

## CREATIVITY IN COOPERATION – FOR INTEGRATING SUSTAINABLE DEVELOPMENT IDEAS INTO TEACHER PRACTICE

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### **Abstract:**

Teachers as creative sustainable development promoters should cooperate by empowering the link between generations, implementing development, satisfying the needs of the present generation, and securing the ability of future generations to meet their own needs. **Aim of the study.** To facilitate development of innovative practices in education and training at tertiary level. **Materials and methods.** Analysis of theoretical sources, an ERASMUS Project IP uniting in cooperation educators from 11 countries. **Results.** Innovative ICT-based content, pedagogies and practice for SD. **Conclusions.** Teachers widespread SD more creatively and professionally if they participate in international collaboration projects involving SD issues.

**Keywords:** *cooperation, innovation, integration, link with community, sustainable development, teachers' teamwork.*

### **Introduction**

Teachers as creative community promoters and sustainable development wide-spreaders should cooperate with colleagues, students and community for empowering the link between generations, implementing development, satisfying the needs of the present generation, and enhancing the ability of future generations to meet their own needs. Nowadays, it is most essential that all people with a sense of responsibility turn their attention to both the aims and the means of education to develop the ways in which educational policies can help to create a better world by contributing to sustainable human development, mutual understanding among people and a renewal of practical democracy.

A quality education must reflect learning in relation to the learner as a creative 'individual, family and community member and a part of the world society. A quality education understands the past, is relevant to the present and has a view to the future. Quality education relates to knowledge building and the

skilful application of all forms of knowledge by unique individuals that function both independently and in relations to others. A quality education reflects the dynamic nature of culture and languages, the value of the individual in relation to the larger context and the importance of living in a way that promotes equality in the present and fosters a sustainable future' (Pigozzi, 2003, 5). Contemporary school and university, as "organized by the state or individuals, are institutions with multiform structure for complex and systematic implementation of students' balanced development and socialisation functions in interaction uniting the society: students – teachers – parents – community. This means that the limelight of the education institution includes the internal and external contacts. Usually the state shifts focus on the internal life of school instead of external contacts which should be changed accordingly' (Špona, 2008, 11 -17). As they need to belong to a community of equals, amid the communities of equals, students implement the act of learning, thus acquiring the experience of working together, being helpful, responsive and responsible, acquiring the skills of cooperation and organizing work during lessons and beyond. The learning environment at school should be constructed as educational, influencing the person in a positive manner. This can be achieved by students in cooperation with teachers through a longer period of time. In a class environment, the "mutual relation between the students and teachers is one of the most significant factors for the development of personality" (Špona, 2008, 11-17), ready to encounter and adopt sustainable development ideas. Unfortunately, there is little or no sustainable development education provided to trainee teachers during studies at higher education institutions, therefore "no skilful teachers, class teachers enter the classes. As a result, school praxis in the group of adolescents learning in forms 5 – 9 has current socio-pedagogical problems" (Špona, 2008, 11-17), therefore tertiary students in pedagogy have to experience themselves education for sustainable development and promote it during their professional careers as English foreign language teachers, too. Thus, it is too seldom when trainee teachers have taken part in activities in a medium in which equity and sustainable development issues were even touched upon, to say nothing of them being considered important. These are two aspects of contemporary life that have become quite menacing and which cannot be tackled without educators.

### **Aim of the study**

The aim of the study is to facilitate the development of innovative practices in education and training at tertiary level and their transfer, including from one participating country to others, by the analysis of theoretical sources and practice of an ERASMUS Project Intensive Programme (IP) uniting in cooperation educators and students from 11 countries.

## Materials and methods

Creativity is a multifaceted concept which many researchers have strived to define and it is not our purpose here to meticulously chart the overabundance of such definitions from the psychological and educational literature. It has variously been described as ‘imaginativeness or ingenuity manifested in any valued pursuit’ (Elliot 1975, 139); a process leading to ‘cultural production’ (Sefton-Green and Sinker in Craft et al 2000), ‘a function of intelligence’ (Robinson, 2001), a ‘state of mind’ (Lucas in Craft et al 2001) or ‘going beyond the conventional agreed’ (Craft 2000). Craft, a significant writer on creativity within an educational context, stresses the importance of three factors - people, processes and domains, echoing earlier work by Gardner (1983). She defines a domain as “a body of organised knowledge about a specific topic” and uses the term post-conventionality to describe situations in which conventions are understood, but where the creative individual has chosen to go beyond them (though not so far as to move out of the domain concerned). Willings (1980, 25) identifies three kinds of ‘creative thinking’:

- adaptive thinking (‘the ability to relate what is observed to something to which it is not obviously relatable’ – making links between apparently unconnected areas);
- elaborative thinking (‘researching, refining and often beautifying the ideas of some other thinker’);
- developmental thinking (‘enables the individual to enlarge her/his concept of herself/himself and the world around her/him’).

Psychologists refer to creativity as one of the ‘higher cognitive functions’ (Gardner 1999).

Koestler (1999), Loveless, A. (2002) define creativity as ‘the ability to make connections between previously unconnected ideas’. Dimasio (2001) identifies preconditions for such a process of integration as:

- strong generation of representational diversity in the pre-frontal cortices;
- a working memory with a large capacity, able to operate on representations ‘online’;
- the ability to recognise novel representations.

Gardner in his theory of multiple intelligences (1983) refers to different types of creativity:

“I suspect there is a connection between intellectual strength and mode of creativity. For example, those with an affinity for interpersonal intelligence are more likely to become influencers or performers. Those with strong logical-mathematical intelligence are more likely to become... theory builders” (Gardner 1999b: 124).

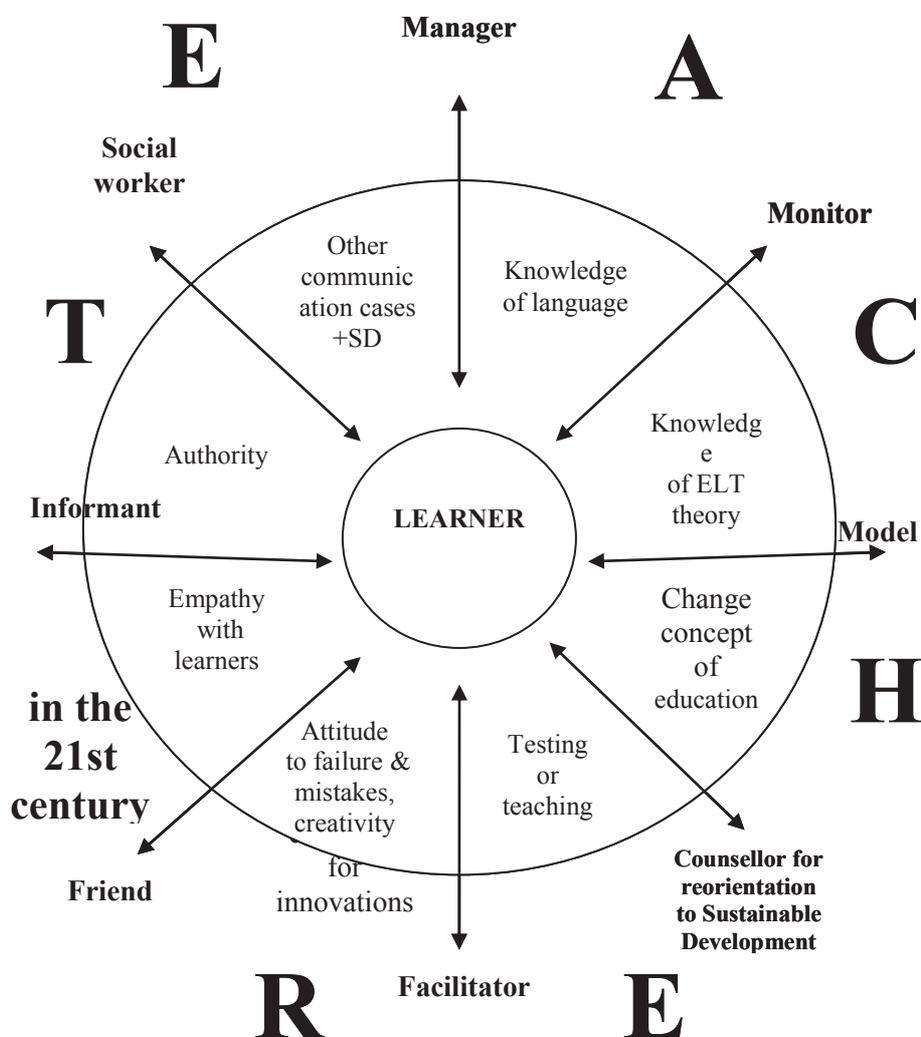
Human pedagogical school theory representatives (Špona, 2006, Gudjons, 2007) claim the school is an influential force in the mutual relationship of social culture, social economy and politics. Therefore, teacher training should enhance the conditions for the quality development of community: positive attitude, “students’ joy to learn and teachers’ wish to work in a creative manner” (Špona, 2008). In the modern contemporary world the learning process is closely linked to cooperation/correlation for the development of personality, compensation (as equalization of deficit of social behaviour) and security function (see Picture no.1).

As the environmental conscience of the UN, the United Nations Environment Programme (UNEP) underlines the importance of and the urgent need for a worldwide change in consumption and production patterns and attitudes. On its behalf, the United Nations Educational, Scientific and Cultural Organization (UNESCO) highlights the role of education in shaping attitudes, values and behaviour while developing the capacities, skills and commitments needed for building a sustainable future ([www.youthxchange.net](http://www.youthxchange.net) - towards sustainable lifestyles).

To involve trainee teachers and academic staff in widespreading creativity and sustainable development (SD) ideas more professionally, educators and the emerging teachers of EFL should participate in international collaboration projects involving sustainable development and equity issues (see Picture no. 1).

The 11 higher education institutions from the EU and even beyond (Austria, Belgium, Denmark, Greece, Hungary, Latvia, the Netherlands, Norway, Spain, Romania, Turkey) had decided to contribute to EUROPEAN PRIORITIES on Erasmus Intensive Programmes set out in the 2009 Call for Proposals by:

- focusing on subject areas for which shorter programmes give a particular added value;
- giving evidence of full recognition and credits to the activities by the participating institutions;
- presenting a strong multidisciplinary approach;
- using ICT tools and services to support the preparation and follow-up of the IP, thereby contributing to the creation of a sustainable learning community in the subject area concerned.

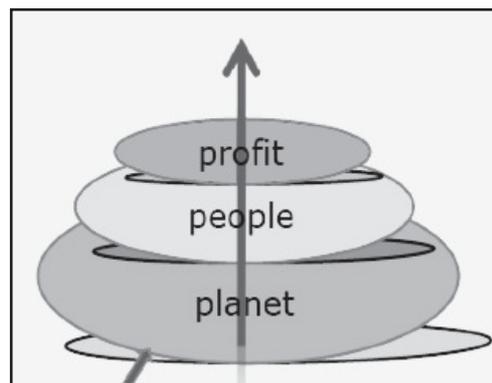


**Picture 1: Learner-teacher-collaborative interactive teaching**  
(Developed on the basis of Prodromou, 2007: 8)

In addition, the consortium of the teachers had agreed to involve the participating students – trainee teachers into maintaining collaboration and team spirit throughout the whole Project procedure and especially during the activities of the IP.

As the main objectives of the Erasmus sub-programme, promoted by 11 higher education institutions in the academic year of 2009/2010, the following had been forwarded:

- to improve the quality and to increase the volume of student and teaching staff mobility throughout Europe so as to contribute to the achievement by 2012 of at least 3 million individual participants in student mobility under the Erasmus programme and its predecessor programmes;
- to improve the quality and to increase the volume of multilateral cooperation between higher education institutions in Europe;
- to improve the quality and to increase the volume of cooperation between higher education institutions and enterprises;
- to facilitate the development of innovative practices in education and training at tertiary level, and their transfer, including from one participating country to others;
- to support the development of innovative ICT-based content, services, pedagogies and practice for lifelong learning.



**Picture 2 Learning to live sustainably** (Based on materials of World Conference on Education for Sustainable Development: Moving into the Second Half of the UN Decade; Bonn, Germany; 2009): planet + people = prosperity: \*«non-negotiable basis for social and economic development» + \*«environmental education» = > Learning about> Learning through> Learning for Sustainable Development>

By cooperating, the educators of 11 higher education institutions together with students had joined in creatively to “reorient curriculum and teacher education programmes to integrate ESD into both pre-service and in-service programmes, support teacher education institutions, teachers and professors to network, develop, and research sound pedagogical practices, as well as specifically support teacher trainers, teachers and trainee teachers to

develop ESD strategies that can work with large class sizes and to evaluate ESD learning processes” (World Conference on Education for Sustainable Development: Moving into the Second Half of the UN Decade; Bonn, Germany; 2009; see Picture no. 2).

## Results

During the Intensive Programme the teachers and the teacher trainees worked together in international groups, discussed updated, global pedagogical issues, and prepared lesson plans based on common criteria. They piloted their materials in schools and reflected on their experiences. A CD was disseminated to CLIL schools in Europe containing the input of the Intensive Programme, the lesson plans, the teaching materials and the reflections on the lessons taught with video footage. The participants considered the knowledge gained, reflected on the most important issues of equity and sustainable development. In national and international teams they produced posters and videos. Preparatory and follow-up project activities were enhanced by the forum provided by an Internet-based Learning Management System.

Sustainable development and creative equity issues were approached in a multidisciplinary sense, as the incorporation of education for sustainable development into different subjects of the school curricula contributes to the development of social and civic competences required for lifelong learning. Before visiting the IP schools the participants formed their free-choice 4 member international trainee teacher teams for observing and conducting the lessons in the IP-offered school. Thus, at first the trainee teachers in international groups guided by one of the IP teachers went to the chosen schools to observe the classes and students. They observed science, history, geography, mathematics, domestic science, PE, English as a Foreign Language classes. Directly after the observed lessons, the IP participants answered the questionnaire.

The answers included the following observations:

Students were highly motivated; talkative, willing to contribute; the teacher’s friendly manner, positive and supportive atmosphere; hi-tech equipment; a smart board in every classroom; mutual respect; relaxed students; allowed to come without footwear in class; multicultural class; freedom of movement within the classroom; cooking class for both boys and girls; high level of English; two lessons (45 min.x.2) dedicated to the same topic; students willing to complete their work; students not disruptive; open, common space within buildings, playgrounds; spacious buildings and grounds, ample classrooms.

As new and unexpected experiences they considered the following: no school uniforms; staff informally dressed; cheeky pupils; seating arrangements; mixed abilities in the classes; too much freedom; work, not play; attention paid

only to the talkative pupils; pupils can take some time off from class, not participate in all activities; open, large library; pupils could go on their own to borrow books; observation turned into participation; warm and helpful teachers; teachers ask for pupils' opinions; an assistant for physically impaired pupils; teaching close to real life, problem based; mutual respect; up-to-date equipment in classrooms, special rooms and play grounds; little ethnic diversity in the private school visited. The diversity of new and unexpected experiences is due to the different backgrounds the trainees and teachers have come from. Moreover, they could compare the differences existing in the represented countries and gain valuable hands-on experience for their own creativity and sustainable development.

Each participant compared the observed data to their own education system, social behaviour and environment in schools and beyond. Therefore, the received answers were really diverse. At the same time they helped the trainee teachers to learn more not only about the IP host country, but also about their respective countries when the answers (not showing the respondent's name) were displayed on the board.

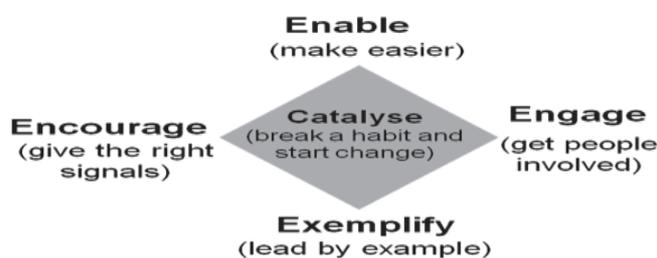
In one of the schools the trainee teachers organized a games session. The participants of the IP, according to the division in international teams (trainee teachers from three IP countries formed one team), involved a group of students in their national games and rhythmic songs used for some traditional days. The communication turned out very friendly, enthusiastic and excited for both parties involved. The trainee teachers shared the opinion that the host teachers were very welcoming and supportive during the games session. Apparently, conducting the lessons for the trainee teachers in the more friendly environment of this school fostered an improved mutual participation in the games session.

The IP participants conducted the lessons in international teams of 4 trainee teachers from four different countries. EquiTIFoLa participants experimented with task-based CLIL lessons, with elements from keyboarding skills, communications and arts. They assessed the inclusion of the tasks learnt during the IP workshops and lectures as very useful. The trainee teachers also mentioned incorporating the observed and shared novelties and innovative approaches into their lessons. They concluded that the IP introductory lectures, workshops, and assistance from the IP teachers for the lesson planning had been of major importance. The teachers and the trainee teachers observing the lessons delivered by the IP participants appreciated the mutual support displayed by the trainee teachers conducting the lessons in an international team of 4 participants from 4 different countries. A common conclusion drawn by participants: although a creative climate and an encouraging adult are essential, they are not enough to develop creativity. The teacher's role, beyond encouragement, involves intervening and actively teaching creative techniques and strategies.

EquiTifoLa also drew on the outcomes of previous project stages, in particular dealing with Multiple Intelligences, Culture and Creativity. The core of the consortium relied on 5 years of cooperation, accumulating a wealth of experiences in teamwork which they shared with the participating teacher trainees during the Intensive Programme.

The teachers and trainee teachers focused on development of innovative ICT-based content, services, pedagogies and practice for sustainable development during lifelong learning. A unique CD-ROM and Moodle were developed as products for further study, cooperation and research. In the case of ICT, what should be considered is the non-linearity of the way in which information can be presented and accessed (websites and CD-ROMs, for example) so as to offer greater scope for 'creative connections being made between such information by intuitive and divergent thinkers' (Loveless, 2002), together with the open-endedness of activities such as adventure games, simulations and control activities which offer learners the possibility of becoming immersed in an imaginary world, thus fostering their creativity, as displayed in Picture no.3, shared by An Roeland (see Picture no.3).

## Teachers influencing behaviour



*Defra, Securing the Future, 2005*

**Picture 3 Teachers influencing behaviour** (after Defra, *Securing the future*, 2005)

## Conclusions

Trainee teachers, teacher trainers and teachers widespread sustainable development more creatively and professionally if they participate in international collaboration projects involving sustainable development issues.

In order to drive positive change, contemporary teachers need the skills and competencies to act appropriately - sustainability competencies are increasingly seen as part of the normal, required skill set within communities.

Valid knowledge on sustainable development and creativity gained both by the teacher trainees and the academic staffs emphasize their significance for the next generation.

Through face-to-face workshops, an on-line learning community and contact tutors' support global issues are explored. They have developed trainee teachers' thinking and created both personal and strategic action plans which ensure a holistic approach to sustainable development.

Lesson planning and conducting experience was developed due to the theoretical input. The observation of practice and the lesson conducting in international teams convinced the participants of the teacher's role reaching beyond encouragement, involving intervening and actively teaching creative techniques and strategies.

Teacher Education for Sustainable Development in Latvian Higher Education has to be emphasized as well. Contemporary society and its education paradigm undergo fast changes. Equity implementation in benevolent, creative student and academic staff collaboration in the study process, involving participation in Erasmus projects, fosters English as a foreign language acquisition by the use of ICT materials and involvement of non-traditional, real life video and audio materials, as well as contributions from students themselves. This serves as a precondition for a creative professional's life-long sustainable development in both the EU and the entire world.

Educationalists should promote themselves creatively alongside their main collaboration partners – pedagogy students – to attain their common goal, i.e., advancement due to sustainable development and sustainable development. Latvian educators should pursue the goal by joint creative efforts with colleagues from beyond Latvia. Shared experiences bring genuine reward.

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