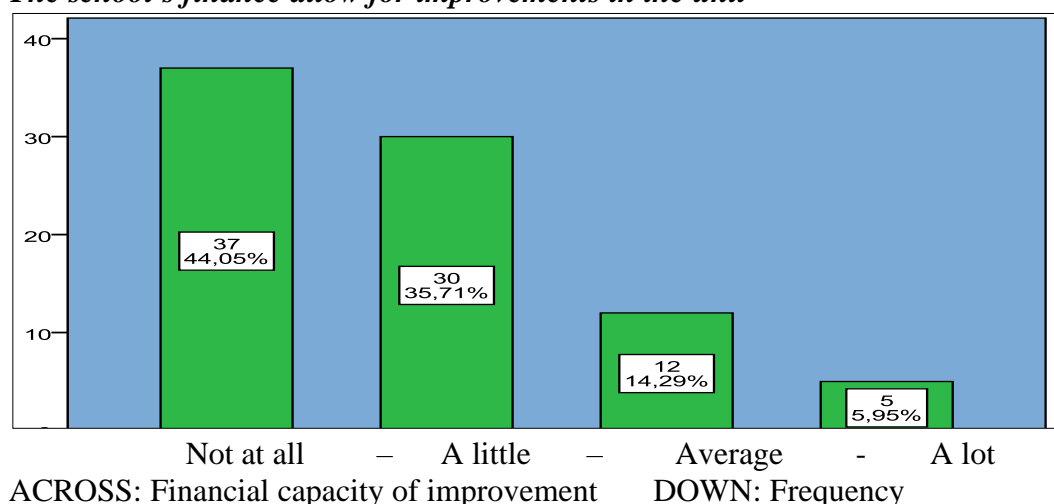
Main feature of sustainable development

Variable		Frequency	Percentage (%)
Main feature of sustainable development	Environmental protection	13	16
	Quality of life for citizens	34	42
	Rational management Human resources	34	42
	Total	81	100

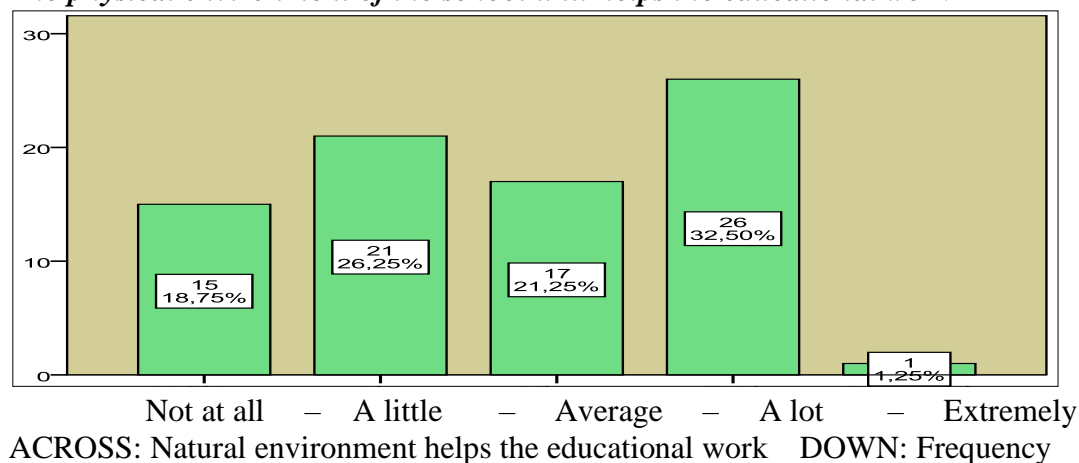
Actions adopted for sustainable development

	Yes	No	Total
Recycling program	64 (77,1%)	19 (22,9%)	83
Water program	15 (18,1%)	68 (81,9%)	83
Energy program	10 (12%)	73 (88%)	83
Program for composting	0 (0%)	83 (100%)	83

The school's finance allow for improvements in the unit



The physical environment of the school unit helps the educational work



Average satisfaction from various aspects of the school unit

	Number of comments	Avg. price	Standard deviation
Satisfaction from premises	84	3,30	1,015
Courtyard satisfaction	83	3,10	1,078
Safety satisfaction	79	3,24	1,003
Satisfaction from logistical infrastructure	83	3,16	0,917
Satisfaction from renovation and cleanliness in the building	83	3,25	0,867
Satisfaction from decoration and comforts	82	2,84	1,036

Classrooms and number of students

	Number of comments	Avg. price	Standard deviation
Classrooms	82	8,02	6,729
Number of students	83	128,05	108,724

Indoor gym, school canteen and housing another school unit

	Yes	No	Total
There is an indoor gym in the school	40 (48,2%)	43 (51,8%)	83
The indoor gym brings resources	21 (53,8%)	18 (46,2%)	39
Housing with another school	65 (78,3%)	18 (21,7%)	83
Problems of co-housing	Cooperation – Contact	Financial management	
	9 (13,8%)	31 (47,7%)	40
	Yes	Not	
There is a school canteen	49 (61,25%)	31 (38,75%)	80
There is proper cooperation with the municipality institutions	66 (79,5%)	17 (20,5%)	83

Environmental education and environmental programs

	Yes	No	Total
You have participated in an environmental education program	49 (59%)	34 (41%)	83
An environmental program is being implemented at this time in your school	26 (32%)	55 (68%)	81

Results

The purpose of this research was to identify the environmental and economic factors of the sustainable development of the school units of the municipality of Larisa, with the help of the school directors of the respective school units.

From the results of the survey, it is first observed that the school director's education level is quite high, although the increased interest in some kind of retraining reveals the tough

competition among them. There is a strong connection between age and years of work experience. Particularly encouraging is the fact that head principles are characterized by a sense of social responsibility, as there are only few who would declare resignation or inaction in case of need or economic distress.

As far as school units are concerned, although there is a lack of infrastructure and building facilities (48.3%), school directors are satisfied with their school facilities, but not satisfied with the offered decoration and amenities. It is also notable that there are no funds required by the State to promote sustainable development issues through environmental education. However, a very large percentage of schools are trying to raise awareness among children to protect the environment through a recycling program. Almost half of the sample argues that the natural environment in the areas where schools are housed does not help in the educational work.

Through the factorial analysis, the distinction of economic factors is as follows: "Exploit resources", "Cut costs", "Inform superiors and await their actions", "Do not fall under my duties and do no action". In environmental factors, the following emerged: "I utilize the local authorities and I implement improvement actions", "I inform superiors and I await their actions", "It does not fall under my duties and I do not do any action".

For a proper and active ecological course, both teachers and pupils should be aware of their rights and obligations to the environment. It is important that students perceive their connection with nature through environmental education. The participants, in this educational process, acquire important communication and social skills, increase their self-confidence, acquire social conscience, and at the same time learn to work in team spirit.

The natural environment helps the educational work with the satisfaction that the person receives from the courtyard space. The satisfaction of the premises is related to the satisfaction of the school's logistics infrastructure. Also, the safety is related to the satisfaction of the courtyard space, while the satisfaction from the renovation-cleanliness and the decoration is related to the building facilities.

In conclusion, the economic factor is being suspended because there is no adequate funding. The lack of building infrastructure is becoming the number one factor that is blocking growth towards a sustainable direction. This, however, does not mean an unconditional resignation but marks an intensity of efforts for environmental education with what is available.

Finally, the economic crisis seems to be affecting the education system as there is currently no program of environmental education in schools. Nowadays, environmental education programs are considered necessary in order to provide further knowledge to primary students. At the same time, future surveys that will examine teacher's views on environmental education will contribute to a better diagnosis of the problems and, by extension, to an invention of their solutions.

References

- Du Pisani P. L. (2006). Direct reclamation of potable water at Windhoek's Goreangab reclamation plant, Vol. 188.
- UNESCO, Education in Sustainable Development: An Evolving Concept
- Huckle John (2000). Sustainability Education: Guidelines for the reform of the analytical programme, Southbank University.
- Huckle J. (1994). Educating for a Sustainable Local Community, Local Management Noard.
- Flogita, E., Vasala, P. (2002). Environment and sustainable education. The energy issue. Approaches and dimensions – educational material for high school, Ellinika Grammata, Athens.

- Lazaretou th. (2002). Environmental problems and law, Ministry of Environment, Spatial planning and public works, National Centre for Social Research, General Secretariat for Youth, Athens.
- Mitoula R. (2006). Sustainable regional development in the European Union and reconstruction of the Greek urban environment, Stamoulis, Athens.
- Mitoulas N. (2005). "The children's scale, the school and the neighborhood" PhD thesis Hellenic Polytechnic University, Athens.
- Papadimitriou, B. (1998). Environmental education and School: a timeless vision. Athens: Printed.
- Tsamboukou-Skanavi, K. (2004). Environment and communication: right to choice. Athens: Kaleidoscope.
- Fargitakis G. (2001). Environmental education in Greece: Reality and perspectives, Athens.
- Fargitakis G (2010). Education for sustainability and environmental education, Athens.
- Saof H., 2008, Organization and management of education structures, Athens.
- Efstratios D., Sklavenitis N., Education and training systems structures in Europe, Greece 2009-2012.
- Larisa Department of Primary Schools. <http://are.lar.Sch.gr/>
- Digital cultural portal of Larissa Municipality. culture.larissa-dimos.gr
- Ministry of Education, www.minedu.gov.gr
- Greek Teaching Federation, www.doe.gr