



Educational Partnerships as a Way Towards Quality Education for Sustainable Development and a Way Towards Sustainable Society: The Case of Slovenia

LES PARTENARIATS DE L'EDUCATION EST UNE DES VOIE MENANT L' EDUCATION VERS LA QUALITE, ET LE DEVELOPPEMENT DURABLE MENANT VERS UNE SOCIETE DURABLE: LE CAS DE LA SLOVENIE

Branka Likon¹; Tuula Asunta^{2,*}; Tanja Benčič Rihtaršič³; Ana Vovk Korže⁴

¹Primary school dr. Aleš Bebler-Primož Hrvatini, Koper, Slovenia

Email: branka.likon@guest.arnes.si

²Department of Teacher Education ,P.O. Box 35, 40014 Jyväskylä University, Finland

Email : tuula.a.asunta@jyu.fi

³Secondary Economic and Business School in Koper, Slovenia

Email: Tanja.Bencic@guest.arnes.si

⁴The International Centre for Ecoremediation at the University of Maribor, Slovenia

Email: ana.vovk@uni-mb.si

*Corresponding author.

Email: tuula.a.asunta@jyu.fi

Received 25 June 2011; accepted 29 July 2011

Abstract

Education partnerships are essential in endeavor for quality education for sustainable development. The understanding of the sustainable development is very complex and has to be interdisciplinary and take into consideration different sustainable dimensions and correlations between those areas. At the same time the concept of shaping competences for the sustainable way of life has to be followed. The main objectives of this paper are (1) to identify which institutions should be actively involved in educational partnerships, (2) to investigate inclusion of sustainable development into school curricula and to determine which competences should be developed, and (3) to investigate inclusion of sustainable development in teaching and learning process. The article is based on review of literature and researchers about educational partnerships for ensuring education for sustainable development in Slovenia as well as on examination of previous research findings about inclusion of sustainable development in school curriculum. Analysis of inclusion of sustainable development in teaching and learning process is based on questionnaires for pupils, parents and teachers. The preliminary research has been carried out in autumn 2008, but it has limitation because of a small sample which has been taken into research. This study shows that first educational partnership

networks as well as school curriculums which will ensure implementation of sustainable development as cross curricular are developing. The article presents some proposals for inclusion of different activities in teaching and learning process which could have an impact on pupil perception about necessity for preserving natural and cultural heritage and which could have an impact on pupil's behavior towards sustainability. The presentation of research findings points out that the current understanding of the sustainable development in schools in Slovenia has its own limitations which should be taken into consideration in further planning and implementation of activities in education to achieve the national agenda of the sustainable development of Slovenia.

Key words: Education; Sustainable development; Partnerships; Competences; Teacher performance; Learning objectives

Résumé

Les partenariats éducatifs sont essentiels dans l'effort d'éducation de qualité pour le développement durable. La compréhension du développement durable est très complexe et doit être interdisciplinaire et prendre en considération les différentes dimensions durables et les corrélations entre ces domaines. L'approche holistique est une méthode pour comprendre le développement durable de telle façon que cela permettrait à la préservation de l'environnement et dans le même temps assurer le développement économique et social. Il devient de plus en plus important que les jeunes puissent acquérir les compétences pour le mode de vie durable au cours de leur scolarité afin qu'ils sachent comment prendre des décisions appropriées concernant le choix des ressources énergétiques, l'utilisation des ressources naturelles et la planification durable.

Les principaux objectifs de cette étude sont (1) pour déterminer quelles institutions devraient être activement impliqués dans des partenariats, (2) pour

Integral development of educational partnerships in Slovenia for sustainable development is included in documents of education and development of Slovenia. Sustainable use, consumption, economic policy on environmental protection and improvement of degraded areas are priority topics in Resolution on Research and Development Program for the Period 2006-2010 (Republic of Slovenia, Ministry of Higher Education, Science and Technology, 2005). The improvement in the quality of the environment and improvement in the quality of the education as well as quality in research and development activities is emphasized in Slovenian National Strategic Frame of Reference 2007–2013 (European Communities, 2007). Operational Program of Human Resources Development for the Period 2007–2013 (Republic of Slovenia, Government Office for Local Self-Government and Regional Policy, 2007) and Operational Program of Environmental and Transport Infrastructure Development for the Period 2007–2013 (Republic of Slovenia, Government Office for Local Self-Government and Regional Policy, 2007a) point to numerous aspects that should be taken into account when interfering with the environment. All topics included in above mentioned documents should be topics of education for sustainable development and connectedness of education, research and business should be encouraged.

Education for environment as a cross-curricular area represents the central part of education and training for sustainable development according to The United Nations Educational Scientific and Cultural Organization (UNESCO) «Strategy for education and training for sustainable development» (UNESCO, 2006). Comprehension of education for environment, which mainly emphasized knowledge of environmental problems, care for clean environment and preservation of natural heritage together with improvement of man's attitude to nature, is now being expanded by including aims and principles of education for sustainable development to studies of complex relationships between nature, society, and economy. Education for environment must necessarily include understanding and solving problems and conflicts that come along with the changed lifestyle and with socio-economic and technical development. This can be made neither by school nor by the state alone, but in strong cooperation between all those competent for education and development. The United Nations guidelines and recommendations for reorienting teachers' education to address sustainability (UNESCO, 2005) include recommendations on developing partnerships. It also includes recommendations about strengthened partnerships between teacher-education institution and elementary and secondary school and such organizations as museums, outdoor education sites and nature centers; to strengthen local, regional and international networks by sharing ideas, experiences and materials and maintaining the vision of a sustainable

world. Those guidelines will be important for future development of educational partnerships in Slovenia.

United Nations Economic and Social Council (UNECE) «Strategy for education for sustainable development» has been adopted in 2005 on the High level meeting of environment and education ministries (United Nations economic and social council, 2005). It has been agreed there is a need to continue with environmental education and at the same time address the wider concept of education for sustainable development. On the meeting it has been stressed the importance of building networks between governments, schools and universities and between people active in education sector. Building networks with industry has been also mentioned. Slovenia endeavors to incorporate more elements of education for sustainable development into educational system. Guidelines for education for sustainable development from preschool to university education have been adopted in 2007 (Republic of Slovenia, Ministry of Education and Sport, 2007). The main aim of guidelines is to emphasize the meaning of education for sustainable development and point to the possibilities for the implementation on sustainable development into formal and informal learning. The National Education Institute has prepared material about strategies for inclusion of sustainable development into individual subjects (Marentič Požarnik et al., 2007). The renovation of school curricula for environmental education, as an interdisciplinary area for secondary grammar school (Zupan et al., 2008) and for primary school (Zupan et al., 2008a) emphasis that aims of environmental education as education for sustainable development are achieving through individual obligatory subjects, optional subjects and different activities as well as projects. Both curriculums place stress on partnering collaboration of school with different institutions. The National Education Institute also ensured the translation of "Quality criteria for ESD schools – Guidelines to enhance the quality of Education for Sustainable development" (Breiting et al., 2008).

Topical issues in this article are: (1) to identify which institutions should be actively involved in educational partnerships for sustainable development; (2) to investigate inclusion of sustainable development into school curricula (3) to determine which competences should be developed through education for sustainable development (4) to disclose opportunities for partnership participants to achieve learning objectives from the field of sustainable development and (5) to disclose opportunities to improve teacher performance. At the beginning is presented analysis of situation on the field of educational partnership for sustainable development in Slovenia. After the analysis of inclusion of sustainable development into school curriculums article presents the research results about inclusion of sustainable development in teaching and learning process. The article present some proposals how teachers could improve their performance by

including activities in teaching and learning process which could have an impact on pupils perception how necessary is preservation of natural heritage as well as could have impact on their behavior towards sustainability. The presentation of research findings points out that the understanding of sustainable development in Slovenia is still too narrow.

The central question of research refers to the interpretation of the state of school partnerships today as regard the fact that schools should be more vital parts of society, that they should be centres of knowledge in local communities and promoters of sustainable development. It is known that there are a lot of activities going on in schools, but they do not meet with a wide response in public; a lot of work is done which should be evaluated as an innovative contribution of school to society and state. The main problem of a bad response to school results is lack of partnership networks that would enable more sustainable work of schools in the region. Therefore this article aims to encourage collaboration of schools with other institutions, communities, faculties, societies, institutes, non-governmental organizations and the state so that all together could achieve more easily harmonious and environmentally balanced development.

1. METHODOLOGY

Analysis of the situation in the field of education partnership

The first part of this article includes review of literature about educational partnerships in Slovenia which have the goal to ensure education for sustainable development. Literature about forming above mentioned partnerships and results of partnerships has been studied. The analysis of data about projects aimed toward sustainability which was carried out in different forms of partnerships is included. This part of research is based upon the analysis of the documents, especially yearly reports about concluded project (Ministry of Education and Sport, Ministry of Environment and Spatial Planning, National Educational Institute Slovenia, Centre of the Republic of Slovenia for Mobility and European Educational and Training Programs (CMEPIUS), Ecoremediation network (ERM), ...). Afterwards the publications of project results via Ministry of Education and Sport and CMEPIUS were examined and it was established that there exist network projects between schools and other organizations and that very few school partnerships relate to the field of environment or sustainability.

Analysis of inclusion of sustainable development into school curricula and development of competences for sustainable development

The second part of article present previous research findings about inclusion of sustainable development into school curriculum. Documents about development of

school curriculums for environmental education as cross-curriculum education have been studied. The National Educational Institute has carried different projects and their consultants connected specialists from the field of education and from the field of sustainability. The aim was to investigate the state of environmental education as education for sustainable development and to develop school curricula for environmental education as an interdisciplinary area. The important aims are also to disclose possibilities for more intensive collaboration and to renew the curricula and improve teachers activity based and collaborative teaching methods. The discussions about competences in the area of education for sustainable development are presented.

Analysis of inclusion of sustainable development in the teaching and learning process

Aiming to find direct answers of the participants in the pedagogical process we prepared the questionnaires for pupils, parents and teachers. Two schools participated in the survey in autumn 2008. Three different questionnaires were designed, referring to the area of sustainable development, and sent to teachers (30), parents (100) and pupils (100). The target groups were: pupils of different age (2nd and 3rd cycle of primary school, for pupils from age 10 to 14), their teachers and their parents. The pupils responded during their classes, they presented the questionnaires for their parents at home and returned them to their teachers. The teachers responded during their working time at school. Altogether 96 pupils, 68 parents and 18 teachers did respond.

2. RESULTS

Analysis of situation on the field of education partnership

In reviewing the literature and researches about education partnerships for ensuring education for sustainable development in Slovenia one does not find numerous examples of comprehensive and formal partnerships. Rather one does find individual partnerships between schools and institutions like specialized faculties (e.g.: pedagogical faculties, faculties and schools for wood and forestry, biotechnical faculty, faculty of chemistry and chemical technology), or schools and individual organizations and local community. Also individual schools are trying to find ways of cooperation with research institution and local enterprises.

Some schools are networking and Ministry of Education and Sport has supported networking with calls for applications called "Hidden Treasure" since 2002. That is organizationally carried out by National Education Institute. Only seven two-year projects on environmental issues have been concluded in school years 2003/2004 and 2004/2005 among more than 70 concluded projects (Republic of Slovenia Ministry of Education and Sport,

Hidden Treasure, 2003/2004 and 2004/2005). Calls for applications in years 2006 and 2007 were oriented to encourage education for sustainable development. Projects could be applied to four different areas: Culture and creativity, Civic education and democracy, Health and Environment, Connectedness of environment, economy and society. The majority of projects, 19 from 26, were oriented to "Culture and creativity". Only five projects dealt with "Health and Environment", two projects were directed to "Civic education and democracy" and none of the projects was applied to the area "Connectedness of environment, economy and society" (Naji & Požar Matjašič, 2007). Three concluded projects in the school year 2007/08 were oriented to the area "Connectedness of environment, economy and society" (National Educational Institute, 2008).

Schools cooperate with National Education Institute and develop innovative projects. 20 projects were successfully finished in 2005, but none of them was aimed at sustainability (Komljanc, 2006). Only seven from the 88 projects that were carried out in the school year 2005/06, dealt sustainable development and environment (Naji, Komljanc, 2006). At the end of the school year 2006/07 there was 77 finished projects and six projects were concentrated on the field of sustainability and environment (Komljanc&Vrbančič 2007, Vrbančič, 2007). In the school year 2007/08 only ten from 127 concluded projects dealt with sustainability (Komljanc, 2008, Malovrh, 2008) and in the school year 2008/09 fifteen from 88 concluded projects dealt with sustainability (Komljanc, 2009, Malovrh 2009). All innovative projects had emphasis on improving teaching and learning process or improving teacher's performance. Some of them aimed to influence teachers' professional development.

The Ministry of Environment and Spatial Planning has become more active in collaboration with schools in the last few years. There are calls for applications for projects from the field of environment, especially space and energy. The main goal of the international project Raising Awareness of Values of Space - R.A.V.E. is to raise awareness of the values of space and sustainable spatial development among primary and secondary school pupils through the educational process (Demšar Mitrovič et al., 2006). The Ministry of Environment and Spatial Planning have supported projects for implementation of good practice in educational institutions (kindergartens, primary and secondary schools) from the field of efficient use of energy for four years (Žogler, 2009). The association for environmental education collaborates with the Ministry of Environment and Spatial Planning in the project "Eco Schools as the way of living" with an aim that the whole school systematically works in the field of sustainability. More than 300 schools in Slovenia are registered as Eco Schools (Pavšer, 2007).

In Slovenia, there is a long history of university faculties cooperating with schools. Beginning in 2004

and continuing on through 2006, there have been a number of formal partnership agreements made between universities and schools for the improvement of educational programs and teacher education. Increasing numbers of professionals in Slovenia are becoming more aware of the many opportunities and benefits of linking school and universities. But these partnerships are usually concentrated on preparing teachers and on mentoring teachers for quality teacher performance and partnerships almost never include the field of sustainable development.

The results of the cooperation showed that partnerships are only in the stage of being formed between educational institutions and less between companies, institutes, ministries and schools. First educational partnership networks are building up. Faculty of Arts University of Maribor starts to develop the international partnership (networking) on the field of education for sustainable development. The partners are: primary schools in Slovenia, secondary schools, Ministry of Education and Sport, National Education Institute, Ministry of Environment and Spatial Planning, Regional development agencies, non-governmental organizations (NGO) and International institutes and organization as well as enterprises. The name of the network is Ecoremediation network – ERM Network. The main goal is to increase activities for prevention of environmental damage and encourage sustainable development (Vovk Korže, 2006).

The incentives for innovation and development are encouraged with initiatives from the European Union within the framework of EU projects Socrates and Leonardo da Vinci or the Lifelong learning program. The development of educational partnerships within the frame of the European Union projects includes schools, local communities, faculties and non-governmental organizations, did result in final products such as regulation of water ways and educational trails as well as prepared promoting material for sustainable development by water. According to the Slovenian National agency Centre of the Republic of Slovenia for Mobility and European Educational and Training Programs (CMEPIUS) there were five mobility projects and one development project from the field of sustainability until 2007 and 21 mobility projects between 2007 and 2010 (CMEPIUS, communication by mail April 12 and 20, 2011 and May, 2011). All those projects were carried out by schools and other institutions from different EU countries. Collaboration between Regional Development Centre and schools from both sides of Slovenian-Italian border (now not existing any more) was reinforced within the frame of EU cross border collaboration.

Analysis of inclusion of sustainable development into school curriculums and development of competences for sustainable development

The targeted research project "Inclusion of the Elements of Sustainable

Consumption and Sustainable Development into School Curriculum” indicates that sustainable consumption and sustainable development are not dealt with as a whole-school approach neither in primary nor secondary school, with very few exceptions, such as within few subjects in the first and second cycle in primary school (Erčulj et. al. 2008, 52). Findings are based on the study of curriculums. The research also indicated that prevailing themes are still from the field of waste management and environment. Through the above mentioned document attention is often oriented to education for sustainable development which will not include only transmission of knowledge, but also values and skills, and even more – transformative learning process. It should be oriented to searching solutions which can improve quality of life without negative impacts for others or for the future. The research carried out in 2007 among secondary school teachers shows that teachers are aware of interdisciplinarity of sustainable development and they express the need for collaboration between different subject teachers and they see the sustainable development as an interdisciplinary topic (Erčulj et. al., 2008, 70-76). In the document it can be found that education for sustainable development should include national and international networking and exchange of good practice.

The research “Analysis and encouraging the integration of education for sustainable development into primary schools” (Skribe Dimec et al., 2008) assessed the possibility of implementing Education for sustainable development in Slovenian primary schools and forming guidelines for encouraging integration of Education for sustainable development into primary schools. Those guidelines are oriented to help schools to systematically undertake the important task of providing Education for sustainable development in everyday educational work and facilitate responsible behavior of our future citizens.

It should be stressed that recently the National Education Institute has become more active and plays a very active role in the renovation of school curriculums in the field of sustainable development. The national Education Institute has made a great effort to establish mutual collaboration between schools, faculties, research institutions and local community. In the year 2008 it made a progress in that striving for quality education for sustainable development with developing and designing two curriculums “Education for sustainable development as a cross curricular area” (for primary school and for classical grammar school). Both curriculums were certified by Expert board of the Republic of Slovenia for General education in 2008 (Zupan, 2008 and Zupan, 2008a). Currently cross curricular development groups working on the introduction of environmental education as education for sustainable development. The experts from the National Education Institute, Universities, research institutes, teachers and principals are included in those groups. It is stressed that aims and topics from the field

of sustainable development should be realized at different subjects and activities and underlined is importance of cross curricular collaboration.

In educational systems it is more and more important for the youth to acquire competences for the sustainable way of life during their schooling so that they would know to make proper decisions regarding the choice of energy resources, the use of natural resources and sustainable planning. The concept of shaping competence refers to the skill of applying knowledge about sustainable development and recognizing problems about non-sustainable development. Five competences domain were identified in education for sustainable development proposed by United Nations Economic and Social Council (UNECE, 2008): knowledge, system thinking, emotions, ethic and values and action.

Naji (2008) discusses about competences in the field of education for sustainable development for secondary schools. Competences in the education for sustainable development domain are understood as ‘cognitive skills and competences that an individual possesses or learns so that he can solve environmental problems and propose solutions to them’ (Weinert, 2001, 27). Developed competences in the Education for sustainable development domain give students the possibility of using sustainable knowledge to solve problems of non-sustainable development. This means the knowledge of interdependence of environmental, economic and social development, understanding of results of current and future studies of the environment and their use in personal, professional and social life. The analysis of the concept of classical competences in curricula showed parallels with OECD competences and at the same time their compatibility with the part of education for sustainable development (ESD) competences. At this point it should be clearly stressed that forming education for sustainable development competences is not limited to a particular school subject. The knowledge of a subject within the framework of ESD competences is important at assessing sustainable problems and in taking right measures for their solutions. Developing ESD competences is a task for an educational institution as a whole and it creates qualitative criteria of individual school’s performance (Naji, 2008).

The main purpose (expected achievement) of environmental education as education and training for sustainable development is to educate the individual who will be capable of critical judgement of influences – both positive and negative, deliberate or not, of his own or man’s activities on the environment, and who will be aware of environmental advantages, opportunities and problems and have knowledge, talents, skills and motive for individual and collective work when taking care of the environment; he will also have the knowledge of suitable treatment of existing problems as well as for the prevention or mitigation of the new ones. For this he will:

(1) have knowledge and understanding of basic

notions, relations and processes (about the environment) that sustain the environment and affect it; (2) have competences to study and tackle environmental problems (in the environment) – research capacity and skills for identifying, studying and solving environmental problems as well as viewpoints, values and conviction for making decisions on the basis of critical judgment of the impact on the environment; (3) be prepared and well qualified for individual and collective action (for the environment) to solve the existing issues and environmental problems and to prevent new ones; he will have the feeling of responsibility also for future generations – being able to predict and create alternative solutions and positive visions; he will also have awareness and sensibility as regards the environment and environmental problems (Zupan, 2008b).

Analysis of inclusion of sustainable development in the teaching and learning process

Almost half of pupils (47,9%, N=96) understand the sustainable development as a long lasting development. According to pupil's opinion, teachers encourage and direct their behavior towards preserving natural and cultural heritage. 91,7% of pupils answered that teacher do include in teaching and learning process activities which encourage pupils behavior aimed to preserve nature as well as natural and cultural heritage (yes or sometimes). Only 8,3% of the respondents have an opinion that such incentives are not included in teaching and learning process (see Figure 2.)

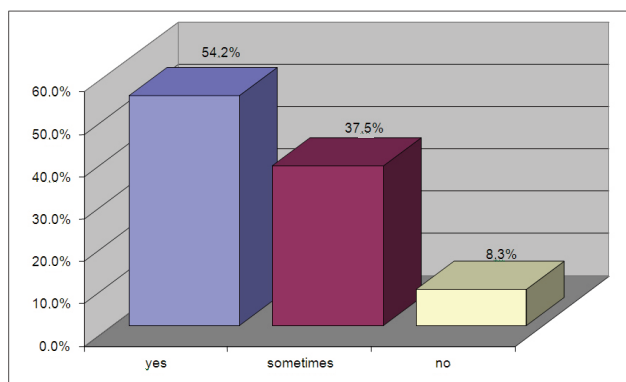


Figure 2
Do teachers include in «teaching and learning lessons» activities which encourage pupils' behavior aimed to preserve nature as well as natural and cultural heritage?

The great majority of pupils (93,8% answered yes or sometimes, N=96) are persuaded that they collaborated in activities connected with sustainable development and 78,1% of pupils said that they like taking part in these activities. The pupils enumerated activities like discussions, walks or outdoors activities, excursions, sports days and separation of waste as activities which

teachers should use to motivate pupils for active participation in preserving the environment. They also have their own ideas about how to contribute to sustainable development. They mentioned separation of waste material, reduction of travelling by cars, use of renewable sources of energy, clean- up of harmful substances. Among the answers about their behavior most of them mentioned separation of different kinds of waste and not throwing garbage in nature.

The majority of parents (N=68) answered that they understand sustainable development as preserving the environment. Some parents gave two or more answers. Among answers about understanding sustainable development parents mentioned getting enough working posts and having good and well organized working conditions and socially, economically and environmentally equilibrated development. To the question if they also care for equilibrated development at home, most parents (95,6%) responded yes or sometimes. Only 4,4% (N= 68) from the parents involved thought that they do not care for the equilibrated development (see Figure 3).

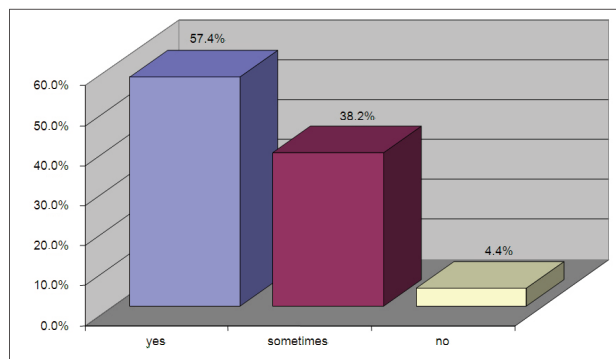


Figure 3
Do parents care for equilibrated development also at home.

91,2% of parents answered that the sustainable development in their city/town could be more efficient. Among the answers to how school can make children behave responsible towards nature and society, which activities organised by school can reach more responsible pupils' behaviour towards nature and society, most of parents answered that schools should have more clean-up and collecting of used paper activities, they should separate different rubbish and use the image of good teacher and parent behaviour as model.

The research shows that teachers are not aware of the complexity of the term “sustainable development”. Only three of them (N=18) know that the term includes development on different fields. Three teachers have an opinion that sustainable development includes preservation of the environment. Two teachers understand sustainable development as efficient use of energy, and two teachers as proper relation to other people and

respect of social norms. Only individuals did mention social values and development which cares for quality of living, reduction in consuming goods and personal development. 5 teachers (N=18) haven't given any answer. The teachers also quoted that their activities linked with sustainable development take place mostly at school – on the basis of that statement we should reconsider teacher educational programs about education for sustainable development. The teachers itemized the ways in which they would like to include sustainable development into teaching and learning process, such as field work and projects. They mentioned some interesting suggestions such as humane relationships between people and positive attitude to environment. Among obstacles to initiate sustainable development in teaching and learning process the teachers listed lack of time and finance as well as inflexibility of teaching and learning process and lack of cross curricular collaboration. They suggested that we should make the following changes for more effective inclusion of sustainable development in teaching and learning process: better cross curricular collaboration, more time in curricula for project work,... Interesting are the answers about the results the teachers are proud of, for example positive attitude to knowledge writing and reading; and previous pupils who are still active in any field.

It is very important that we try to raise the awareness of values of the space as well as the awareness of necessity for the efficient use of energy and “sustainable consumption”. This endeavor should start in school and school should try to work with younger pupils. It is important that these values are accepted at school and that the great majority of staff acts according to them. The new content should guide pupils to greater familiarity with the values of the space, a more responsible treatment of the environment and to understanding of the causes and consequences of the human impact on the space. Students' acceptance of values as their own values is the most important and hardest reachable aim in the educational process. Family and the entire society have an important impact on this.

The results from both schools are similar and it is most interesting that pupils would like to cooperate with others, they wish for active forms of learning, but in practice it is much different. Even among teachers the understanding of the term sustainable development is weak.

CONCLUSION

Analysis of situation on the field of education partnership

The article presents the review of developed educational partnerships in Slovenia with the target on achieving learning objectives in the field of sustainability. It is based on studies of literature and on documented formal

partnerships that besides school include at least one state institution, e.g. National Education Institute, Ministry of Education and Sport or Ministry of Environment and Spatial Planning. The European Union projects encourage international networking. There are opportunities to develop very simple but useful methods for cooperation between schools, municipalities and other organizations. The article shows that we can find individual partnerships between schools and specialized institutions and some examples of networking, but a more systematic and integral approach is needed.

The first aim in this article is identification of institutions which should be actively involved in educational partnerships for sustainable development. On the base of review of developed educational partnerships in Slovenia it can be stated that the broader range of institutions should be involved in educational partnerships for quality education for sustainable development. The analyses carried by teachers and faculty professors as well as by experts from the educational field and from the field of sustainable development shows that we need systematic collaboration which should include the following institutions: schools, faculties, Ministry of Education and Sport, Ministry of Environment and Spatial Planning, local communities and enterprises, as well as the National Education Institute. Partnerships among individual institutions have already been established but it was pointed out that more integral connections are needed.

Analysis of inclusion of sustainable development into school curriculums and development of competences for sustainable development

Two important aims of article are: to investigate inclusion of sustainable development into school curricula and to determine which competences should be developed through education for sustainable development. The previous research shows that sustainable development as sustainable consumption are not dealt with as a whole school approach neither in primary nor secondary school in Slovenia (with very few exceptions). The National Educational Institute works on implementation of sustainable development as cross curricular area. The collaboration between schools and faculties resulted in developed material for education for sustainable development. Portals with e-materials have an important role in acquiring competences of sustainable education. They enable acquisition of information, data, and active cooperation (consolidation of knowledge, assessment of knowledge by means of quizzes, exercises and games) as well as transfer of this knowledge into practice.

Analysis of inclusion of sustainable development in the teaching and learning process

The fourth issue of this article is to disclose opportunities for partnership participants to achieve learning objectives from the field of sustainable development. Research

results show that there are important opportunities to achieve learning objectives from the field of sustainable development. According to pupils' opinion expressed in questionnaire teachers can motivate pupils for active participation in the field of sustainability with activities such as clean-up, waste separation and with excursions, walks and discussions. They also think that different kind of warnings and reminders could be very effective. Pupils think that most teachers include sustainable development topics in their lessons. Most of them sometimes participate in environmental protection at school and most of them like taking part in these activities. To protect the environment they would wish more clean up activities, less using cars, less spraying, less fertilizers and harmful fuels. Pupils mean that at home or when traveling they mostly care for the environment by dumping rubbish into rubbish bins and separating waste. Parents believe that opportunities for sustainable development aimed at children being more actively involved in a responsible attitude towards nature and society exist in farm life, expeditions, camping, as well as actions for collecting "old paper or plastic" for recycling. Some of them are mentioned in the project Eco-school and give a good example of parents' and teachers' behavior. At home most children talk with their parents about activities carried out at school that are related to sustainable development. Parents expressed that for the most part they care for equilibrated development, supporting sustainable development, also at home. The great majority of parents believe that in their hometowns sustainable development could be implemented more effectively (solving the problem of unemployment, environmental protection...). Teachers gave some proposals for including sustainable development into teaching and learning process as a field of work and projects. They mentioned some interesting suggestions such as the humane relationships between people and positive attitude to the environment.

The last but not least aim is to disclose opportunities to improve teacher performance regarding field of sustainable development. Teachers mean that in school sustainable development is mostly connected with lesson content, activities for environmental protection and with after school activities. They also expressed that most of their activities related to sustainable development take place in school and that these activities take place both during lessons and out of them. In these activities sustainable development is mostly shown as some acquired knowledge, motivation or self-education, and awareness. Teachers include activities which encourage preservation of nature, culture and heritage in their lessons mostly through conversation, but also by their own behavior. These activities are well accepted by all pupils, they are not refused by them. Most of teachers would incorporate sustainable development in lessons via projects or field work. The biggest obstacle at introducing sustainable development content into lessons is lack of

time and lack of finance according to respondents.

It is evident from the processed questionnaires that pupils, parents and teachers do not understand the significance of sustainable development in everyday life, but they understand it only as a sort of a guide-line the transfer of which in their own life they have not yet perceived. Majority of pupils understand sustainable development as something that develops over a longer period of time or permanently. Most parents associate sustainable development with environmental protection and well-regulated working conditions (employment). Teachers understand sustainable development mostly as long-life development in different fields and as environmental protection.

Partnerships can lead to greater ecological awareness and the awareness that each individual with their own responsible behavior can help to preserve the environment and natural heritage. Besides that, educational partnerships can influence the development which takes into consideration economic, environmental and social aspects. When different generations have possibilities of getting information, cooperating in realization of sustainability in everyday life (conscious decision with regard to shopping, waste separation, attitude to nature and living beings), the shift to sustainable society is ensured. Mutual learning can be enabled by active collaboration of all partners.

The international research cooperation could disclose comparison of teacher performance and inclusion of different activities aimed towards sustainability in teaching and learning process in different countries. The development of competences and possibilities for influence on pupils' behavior in different countries could be presented in future research.

LIMITATIONS

The study has limitations, in that it is performed as case studies; therefore, the result cannot be generalized to the whole population. The method, which included questionnaires for pupils, their parents and teachers seemed to answer well to the aims and research questions of the study. Only 18 out of 30 teachers and 68 out of 100 parents returned the questionnaire. This may cause biased results. The knowledge contribution to the study is that it points at interesting and crucial matters which need to be investigated further.

REFERENCES

- Breiting, S., Mayer, M., & Mogensen, F. (2008). *Kriteriji kakovosti šol, ki vzgajajo in izobražujejo za trajnostni razvoj: vodnik za dvig kvalitete vzgoje in izbraževanja za trajnostni razvoj* [translation "Quality criteria for ESD schools"]; translated by Lesničar, B., Naji, M.]. Ljubljana: Zavod Republike Slovenije za šolstvo [National Educational Institute Slovenia].

- Demšar Mitrovič, P. et al. (2006). *Report about R.A.V.E. project, Raising awareness of values of space – EU INTERREG III B CADSES project*. Portorož.
- Erčulj, J., Sedmak, S., Trnavčević, A., & Kuzmanič, T. (2008). *Vključevanje elementov trajnostne potrošnje in trajnostnega razvoja v šolski kurikulum. Zaključno poročilo o rezultatih opravljenega raziskovalnega dela na projektu v okviru CRP Konkurenčnost Slovenije 2006-2013 [Inclusion of the Elements of Sustainable Consumption and Sustainable Development into School Curriculum. Final report of the results on targeted research project Competitiveness of Slovenia between 2006 and 2013; in Slovenian]*. Koper: Univerza na Primorskem Fakulteta za management in Ministrstvo za šolstvo in šport ter Javna agencija za raziskovalno dejavnost Republike Slovenije [University of Primorska Faculty for Management & Ministry of Education and Sport & Slovenian Research Agency].
- European Communities, Office for Official Publications of the European Communities. (2007). *National Strategic Framework 2007-2013*.
- Hass H. D., & Schlesinge, D. S. (2007). *Umweltoekonomie und Ressourcen-management. [Environment Economy and Resource management]*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Komljanc, N. (Ed.). (2006). *Inovacijski projekti – zbornik. [Innovative projects – editorial; in Slovenian]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Educational Institute Slovenia].
- Komljanc, N., & Vrbančič, S. (Eds.). (2007). *Poročilo o izvajanju inovacijskih projektov Zavoda Republike Slovenije za šolstvo in seznanitev z novostmi 2007. [The report about Innovative projects of National Educational Institute Slovenia and novelties in 2007; in Slovenian]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Educational Institute Slovenia].
- Komljanc, N., (Ed.). (2008). *Novosti inovacijskih projektov Zavoda za šolstvo Republike Slovenije v šolskem letu 2007/2008. [The report about novelties in Innovative projects of National Educational Institute Slovenia in school year 2007/2008; in Slovenian]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Educational Institute Slovenia].
- Komljanc, N., (Ed.). (2009). *Novosti inovacijskih projektov Zavoda za šolstvo Republike Slovenije v šolskem letu 2008/2009. [The report about novelties in Innovative projects of National Educational Institute Slovenia in school year 2008/2009; in Slovenian]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Educational Institute Slovenia].
- Malovrh, N., (Ed.). (2008). *Inovacijski projekti 2007/2008. Zbornik končnih poročil. [Innovative projects 2007-2008 professional contribution publication: collection of paper; in Slovenian]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Education Institute Slovenia].
- Malovrh, N., (Ed.). (2009). *Inovacijski projekti 2008/2009. Zbornik končnih poročil. [Innovative projects 2008-2009 professional contribution publication: collection of paper; in Slovenian]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Education Institute Slovenia].
- Marentič Požarnik, B., Zupan, A., Vovk Korže, A., & Orel, M. (2007). *Strategije vključevanja okoljske vzgoje kot vzgoje in izobraževanja za trajnostni razvoj v posamezne predmete [The strategies of the environmental education as education for sustainable development into individual subjects; in Slovenian]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Educational Institute Slovenia].
- Mlakar, M., & Naji, M. (Eds.). (1996). *Strategies and practices of environmental education in European countries. Materials of the international symposium*. Radenci: The National Education Institute Slovenia & Europe House Maribor.
- Naji, M. & Komljanc, N., (Eds.). (2006). *Razvoj inovativnosti in inovativnega okolja. [Development of Innovativeness and Innovative Environment]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Educational Institute Slovenia].
- Naji, M. & Požar Matjašič, N. (2007). *Skriti Zaklad*. In E. Rustja (Ed.), *Vzgoja in izobraževanje za trajnostni razvoj. Primeri dobre prakse v Sloveniji [Hidden Treasure. In E. Rustja (Ed.), Education for Sustainable development. Examples of good practice; in Slovenian]* (pp. 49-59). Ljubljana: Ministrstvo za šolstvo in šport & Zavod Republike Slovenije za šolstvo. [Ministry of Education and Sport & National Educational Institute Slovenia].
- Naji, M. (2008). *Ključne kompetence v vzgoji in izobraževanju za trajnostni razvoj VITR v srednjih šolah [Key competences in Education for Sustainable development in secondary schools]. Trajnostni razvoj v šoli in vrtcu [Sustainable Development in School and Kindergarten; in Slovenian]*, 2(2), 45-51.
- National Educational Institute Slovenia. (2008). *Skriti zaklad 2007/08. [Hidden Treasure, 2007/2008; in Slovenian]*. Retrieved 30, 11, 2007, from http://www.zrss.si/doc/_Rezultati_skriti_zaklad_0708.doc.
- National agency Centre of the Republic of Slovenia for Mobility and European Educational and Training Programs (CMEPIUS) 2011. The list of projects has been received by mail. April 12 and 20, 2011 and May, 2011.
- Pavšer, N. (2007). *Ekošola kot način življenja*. In E. Rustja (Ed.), *Vzgoja in izobraževanje za trajnostni razvoj. Primeri dobre prakse v Sloveniji [Eco School as the way of living. In E. Rustja (Ed.), Education for Sustainable development. Examples of good practice in Slovenia; in Slovenian]* (pp. 23-35). Ljubljana: Ministrstvo za šolstvo in šport, Zavod Republike Slovenije za šolstvo [Ministry for Education and Sport & National Educational Institute Slovenia].
- Republic of Slovenia, Government Office for Local Self-Government and Regional Policy. (2007). *Operational Program for Human Resources Development for the Period 2007-2013*.
- Republic of Slovenia, Government Office for Local Self-Government and Regional Policy. (2007a). *Operational Program of Environmental and Transport Infrastructure*

- Development for the Period 2007-2013*.
- Republic of Slovenia, Ministry of Education and sport. (2007). *Smernice vzgoje in izobraževanja za trajnostni razvoj od predšolske vzgoje do douniverzitetnega izobraževanja*. [Guidelines for education for sustainable development from preschool to university education; in Slovenian].
- Republic of Slovenia, Ministry of Higher Education, Science and Technology. (2005). *Resolution on National Research and Development Program for the Period 2006-2010*.
- Republic of Slovenia Ministry of Education and Sport. (2004). Skriti zaklad 2003/2004. [Hidden Treasure, 2003/2004]. Retrived 27, 07, 2007, from http://www.mss.gov.si/si/delovna_podrocja/razvoj_solstva/skriti_zaklad/zakljuceni_projekti_v_solskem_letu_20032004_trajanje_od_2002_do_2004.
- Republic of Slovenia Ministry of Education and Sport. (2005). Skriti zaklad 2004/2005. [Hidden Treasure, 2004/2005]. Retrived 27, 07, 2007, from http://www.mss.gov.si/si/delovna_podrocja/razvoj_solstva/skriti_zaklad/zakljuceni_projekti_v_solskem_letu_20042005_trajanje_od_2003_do_2005.
- Skribe Dimec, D., Dermol Hvala, H., Golob N., Jamšek D., & Javrh P. (2008). *Analysis and encouraging the integration of education for sustainable development into primary schools. Final report of the results on targeted research project 2006-2008*. Ministrstvo za šolstvo in šport (Ministry of Education and Sport).
- UNECE-United Nations Economic and Social Council. (2005). Committee on environmental policy. Chairs summary on High level meeting of environment and education ministries, March 2005, Vilnius.
- UNECE-United Nations Economic and Social Council. Steering Committee on ESD. (2008). Discussion papers on the competences in Education for Sustainable Development in the education sector, March 2008, Geneva and September 2008, Paris.
- UNESCO-United Nation Educational, Scientific and Cultural Organization. (2005). Guidelines and recommendations for reorienting teacher education to address sustainability. Education for sustainable development in action, Technical paper, UNESCO Education sector.
- UNESCO-United Nation Educational, Scientific and Cultural Organization. (2006). Strategy for education and training for sustainable development.
- Vovk Korže, A. (2006). Eko-remediacije kot integralni pristop k varovanju okolja. In: S. Vrcič-Mataija (Ed.), *3. Dani Ante Starčevića, Zavičajnost, globalizacija i škola. Gospić, 2006. Zavičajnost, globalizacija i škola: znanstveno-stručni skup s mednarodnim sudjelovanjem*. [Ecoremediation as an integral approach to environmental protection. In: S. Vrcič-Mataija (Ed.), *3. Dani Ante Starčevića, Regional identity, globalization and schools, Gospić, 2006. Regional identity, globalization and education: Scientific-professional meeting with international participation*; in Slovenian] (pp. 389-400). Gospić: Visoka učiteljska škola [Teacher Training School].
- Vovk Korže, A. (2009). Desetletje vzgoje in izobraževanja za trajnostni razvoj in potreba po ekosistemskem pristopu. [The sustainable development decade and the need for ecosystem approach]. *Trajnostni razvoj v šoli in vrtcu [Sustainable Development in school and kindergarten; in Slovenian]*, 3(1), 11-18.
- Vrbancič, S., (Ed.). (2007). *Innovative projects 2006-2007 professional contribution publication: collection of paper*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Education Institute Slovenia].
- Weinert, F. E. (2001). Concept of Competence: A Conceptual Clarification. In: D.S. Rychen & L.H. Salganik (Eds.), *Defining and selecting key competencies* (pp. 45-66). Cambridge (State of Washington) and Göttingen: Hogrefe&Huber.
- Zupan, A., Marentič Požarnik, B., Vovk Korže, A. & Orel, M. (2008). *Okoljska vzgoja kot vzgoja in izobraževanje za trajnostni razvoj (splošna, klasična, strokovna gimnazija). [Environmental Education as Education for Sustainable Development (general, classical, vocational grammar school); in Slovenian]*. Ljubljana: Ministrstvo za šolstvo in sport & Zavod Republike Slovenije za šolstvo [Ministry of Education and sport & National Education Institute Slovenia].
- Zupan, A., Marentič Požarnik, B., Vovk Korže, A. & Orel, M. (2008a). *Okoljska vzgoja kot vzgoja in izobraževanje za trajnostni razvoj (osnovna šola). [Environmental Education as Education for Sustainable Development (primary school); in Slovenian]*. Ljubljana: Ministrstvo za šolstvo in sport in Zavod Republike Slovenije za šolstvo [Ministry of Education and sport & National Education Institute Slovenia].
- Zupan, A., et al. (2008b). *Poročilo o izvajanju prenavljanja učnih načrtov z vidika vzgoje in izobraževanja za trajnostni razvoj v letu 2007. [The report about renovation of school curriculums in the field Education as Education for Sustainable Development; in Slovenian]*. Ljubljana: Zavod Republike Slovenije za šolstvo [National Education Institute Slovenia].
- Žolger, I. (2009). Povzetki projektov izbranih na podlagi Javnega razpisa za sofinanciranje ozaveščevalnih, promocijskih in izobraževalnih projektov za URE in OVE v letu 2008, 316-42/2007 Uradni list RS, št. 53/07 [“Project abstracts selected on base of public announce for financing promotional, awareness and educational projects for URE and UVE in year 2008”, 316-42/2007 Official Journal of Slovenia, number 53/07, in Slovenian]. Ljubljana: Ministrstvo za okolje in prostor Direktorat za evropske zadeve in investicije Sektor za aktivnosti učinkovite rabe in obnovljivih virov energije [Ministry for Environment and Spatial Planning, Directorate for European Affairs and Investments, Sector for Efficient Use of Renewable Energy Sources].