6th eRegions Conference 2016: Cross-border eSolutions & eServices Prototypes Development Panel

Creating Environment for Entrepreneur and Innovative Grammar School Students in the eRegion





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Introduction words

This event is of great importance especially in this challenging time when we all understand that the quality dimensions of human capital are the most important resource for the wellbeing of the wealth, countries, cities, region and for every single person.

It is challenging to search the answer to the question - How to support (in an inclusive way) the high ability students to be highly motivated for self-regulated life-long learning, to be highly creative, innovative, and entrepreneurship oriented. And moreover, how to empower them to take personal responsibility for their actions and products, for sustainable development of the world. These students will be the "leaders of the future". You, our young participants, will be the leaders, but you will have to take the decision - will you take care about wellbeing of other people too, or not. That means that the school system as a whole and each particular school today should care and share responsibility for the quality of education, together with other stakeholders, students and parents.

It is not only the question of the quality of knowledge, but still much more about the values. Being creative and being inventive is not the only thing that matters. It is far more important to teach our students which problems are worth dealing with, what are the issues that really need creative and innovative solutions. Students' projects should not be primarily "result oriented" but "process and value oriented". The first question should always be – WHAT FOR, not HOW.

So the main goal of this panel is primarily about the processes of education (organization, methods, relationships), not about the results; about cooperation, not about competition. We are looking forward to learning and sharing successful experience about those dimensions and perspectives of education.

The main goals of this panel:

- to exchange the best practices for empowering the most motivated talented grammar school students for creativity, innovation and entrepreneurship;
- to form new institutional and personal networks for future students' collaborative, innovative and entrepreneurship projects in the e-region.

- Is there really a need for "more creativity, innovativeness and entrepreneurship" in the present Grammar School curriculum? Which organizational and teaching strategies represent most potential for the development of creativity and innovativeness among students?
- Which is more important the financial resources for school work or the level of school autonomy?
- How can school leaders better support the most creative and innovative teachers and mentors? How does collaborative or competitive school culture influence creativeness, innovativeness and entrepreneurship of students and teachers? Which one is more important for students' personal and career development and for the whole community?
- What kind of support can local community and the national educational system offer? How can we enhance more partnerships between grammar schools, teachers, mentors, students and the labour market, researchers, tertiary education?
- What kind of platforms, data base, networks and certification system could be more suitable for students, mentors, schools, municipalities?

The panelists:

- Ines Dukić, Physics Teacher & Mentor XV. Grammar School Zagreb, Croatia
- Sonja Artač, Biology teacher and Student Projects Coordinator
- Maja Gerden, Teacher & Projects Head Grammar School Ljubljana Vič, Slovenia

•Tanja Bezić, MA, Senior Adviser and president of The Expert Group for Gifted and Talented Education at NEI

A Short Introduction to the Slovene System of G/T Education

The Key Structural Elements of the Slovene Educational System

Primary and lower secondary education are unified - lasting 9 years (3 three-years cycles; age level from 6 to 15).

Three types of secondary schools (ISCED3):

- vocational education programmes (lasting two-and-a-half or three years; with the option of continuing with a two-year upgrade programme OR entering the labour market);
- technical education programmes (four-year programmes in different areas);
- general education programmes (Grammar School, "gimnazija": general, classic, technical, economic, arts, international baccalaureate, sports classes)

Different Types of Differentiation in 9-year Primary School

- By law the internal didactic differentiation is expected in all classes of the primary school.
- From the fourth to the seventh class students can be put in different groups at the maximum of three subjects Mathematics, Slovene and the first foreign language; but not more than in one fourth of the annual lesson fund (flexible differentiation).
- In the eighth and the ninth year partial external differentiation can take place. Students can be placed in three different learning groups according to their learning abilities, in three subjects: Mathematics, Slovene and the first foreign language.
- In the seventh, eighth and ninth class students select two or three elective subjects that broaden and deepen their knowledge of the compulsory subjects. These elective subjects can be compensated by attending a public music school.
- From the first to the ninth year the school has to offer two hours of additional lessons per month in subjects where a student constantly overreaches the National objectives.

The Legislation and G/T Education

 For the pre-school educational system the national curriculum prescribes only internal differentiation to the greatest extend; identification of the G/T pupils is not taking place.

 Primary and secondary school legislation pays special attention to the importance of developing all students' gifts and talents and defines gifted students as students with additional / special educational needs.

Schools are obliged to adjust the methods of teaching and learning.

The Concept of Recognising of and Working with the Gifted Students in 9- year Primary School (approved in 1999) and in Secondary Schools (approved in 2007)

The Concept defines gifted and talented students as students who are **possessing demonstrated or potential abilities** in the following **areas**:

- general intellectual,
- specific academic fields,
- creativity,
- leadership capacity,
- arts music, drama, creative writing, visual arts,
- psychomotor area sport, dance, technical area

and who need the **specific** adjustment or differential educational courses not ordinarily provided by the regular school curriculum.

Identification process

Students are identified as gifted/talented if they reach the standard (at least 90 percentile) on at least one of the instruments:

- special marking scale for teachers,
- ability test (SPM, WISC),
- creativity test (Torrance).

In secondary school identification is possible by

- confirmation of the primary school documentation (students bring their personal reports to secondary schools; reports have to be verified by primary schools);
- certificates of the top academic and other areas achievements at the state level;
- nomination and identification with the use of psycho-diagnostic instruments.



Education of G/T Students in Primary and Secondary Schools

After identification, if the student agrees, primary and secondary schools have to offer the INDEP, which has to be confirmed by the school, the student and the parents.

INDEP is a term for the common plan of internal, flexible differentiation, partial external differentiation, acceleration, and other teachers' and student's learning activities "inside and outside the school".

The main goal of identification and INDEP is to recognize the exceptionally high abilities and interests of individual student and the adjustment or modification of the regular curriculum for the student's optimal and holistic personal development.

The Possible Schools' Provisions for the G/T Students – Defined by the Law and Financed by the State

- early entrance,
- skipping the year,
- extra lessons in different subjects (not for ISCED3),
- internal, flexible and partial external differentiation (ISCED2),
- elective subjects (ISCED2, ISCED3),
- interest activities (ISCED 1, 2);
- elective activities and projects (ISCED 3);
- national competitions in knowledge, sports and art
- Zois state's scholarship for exceptionally successful students (ISCED3 to ISCED6).
- school counselling services testing procedures inside schools,
- special academic status "sportsman, researcher????, artist " (ISCED2, ISCED3),
- special "educational contract" (ISCED3) if adjustments exceed the law.



Provisions Outside the School, (partly financed by the State budget)

- Summer Schools and Research Camps in science, sports and art (ISCED2, ISCED3);
- Music and dance festivals (ISCED1, ISCED2, ISCED3), art exhibitions (ISCED1, ISCED2, ISCED3);
- Public music schools (ISCED1 and ISCED2) as well as the high schools (ISCED3).
- Private music, dance, art and theatre schools (ISCED1, ISCED2,ISCED3).
- Local communities and private funds for scholarships.

Table 1: The percentage of the identified G/T secondary students among all enrolled, at the end of the school year 2011/2012

Secondary programme	ID %
Grammar school – 4 year	47.8
Technical-General - 4 year	18.4
Technical - 4 year	6.8
Vocational - 3 year	0.8
Vocational-Tehnical 3+2	1.1
Σ	22.7

Table 2: Identified G/T students with INDEPs at the end of the school year 2010/2011

	Class 1		Class 2		Class 3		Class 4 (1)		Class 5 (2)		Σ	
Programme	n INDEP	% of ID	n INDEP	% of ID	n INDEP	% of ID	n INDEP	% of ID	n INDEP	% of ID	n INDEP	% of ID
General – 4 year	407	24.7	352	24.0	343	25.3	219	19.1			1321	23.5
Technical-General - 4 year	64	37.9	37	28.2	17	19.5	13	28.3			131	30.3
Technical - 4 year	93	39.2	88	40.4	67	43.2	24	25.0			272	38.5
Vocational - 3 year	3	42.9	6	54.5	2	15.4					11	35.5
Vocational- Technical 3+2							1	8.3	3	75.0	4	25.0

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Table 3: The percentage of students with INDEP-s of all enrolled

Programme	% of all enrolled
General – 4 year	11.2
Technical-General - 4 year	5.6
Tehnical - 4 year	2.6
Vocational - 3 year	0.3
Vocational-Tehnical 3+2	0.3
SUM	5.8

Mentors in General Grammar School - more than 600 mentors for 1300 students...15573 hours of mentoring (only 24,3 hours per mentor)

Is it true and enough? (only students with INDEP)

What are the main problems of G/T education in Grammar Schools?

 Generally, the Concept influenced much more systematic and higher quality G/T education for the greatest part of all secondary schools.

BUT

- Schools' overall perception: insufficiency of moral and financial support for mentoring and mentors and for the high quality enrichment programmes;
- Deficiency of connections and networks between secondary schools, mentors and students; only a rare systematic connections exist between the secondary schools and academic institutions, local communities and business sphere;
- There is a huge chance that students' creativeness and innovativeness is not enough focused on the direction most needed and really worth;
- Problem? The scarce resources are possibly not used in the optimal way;
- One possible solution: ??? Concrete Gymnasium ??? a reference centre for specific area of learning or for specific teaching methodology; the eNetwork centre for schools, students, mentors, academics, local communities and entrepreneurs.

"The best way of talent education is not a specific method, nor a specific teacher or school, but the complex environment in which the talent being raised is located. That is,



the best talent education method is to provide a talent-friendly social space."

(JGyőri. 2012. Best Practices in International Talent Nurturing and Support. Reflections, Lessons and Questions, p. 217; 215-228)

