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Teachers in Pedagogical Guidance of School Environmental Projects: Demands of the Undertaking Roles

Kalathaki M
Ph.D., Med, School Advisor for Secondary Science Teachers of West Crete, Regional Educational Administration of Crete, Director of the Training Center of Heraklion, Greece

Abstract : *The school projects of Environmental Education in Greek Secondary Education, have yearly duration and materialized voluntarily, beyond the school time, with institutional framework determined by laws and Ministerial Circulars. The coordinator, a teacher-member of the pedagogical team, who is responsible for the accomplishment of a school environmental concern's project and takes part in many team works with students and teachers, coordinates the educational actions in order the goals of the project to be achieved. Her/his role and responsibilities are not officially defined and vary for each project, depending on the project's topic and synthesis of the work groups.*

In this paper are analyzed the aspects of teachers of Heraklion Crete (Greece) county who have been involved in SPEEs in various ways about the profile of the Head/Coordinator of the pedagogical team who undertakes to carry out the project. The general objective of this research was to originate and derive the identity of the teachers who coordinate SPEEs. More specifically, the research focused on the reasons and the motives that make the teachers to resume the coordinating role, the demands of this role, the goals of the educational program that have to achieve, the problems which arise from the collaborated colleagues and the students who are members of the project teams. Also, it was investigated the education training that the teachers of Heraklion Secondary Education had received on thematic areas related to the Environmental Sciences and those they wish to receive.

INTRODUCTION

The School Projects of Environmental Education (SPEEs) in Greek Secondary Education have yearly duration and are materialized voluntarily, beyond the school time, as projects of Education and Culture connected to the school curriculum. Their institutional framework is determined by laws, Ministerial Circulars [laws 1892/1990 (official journal of the Hellenic republic 101tA') and 2986/2002 (official journal of the Hellenic republic 24tA'/13-2-02)], Ministerial Decisions G2/4867/28-8-1992 and G2/4915/16-9-96] and Circulars (e.g. 98498/G7/17-9-04). The Greek educational system has created conditions of bigger flexibility in the choice of subjects and drawings to work in the field of Environmental Education (EE), without obligatory integration of all school objects. That is the "Flexible Zone" in Primary and Lower Secondary Education where they can be enacted focusing education on environmental issues, with bigger orientation to the interests of students and the timeliness in the school courses (Michailidis, 2003).

For planning and concretization of a SPEE is required the constitution of Pedagogic Team with teachers of the school who undertake the responsibility of carrying out the project and support the collaborations of the whole school community, experts, scientists, local authorities, Universities etc. It is not enough only one teacher, of only one specialty, but is required pedagogic team that will approach the subject from a lot of sides (scientific, political, and social) and will also analyze the relations between them. The collaborations that develop with external institutions, related with the Environment and its protection, push the school to open the doors to the real life, to the world outside, in the society. This process promoted by the EE, liberates the students, henceforth, places them in the society in which they belong. Preparing young Europeans for active citizenship should promote a culture of democracy in schools, involving students, parents and teachers. Democracy requires a life-long learning process that has been practiced at own level (EC, 2007). Moreover, students involved in SPEEs, increase their self-confidence since they investigate problems and propose solutions outside the protective environment of family and school (Flogaiti, 1993).

According to UNECE Strategy (2005), ESD must use a wide range of educational methods, participatory and oriented processes in finding solutions tailored to learners. The method of inquiring essay, known in Greece as Project Method, is almost exclusively used in Greek SPEEs as the most interdisciplinary method of applying

EE in schools, offering individually modifications depending on each project's special needs (Frey, 1986). In active, experiential learning, which is promoted with this method, the students draw alone information and, work in teams, to approach the subject that the project negotiates (Khomo & Farley, 1999). The students are guided in the bibliographic research in libraries and web, in laboratorial and field research, in critical treatment of measurements and observations on export of conclusions, in the manufacture of models, in the recording of their work. The value of systemic approach as methodology in EE lies in the configuration of a synthetic way of school thought, where the environment is faced not only as unity of factors but as relations of interdependence and interaction, comprehending the significances of causality and time (Ragou, 2000).

Beyond the didactic energies of teachers of the Pedagogic Team, take place and important pedagogic interventions for the confrontation of inconsistency, the surmounting of obstacles and the guarantee of the project progress. According to Flogaiti (1993), the pedagogic strategies that will be used owe to include phases of investigation of the environmental problem and solutions, phases of collaboration and constitution where the students discuss, compare and publish information, opinions and perceptions, analyze situations, evaluate. Such type of educational strategies remove students from the passivity of listener and cultivate abilities of research, collaboration, objectivity, self-activity and action. The pedagogic strategies to which resort the teachers of EE are not meticulously prepared and drawn in advance but usually accidentally and of need to introduce them, including the promotion of initiatives undertaking by the students, games of roles and simulation, creation of debates in teams for disagreements and explanations at pairs, discussions and analyses of school behaviors, public debates and conferences, interviews, round tables etc. (Flogaiti, 1993; Kamarinou, 2000; Aegean, 2004).

In the beginning of the school year it is constructed the environmental team of students and the pedagogical team of teachers who will carry out, during the whole school years, one or more SPEEs. The head of these teams undertakes the role of the coordinator, the leader of the EE in school society. The role of the coordinator in the Greek SPEEs is not institutionally separated from that of the rest teachers of the Pedagogic Team that have the responsibility of the project's implementation (Circular 106137/G7/30-9-03 of the Greek Ministry of Education-YPEPTH). The roles that teachers of SPEEs usually undertake is issue of extended and long term discussions in the educational community in Greece, so became the purpose of the present research, in order to be clarified and identified the head's profile. The coordinator's role and responsibilities vary for each project, depending on the project's topic and synthesis of the work groups. The teacher-Head of the SPEE, as member of the pedagogical team, is responsible for the accomplishment of the SPEE, takes part in work groups and coordinates the actions and activities in order the project's goals to be achieved. His/her role and responsibilities are differentiated among the teachers, the way of the project's implementation, depends on how each one realizes the duty. She/he has to develop and coordinate the students and teachers of the project in collaboration with scientists, authorities, parents and other teachers, to undertake initiatives and actions, to solve problem and to arrange the total teamwork framework. But, the main goal that a coordinator has to reach is to make the students more sensitive on environmental issues and develop cooperation between the school community and the society.

The training of teachers on the EE was limited in Greece in the period the research was carried out. Only 12% of the teachers all over Greece, who served in schools of Secondary Education, had been trained in subjects of EE. In Heraklion prefecture, this percentage was much lower, about 4%. The specialties of trained teachers were various, mainly teachers of Greek Literature, of Natural Sciences and Mathematicians. The training seminars were optional and the interest of teachers was limited (Spyropoulou, 2005). The first specialty, is the more abundant in schools and their academic studies abstain a lot from the Environmental Sciences. The seminars were organized mainly by the Persons in Charge of the Local Environmental Education Offices, had general content with explicit however lack in the instructive and pedagogic methodology. Also, the Environmental Education Centers (Circular of Greek Ministry of Education G2/3219/FEK 451/23-5-95) provide educational programs one to four days to the environmental teams which visit them, accompanied with teachers. They, also, organize training seminars for teachers that dealt with EE. In a research of the Pan-Hellenic Union of Teachers who were dealing with EE, in Attica, resulted the usefulness of this type of seminars on getting the ideas about topics for SPPEs, the ways of communication and reflection on what teachers and students are carrying out and receive in environmental actions (Vatrikas, 2005).

Even many researches, from the beginning of previous century, try to determine the special characteristics of the Heads/Leaders in teams, have not led to secure and concrete criteria (Hollander & Offerman, 1990). The situations, the sought work and the project needs vary. The Heads/leaders are emerged in the team attempt to complete the

project work role, in order the targets to be achieved and to ensure the desirable social relations. The teachers who guide environmental teams must have strong, but distinguishable presence, to check everything regularly, to ensure the support, to encourage the students and the other teachers' of the pedagogic team (Fermeli, 2005). The educational projects require from the coordinator to have organizational and administrative abilities, also specialized knowledge in the transaction of documents and state affairs. Her/his role is not only to teach, with the strict significance of the sense, but also to give the students better directives for the achievement of project objectives. She/he acts, at some way, as director who makes the plan, proposes roles and characters, helps in front and back the stage, prompts and promotes. The students of the SPEE are the actors and actresses in the theatrical performance which is being prepared in simulation (Fermeli, 2005). The coordinators of SPEEs must have solid, evident and special knowledge in ecological, pedagogic and social subjects. Their contribution is significant in the right choice of what methodological frame will be applied, including pedagogic strategies and instructive methods of EE.

This paper contains the research results on the role of coordinators in SPEEs of Secondary Education of Heraklion prefecture, which were being carried out during the school year 2004-2005. In the paper are analyzed the aspects of teachers from Heraklion county, who had been previously involved in SPEEs, about how they had realized the profile of the pedagogical head/coordinator of a SPEE. Some research results have been already announced in Congresses (Kalathaki, 2005; Kalathaki, 2016).

METHOD

The research object was the determination of the profile of the teacher-pedagogic head/coordinator of the SPEEs regarding the responsibilities she/he undertakes and the roles that plays during the SPEEs' implementation. Aims of the research were to be described the characteristics of the teachers, the qualifications that they should assemble in order to correspond to the needs of their role, to accomplish the general objectives of each SPEE that they have to conquer, overcoming the difficulties that usually result.

Teachers of Secondary Education of Heraklion County, Crete, Greece deposited their opinions for the role of coordinator in SPEEs via questionnaires and interviews. They were all permanent with many years of previous experience in the schools of Secondary Education, with a sufficient percentage of them having increased scientific qualifications and multiannual experience in development of various school educational projects.

The strategic research methodology that was followed in order to approach the inquiring object was the quantitative analysis with questionnaires (Harris, 1986). For triangulation of the research results, additionally to the bibliographic investigation, were taken and two interviews from the Head of the Office of EE of Heraklion Secondary Education and a teacher with long experience in SPEEs (Bird et al, 1999).

The main tool for collection of data which confirmed the formulated opinions was the questionnaires with closed type questions. The questionnaires were surnamed, including the inquiry questions and scientific research hypothesis. They were delivered in printed form to the teachers who had to put their choices in increased sufficient scale, with the opportunity of selection of more than one answer, that's why the total percentages in many cases are not 100%. In order to put the choices in increased sufficient scale for classifying, the selections were Yes or No in each individual question.

The independent variables constituted by the personal elements of teachers, who were asked in this research, with regard to their studies. More specifically they were asked personal elements (sex, age), studies (basic studies, other degrees, postgraduate title of studies, foreigner language certification, knowledge on the handle of PCs, the number of the years that had graduated from University, current work-the type of Secondary school that they worked; if it was Gymnasium or Lyceum) and their previous experience in materialization of SPEEs and if they had been coordinators.

The dependent variables constituted questions that concerned the teachers' current and previous experience in implementation of SPEEs. The general objective of this research was to originate, to derive the identity of the teachers who coordinate SPEEs. More especially, the research focused on the reasons and the motives that make the teachers resume the coordinating role, the demands of this role, the goals of the educational project that have to achieve, the problems which arise from the collaborated colleagues and the students who are members of the project teams. Also, it was investigated the educational training that the teachers of Heraklion Secondary Education had received on thematic areas related to the Environmental Sciences and those they wished to receive.

18 questionnaires were answered by teachers who served in public Gymnasiums and Lyceums of both the province and the city, except one of them who served in private Lyceum. More specifically, the questionnaires were answered by

one teacher of Experimental Gymnasium, one of the Private Lyceum, five teachers who served in Gymnasiums of the city and five who served in Gymnasiums of the Province, two teachers of Lyceums in the city and four of the province one teacher that served in TEE.

The collected data from the questionnaires was grouped, categorized and statistically analyzed with software Microsoft Excel. The results were discussed in combination with the inquiring planning, the methodological frame and the theoretical questioning that had been developed relatively.

The bibliographic investigation of the research took place in the circulars of YPEPTH to the Addresses of Secondary Education and the relative published works.

In the closed type questions of the questionnaires existed a variety of alternative answers, so as not to limit and direct the choices. In most of them existed the possibility of "Else" answer with space where teachers could be differentiated and develop their own opinions.

Two unstructured interviews, in the form of discussion, became with the Head of the Office of Heraklion Secondary EE and an experienced teacher in EE from a Lyceum in order to have a more representative research sample and more reliable findings. The interviews, in combination to the completions of space "Else" of the questionnaires, offered explicit interpretation to the research aims, operating complementary to the numerical elements and the statistical analyses of quantitative research (Measor, 1984). Because the findings of the qualitative part of the research converge in most cases with the resulted of the analysis of questionnaires, they are not presented separately and individually.

The validity and the reliability of research are ensured by the representatively of the sample, the used tools for the data selection, mixed of quantitative and qualitative analysis, and the impartiality in the data analysis which functions as safety valve in the success of the survey (Bird et al, 1999). The number of the answered questionnaires is judged adequate according to the small number of SPEEs that are finally implemented every year in Heraklion Secondary Education prefecture. Additionally, the research was carried out in relatively short period, thing that ensures the stability in the inquiring environment, since that did not exist relative events that could cause significant changes and modifications in the methodology and recorded opinions.

RESULTS AND DISCUSSION

The sample of research consisted of teachers of various specialties who served in Gymnasiums (38%), in Lyceums (54%) and Technical Vocational Lyceums (TVL) (8%) of Heraklion Secondary Education. They had materialized at least one SPEE during the previous years. Half of them were men and the rests women. Mostly (85%) they were aged over 40 years. A certain percent of them (31%) had second degree of Higher Education and 15% had postgraduate titles of studies Master and PhD. Roughly half of them (46%) had certification of English Language and all of them knew how to handle a PC. More than 10 years had passed since they had completed their Academic Faculties. The 77% of the asked had coordinated in the past SPEEs and the 62% of them had been members of pedagogic teams of SPEEs. The 69% had participated in other types of school educational projects, called Projects of Health, Career, Cultural and Arts. A high percentage of 77% believed that they had very good knowledge of the institutional framework of school activities in EE. In very few cases teachers took advantage of the spaces "else" of the questionnaires to develop their own opinions, probably because the choices that the questionnaires offered them covered entirely all the tendencies, so the structure of the questionnaires didn't restrict the mind to express comfortably an integral opinion on the under research subject.

From the bibliographic investigation, there were not resulted remarkable comparable elements to those factors contribute to the constitution of the profile of SPEE's coordinator. It is a subject that does not appear to have been particularly inquired, probably because the role of the coordinator is not separated from the rest teachers-members of the Pedagogic Team.

Educational Methodology used in SPEEs

The methodological framework of SPEEs is referring to the pedagogic and didactic methods which promote the principles and goals of the EE with the best way in a SPEE, and they are much different to the used traditional methods in the classrooms where taught the school courses. The method of Inquiring Essay, known as Project Method, is exclusively used in the SPEEs as the most interdisciplinary method, with individually modifications (Frey, 1986). Roughly the half portion of teachers declared that they always use the method of Inquiring Essay (Project) in the SPEEs that they materialize (Table 1).

Table 1: % percentage of teachers declared about the methodology they used in SPEEs

Methodology used by coordinator	Always	Usually	Seldom	Never
Method of Research Essay (known	46	54	0	0

as Project Method)				
Alternation of the roles between teachers and students	8	69	23	0
Entrusting of team work	77	23	0	0
Sharing of responsibilities among the collaborators	62	38	0	0
Interventions in all the phases of the project-formative evaluation	46	38	8	8
Choice of the project topic jointly with the students	54	38	8	0
Determination of the project objectives jointly with the students	54	31	15	0
Evaluation of the projects	77	23	0	0
Dissemination of the results at the end of the project	54	46	0	0
Open Conference to the school and local community at the end of the project	23	46	31	0

The interviewed teacher said that "teachers try to use energetic participative methods in the conquest of knowledge even if this is not attainable in all the cases". During SPEE's implementation, the traditional roles of teachers and students are often reversed as students explain to the teachers things what they ignore, relatively to the New Technologies. This knowledge does not emanate from the school courses learning but are gained with non-formal education (kamarinou, 2000). Most of the asked teachers always entrust work at teams (77%). As it is widely known, the main characteristic of the didactic methods that were followed in the materialization of EEPs is the students' work in teams. Didactic research following in SPEEs is a team teaching procedure with exchanged roles of teachers and students (70%). Roughly half (54%) select always and jointly with the students, the topic and content of the project, while remainder 38% does it usually and 8% seldom. Also, roughly half (54%) determinates of the project objectives jointly with the students, while remainder 31% does it usually, and the rest 15% does it seldom. In the same table are presented also the percentages of teachers, when they are coordinators, who allocate always competences and responsibilities with their collaborators (62%), while remainder (38%) make this usually. The 46% of the asked teachers wanted to intervene always in all the phases of the project, the remainder (38%) intervene usually, while the 16% do not intervene ever.

Most teachers (92%) engaged with EE, as well as the interviewed teacher, declared that they connect the project subjects to the curriculum of the school courses that they teach and all of them, without exception, make reports and spend lesson time in discussions on relative subjects with the cognitive content of the project and taught courses.

Most of the teachers (77%) always make evaluation of the project, while the remainder only occasionally. "A special simple form of the SPEE's evaluation is sent to schools at the end of school year to be supplemented by the coordinator and dispatched to the Office of Environmental Education of the Secondary Education Administration of Heraklion, accompanied with the final report of proceedings", as the Head of Heraklion Secondary EE mentioned in the interview. Less than half (46%) declared that they always make Presentation Conference at the end of the school year to disseminate the project's results. Few of those organize such meetings, that are only addressed to school community (23%), while, remainder invite the local society (46%) or even expand in wider gamut (31%). The presentation of project work is also evaluation of the project that is not restricted only in the description of the project but has the character of analysis.

Organization of educational visits

The coordinator usually undertakes the preparation of the educational visits in the framework of the SPEE (Table 2). She/he informs the Director and the colleagues in the school about the dates and the activities of the visit.

Table 2: % percentage of teachers declared about the organization of educational visit in the frame of SPEE

Difficulty	No	Not so much	Yes	I do not answer

Is it a big headache?	0	54	46	0
If the coordinator undertakes the organization does visit have bigger success?	15	31	54	0
Would you like to avoid the visit's organization?	61	23	15	0
Is the visit's preparation easier at EEC?	15	15	70	0

The organization of the educational visit appears to be great nuisance (46%) or relatively big (54%) headache for the teachers who materialize and coordinate SPEEs. A great number of them (61%) would like to avoid that. They consider, at percentage 54%, that if the coordinator of project undertakes the visit's organization, the success is greater. The 69% of those asked sustained that the weight and the pressure of organizing an educational visit become lighter, if the visit takes place in Environmental Educational Centers. "The reasons that everything around the visit becomes easier is that the experts of the Centers undertake to guide the students in the regions where they have developed the special education Project" (Interviewed teacher and Head).

Support to the implementation

The teachers who materialize SPEEs are supported mainly by the Persons in Charge (Head) of the Environmental Education of local Administrates of Secondary Education Heraklion prefecture (57905/G2/4-6-2002, FEK745/14-6-02 Ministerial Decision) who watch, support and evaluate the projects, visit the school, organize meetings of environmental teams and events in the end of the school year in order for the SPEEs to be presented (interviewed Head). According to the Circular of Greek Ministry of Education G2/3219/FEK 451/23-5-95 on Environmental Education Centers' foundation and operation, "the Centers provide educational programs of one to four days to student teams that visit them, organize training seminars for teachers, produce specialized educational material, develop national and international collaborations and thematic school networks" (interviewed Head). Moreover, "various Institutions, Organisms, Companies, Unions, as Agricultural and touristy, or Feminine Cooperatives of Countryside which are activated in the field of EE, Protection and Culture can collaborate and contribute in SPEEs. Also, the local Municipal Authorities usually offer important support to the students of the environmental teams" (interviewed Teacher).

Table 3: % percentage of teachers who declared about the received support as coordinators of SPEE

Support Source	% Percentage
Teachers-Colleagues of the school	85
Director of the school	69
Person in charge (Head) of Secondary Environmental Education	77
Teachers of the project's Pedagogic Team	54
Environmental Educational Centers	31
Local Municipal Authorities	54
Local Institutions, Organizations, Unions etc.	46
Higher Education Institutions	15

The greatest portion of asked teachers usually find support in their workplaces from their colleagues (85%) and the school director (70%) (Table 3). Also, the environmental teams are supported by the Person in Charge of Environmental Education Address of Secondary Education (77%), other teachers that have already carried out SPEEs (54%), the Environmental Educational Centers (31%), the local Municipal Authorities (54%), various local institutions, organizations, Companies, Unions etc. (46%), the Higher Education Institutions or else (15%). Sustainable development requires the meaningful involvement and active participation of regional, national and sub-national legislatures and judiciaries, and all major groups as women, children and youth, indigenous people, non-governmental organizations, local authorities, workers and trade unions, business and industry community, the scientific and technological community, and farmers, as well as other stakeholders, including local communities, volunteer groups and foundations, migrants, families as well as older persons and persons with disabilities (Rio+20, 2012).

Reasons and motivations for undertaking the coordinator role

The reasons that prompt a teacher to undertake the role of coordinator of a SPEE appear

to vary (Table 4). The motivations and the reasons that lead the teachers in undertaking the coordinator role seem to have been cleared enough by the teachers themselves. More specifically, in the question about the motives and reasons that lead the teachers to undertake the coordinator role, none of the asked teacher supported that the motives are economical or in minimal cases (23%) subject of prestige.

Table 4: % percentage of teachers answered affirmatively about the reasons and motives of undertaking the coordinator role in SPEEs

Reasons of undertaking of the role of coordinator in SPEEs			Motives for teachers to undertake the role of coordinator in SPEEs
	% percentage		
Economic reasons	0	0	Economic reasons
Prestige Subject	8	23	Subject of prestige
No governing commands from the others	15	46	Solution of need, because somebody must undertake the project coordination
Need to offer more than the obligatory	77	15	I do not answer
Inquiring disposal	62	15	I do not know
Acquisition of experiences	46	23	Else
Wish to live different than the routine of the everyday life	31		

Approximately, half of them (46%) believed that it is a solution of need because somebody should undertake the coordination of the project. A very small percentage (15%) declared that they did not know why this happened or probably, some teachers did not tolerate other governing commands (15%) and they preferred to do it by themselves. About half of them chose to materialize a SPEE because of the acquisition of experiences and to escape from the routine of everyday life (31%). Remarkable is the higher percentage of 77% of the asked teachers who declared the need to offer in the Education more than the obligatory. In the field "Other" some of them wrote that they undertook the responsibility for the students' benefits. The common characteristic of all the teachers of the pedagogic teams is the tendency to offer more than the obligatory, the inquiring disposal in sectors different from their special object, the acquisition of experiences and generally the wish to spend certain hours in a different way than they used to.

Training Needs in Materializing Environmental Projects

The training needs on EE of the asked teachers varied. The following didactic methods, techniques and strategies in SPEEs had very little or at all taught in the Universities. In table 5, are presented analytically teachers' needs of training escalate with increasing percentages as follows: Use of Internet-emails (8%), handle PCs (15%), subjects of behavior (15%), laboratorial methods and techniques (31%), pedagogic methods (38%), didactic methods (38%), Ecology (54%). The incorporation of multiple approaches of subjects in the educational process is not simple, comes in conflict with the traditional teaching methodologies and, in general, with all the structure of the school curriculum and syllabus, without proper teachers' training, which, in the period that the research carried out, was one-dimensional and one-branched, only, in the frame of the scientific specialty (Flogaiti, 1993).

Table 5: % percentage of teachers that declared about their Training Needs in Materializing of SPEEs

Training Needs	% percentage
Laboratorial methods and Techniques	31
Use of PCs	15
Internet and emails	8
Ecology	54
Issues of behavior	15
Pedagogical methods	38
Didactic methods	38

As revealed by the analysis of questionnaires, the asked teachers had received in the past relatively good training on the organization of a SPEE but not however in the coordination. The

1/3 of the teachers declared that they had not had training for the coordination of a SPEE, while 90% of them had received general training relative with the concretization of the projects. The 69% wished to have training in subjects that concern the coordination while the 92% expressed wish of general training relative to the concretization of the SPEEs.

Sources and Causes of Problems in the Implementation of Projects

As it happens in all educational processes, also in SPEEs, with so many persons involved, problems are created with significant impact on the project, even in its viability. According to Carr & Kemmis (1986), main source of problems in the materialization of SPEEs are the restrictions of institutional frame of school programs and allocated time. The teachers of the pedagogic teams and the coordinators are not informed and remain without help for all those they could make by themselves in their limited space and needs of the educational actions. There are not supplies for the development of an inquiring syllogism that would allow them to analyze the parameters of the problems they face, to draw ways of surpassing them, knowing a line connecting the practice of finding alternative solutions and to assess them with systematic and effective way.

A variety of problems come from the teachers or students, and in some cases they can prevent the smooth concretization of the SPEE (Table 6). The 70% of the asked teachers do not face problems with their colleagues during the project implementation. According to the remainder 31%, difficulties that come up are caused by various factors. The main of them seem to be the weaknesses of developing collaboration (31%) and in equal percentage, the personal characteristics of the colleagues. The attitudes and behaviors toward social and environmental subjects (23%), as well as insufficiency of the cognitive object and the personal characteristics of the colleagues doesn't seem to negatively affect the project. Also, in minimal percentage pedagogical insufficiency of colleagues (7%) causes problems to the EEPs.

Table 6: % percentage of teachers declared about the sources and causes of problems in the implementation of SPEEs

Source of the problems	Causes of problems	% percentage
From Teachers members of the Pedagogical Teams of SPEEs	Attitudes and behaviors against social and environmental subjects	23
	Insufficiency in the required cognitive objects of SPEE	23
	Insufficiency in pedagogical issues	8
	Psychological and sensation world	23
	Personality/ Character	31
	Weaknesses in developing collaborations	31
	Inconsistency in the undertaken obligations	31
From Students members of Environmental Teams of SPEEs	Danger to cause accident	23
	Unanticipated tendency of infringement	15
	Initial enthusiasm-disappears later	69
	Inconsistency in undertaken obligations	46
	Juvenile oppositions that marginalize or elect different students occasionally	31

The most frequent problems that are presented in the School Environmental Teams are related to the puberty of students that have initially great enthusiasm because of their attendance in the project but over time they become inactive (69%). The juvenile oppositions that marginalize and elect individually different students occasionally (31%) cause problems in the EEP. The danger of accident (23%) and unanticipated tendency of infringement (15%) cause less frequently problems to the EEPs. The inconsistency in the obligations undertaken by the students (46%) and the teachers (31%) play confidential role in the project teams. Work that has been assigned could remain semi-finished, cause confusion or even reformation in the team, if it is not led finally to inactivity and inaction.

Requirements of the Role of Project Coordinator

All teachers asked in this research, without exception, agree that the role of the coordinator requires abilities to develop and manage collaborations with persons, institutions, bodies, offices and authorities (Table 7).

Table 7: % percentage of teachers declared about the requirements of the role of coordinator in SPEE		
Requirements of the role of coordinator	**% percentage**	
Organizational, administrative abilities	54	
Knowledge of transaction of documents and administrational affairs	23	
Ability of developing collaborations	100	
Ability of analysis of environmental subjects	77	
Special knowledge of ecology, pedagogical subjects	38	
Knowledge of laboratorial methods and techniques	15	

The 54% believe that are required organizational and administrative abilities. Most of them believe that the coordinator should be able to analyze environmental subjects (77%). In fewer percentages, they declare that the projects' coordinators is good to have ecological knowledge (38%), knowledge of transaction of documents and affairs with public Administration (23%). A very small percentage (15%) believes that the knowledge of laboratory methods and techniques are necessary for the role of the coordinator.

The coordinator should have clear idea about the environmental problem that is examined so as to be able to enlighten the students, whenever it is necessary, how are connected all those that have been found and assembled (Fermeli, 1999). Students in the process of learning, are in need of an experienced, in charge person to support them (Michailidis, 2003). In the same direction, the asked teachers declared in high percentages that requirements of the coordinator's role are the ability to analyze environmental subjects, organize and administrate. The role of the Head teacher in the introductive meetings is decisive for the communication and the effectiveness of the teams (Whittington, 1986). "The coordinator should emit warmth and directness, clarify the objectives, the operating terms of of the team, the work that should be carried out and summarize what has become up to now" (interviewed Teacher). To be effective a national coordinator of UNESCO Associated Schools must show leadership qualities and know how to encourage and motivate teachers and students, possessing at the same time organizational, management and communication skills (UNESCO, 2006).

Goals that a Coordinator has to Achieve

To give the knowledge that the coordinators and, generally, the teachers of the pedagogic team have in the subjects of the SPEEs (8%) or to improve their knowledge and perceptions in environmental subjects (15%) do not seem to constitute priorities in the goals that they have to conquer (Table 8). The coordinator, as the rest of the teachers, keeps company with the young students, conceives their concerns for the environmental problems, expands their horizons, and encourages them to undertake concrete initiatives, not only to realize problematic situations and wait for some solutions coming from others but to undertake action by themselves (Michailidis, 2003).

Table 8: % percentage of teachers declared the goals that a coordinator has to achieve in a SPEE	
Goals	**% percentage**
Constructive collaboration with colleagues of Pedagogic Team	46
Transport of knowledge to the others	8
Sensitization, incentive of students of Environmental Team	85
Sensitization, incentive of teachers of Pedagogic Team	54
Improvement of ecological knowledge	15
Appointment, culture of dexterities of collaborators	62
Other: (e.g. Love of the environment)	15

The constructive collaborations (46%) that the coordinator has to develop with his colleagues who are members of the pedagogic team and their sensitization (54%) received mediocre rates of choice, in contrast to the choice of the effort that has the coordinator of sensitization of students which was selected almost by all (85%). The quality of relations of the team members shapes their social and sentimental climate. When each member feels free to contribute to the common effort, to meet the diversity of the others, to negotiate with them, to ask for their help, without being afraid that he/she will confront their arrogance, irony or animosity, then the team spirit works positively on common and individual goals. (Michailidis, 2003). The main goal that has to be

conquered by a SPEE coordinator is, first of all, to sensitize the students to work constructively in teams with the guidance of a pedagogic team, applying the project's timetable with the selected activities, in accordance to the project targets. In the fields "Else" of the questionnaires the teachers expressed the aspect that the student benefits must be the main goal of SPEE. In the same field, they also wrote "The students must mainly gain experience from a SPEE, to be well-known of the object of the project and be attached to the project goals, in all the levels of the work". The transformation of the environmental knowledge from the coordinators to the rest teachers for the improvement of their knowledge selected in low percentages.

Secrets for Success of Coordinator

Almost all the teachers (92%) consider that the top secret of the success of the SPEEs' coordinators is to accomplish with the goals and choices of the project and stir the interest of students and teacher to continuously participate (Table 9). The guidance of the pedagogic team in the detailed and realistic planning of the project timetable guarantees the success of the Coordinator

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Table 9: % percentage of teachers that declared the secrets for success in SPEEs

Secret of success	% percentage
Observance of balances among collaborators	23
Observance of balances among students	38
Observance of balances in collaboration of students and teachers	15
Cause disposal of obedience to the students	30
Accomplish the conformity of teams to directives	30
The choices and ways to stir the interest	92
Other: (eg: be friend with students, to be achieved objectives, etc.)	8

The questionnaires choices of achievement of balances between students and professors received relatively low percentages (from 15 to 38%). Vigotsky (1997) emphasizes the social dimension of the knowledge structuring, namely the interaction of learners with the social environment, their classmates and teachers, considering that higher mental functions are derived from social life, which first appear as interpersonal and then internalized by the child. The educator in EE, actively, is not focused in the transmission of ready information and models but encourages, organizes and supervises all the educational activities, proposes sources of information, ways of approach and treatment of data, causes discussions, helps the treatment and understanding of new concepts, new methods of research, imports educated in new fields of thought and reflection (Flogaiti, 1993). Thus, the guidance in SPEEs is exceptionally important and difficult and radically different from the traditional teaching in school courses.

CONCLUSIONS

In conclusion, materializing a SPEE is not an easy issue. Many problems appear in the procedure, coming from the colleagues and the students. In many cases these problems may terminate the SPEE. The difficulties vary from school to school and from year to year, depending on the composition of the teams and the selected collaborators. Dangers, usually, are not visible from the beginning and create unpleasant situations, linked to parents, students, external collaborators, the heads, and more seldom, the local society. In other cases, the relatively high inconsistency of the students in the project works causes confusion in the team and is required team reformation, if it is not lead finally to inactivity and inaction. Coordinators can give "breath" to the environmental teams every time it is needed, keep balances in the adolescent relations, encourage the undertaking of initiatives. They develop innovative pedagogic strategic and original practical and instructive methods that abstain a lot from prevailing in the traditional education.

Secondary teachers of Heraklion, Crete (Greece), in a description of SPEE's Pedagogical Head's identity, attribute some common characteristics to all the teachers who undertake voluntarily this role, concerning their organizing ability as well as the fact that they are keen on making research and gaining new experiences. Pedagogical Heads are willing to work hard and beyond their working hours, generally to get out of the daily routine. On the one hand, educational projects require much work and effort, but on the other hand there are lots of significant benefits. Students and teachers can escape from monotonous school time, school opens up into the society pointing values and new attitude and behavior standards with a view to the everlasting handling of the environment.

The main goal that Head of the pedagogic team/Coordinator of the SPEE should reach, is to make both the students and the colleagues, more sensitive on environmental issues and develop multiple and effective cooperation among students,

teachers, school director, scientific and local community. The success's top secret is hidden in the commitment to the principles and objectives of the EE and in undertaking initiatives with leadership abilities.

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