



**VISConti**  
P R O J E C T

*Viability Innovation Scientific Creativity  
oriented networking training and instruction*

## **IO9 - VISConti Policy Recommendations**

Norges Teknisk-Naturvitenskapelige Universitet  
and VISConti Partnership



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## **Introduction**

The recommendations found in this document are the result of observations and reflections made by the partners in the VISConti project especially those forming part of the Observatory of the dynamics of the Community of Practice started up by the project, the coordination team and the external evaluator.

VISConti stands for *Viability Innovation Scientific Creativity oriented networking training and instruction*. It is a project financed by the European Commission under the Erasmus+ funding programme.

It is a Strategic Partnership bringing together 7 partner organisations from 9 countries including 3 universities, 7 VET schools, one network of schools, one association of professionals in education management, one policy maker, one IT company and three organisations engaged in research and promotion in industry.

It is a relatively large partnership and this was necessary so that the project could have the widest impact possible and so that it could function like a network during and after the project lifetime. It covered a large geographical area with two national clusters in Romania and Turkey. This has given to VISConti a wide base of experience as well as the necessary critical mass required for the results it was set to achieve.

VISConti has three objectives:

- the generation of tools to enable experimentation on new methods of assessment of projects by students in VET studying STEM, IT and science related subjects,
- the start of a new generation of students and teachers in VET who interact with science professionals in industry around creativity in science and
- the start-up of a new Community of Practice in which students, teachers and professionals interact at par for a collective and interactive learning experience through exchange of ideas and reactions to science concepts and projects.

The recommendations hereunder are divided under a number of headings to facilitate clustering of ideas and to organise them in a way that is easier to use in group discussions as follow up to the project.

### **1. On new content and methods of learning in VET**

It is evident what VISConti did with the introduction of the CoP in VET fits like a glove with the teach less and lead more trend. It also tallies perfectly with the bid of bringing VET and industry closer. The fact that one of the VISConti products is online tools for presentation and assessment of projects makes it also partake of the project based learning methodology.

During the process some ideas came up in relation to adopting new content and methods of learning in VET.



One strong recommendation would be:

***The introduction of training of VET students on pushing boundaries possibly through challenging questions and exposure to methods of validation / assessment of creativity.***

In the beginning of the activities of the project we asked the partners to share methods of assessment of projects and it confirmed that teachers had methods of assessment that were broad and in some cases the parameters for assessment were shared with students. In a number of cases teachers are assigned mentor roles for students preparing projects and during this mentoring the teachers help students satisfy the criteria for assessment of the projects.

We see the opportunity to devise formal training in creativity and this sustained with skills in research at least so that the student can make a more informed decision about whether one's own project pushes boundaries, is creative and innovative.

This training would include vocabulary and assessment exercises of ideas that are floated already. Students would, in such training, acquire insight into the difference between invention, innovation, change of use, transfer etc. and at the same time be equipped to look at projects from a technical and economic potential point of view. This practice would be an excellent vehicle for learning from others and then use the same knowledge and competences when preparing one's own project.

When the project proposal of VISConti was being put together there was one striking reflection. One of the contributors conditioned us to leave out self-assessment from the tools for the students. The contention was that self- assessment kills creativity. We adopted the transparency method in which the student knows what tools the expert will use to assess a project and these would become a form of milestones to be reached and thresholds to be attained. We are looking at what happens in the CoP dynamic in this area.

We are forming opinions about it but:

***something that is clear already is that once the tools for assessment are available to the student or the person submitting a project and if there is mentoring during the preparation of the project then the assessment would necessarily be carried out by someone other than the teacher of the student. This would possibly also be by someone from industry like we are doing in the VISConti CoP.***

This will help provide a more detached assessment of the project. This method is already used in a number of cases provided by partners and we see that it has benefits.

Later on in this document we will identify the potential difficulty that schools might encounter in the setting up and adoption of the CoP methodology for themselves within their region.

This can be solved by the school using the VISConti CoP platform if the school is ready to engage in cross border interaction. If the school does not wish to go cross border but is interested in the CoP methodology of interaction between students and teachers, or better still between students and experts from outside school, it can adopt it for its own local context. It can also be a recommendation to adopt the CoP method by way of simulation.

This recommendation would therefore suggest that the students and teachers, and possibly experts, interact for an assessment purpose at a given time.

This is very close to what some schools are already doing with the involvement of externals to validate or assess students' projects. Our recommendation is that:

***even if the school does not wish to join the CoP it still engages external professionals in assessment of projects and possibly emulate the CoP working environment to give to the students the taste of how a CoP works. It would be very much like the Practice Firm concept and method in management training.***

In the CoP of VISConti there are tools (or rather spaces) for assessment of projects of students on three axis namely technical viability, scientific creativity and economic potential.

The CoP requires students to present their projects with questions related to the three axis. Keeping in mind that the students involved are students of STEM, IT and science related subjects. This means that they do not have training in economics, markets and financial preparation.

We venture to recommend that:

***students can interact with students from other fields of study in the preparation of their projects maybe have these students present projects together in a cross disciplinary manner.***

This may be a wild card but we feel it is worth exploring and this may also be taken to be one of our recommendations. The partners in VISConti who are now partners in the UPPScience project will already have the opportunity to explore this. The UPPScience project will expand the scope of the CoP involving teachers not only from STEM and IT but also from sectors that have an effect on or are affected by the science world.

## ***2. On new skills for teachers***

In key with our previous statement that VISConti fits in with the teach less and lead more in education there are skills that teachers need to be equipped with it if education has to run along with the internet based information challenging novelty in class. Teachers are encountering challenges to maintaining interest from students who are ever more autonomous learners and independent when it comes to knowledge acquisition.

This new dynamic has created the need of new competences that students need and the consequential need for new skills that teachers require to help students acquire them. Project work and autonomous learning require research skills, preparation, presentation skills, filtering of information, cross checking and critical analysis of information that comes from the net.

Students working more on their own means that they need the tools to find the right information and be able to analyse it before using and owning such information.

Students need skills into looking at who is sharing information and why, agendas of publishers. They need to be able to be aware of source and date of data that they find.



***It is recommended therefore that teachers be given the skills to help students acquire competences including research, analysis and comparative methods both in class and in practice.***

This training of teachers needs to be high on the practical as well and this can be carried out with their participation in project presentation and having their ideas assessed and validated by others. This can be put in practice in the VISConti CoP or in simulations.

Should professionals from industry be involved in this process it would be a golden opportunity for teachers to remain in touch with the ongoing in science, technology and industry. It would help them remain up to date and be better teachers with better background knowledge and preparation.

***In key with the character of VISConti and the importance it gives to professional profiling we cannot omit the recommendation that teachers be given skills in this area.***

The VISConti experience with the CoP highlighted the fact that teachers are not very light footed when it comes to building a professional profile online. We could identify a number of shortcomings from basic skills in presenting oneself well and to presenting oneself with what is relevant for building a professional profile.

Teachers do not normally look for clients and this reduces the need to present oneself unless one is seeking job mobility. During the VISConti process basic coaching and directions were needed at times. The fact that one is building one's profile in a community that has specific purpose would normally serve as a direction as to what one should put into one's profile but we discovered how much online profiling can be the subject of training and coaching that is needed for teachers and for students.

### ***3. On new quality approaches in VET***

The idea behind VISConti was born in two previous Comenius Networks.

SEEP (Science Education European Platform 2009-2012) was a network of teachers of science and their schools that was successful in the generation of structured online activity in which teachers exchanged views and teaching ideas. Teachers benefited from a new open door network working environment. For many it was a first time experience in a cross border project. Some benefited more than others and are still working together in joint training activities with a high element of networking in form and content. Indeed four partners from SEEP are now in the VISConti partnership.

RICK'S Cafe (Renewal....Spaces 2010-2013) was a network of teachers and schools that took the activities of SEEP one step further in that it had an element of publishing within it. Teachers were supported and inspired to publish and share mini papers about a number of topics that were the subjects of discussion of online fora. This was a successful exercise with some experimentation in sharing experience through stories as well. The network is still working in a manner very much like it did during its funded lifetime. A number of partners from RICK'S cafe are now partners in VISConti.

VISConti has carried the baton of structured online interaction and sharing ideas through the publishing of project ideas within a CoP.

During the discussion and exchange between teachers, academics and individuals from industry one could observe how sharing requires preparation to maintain good quality content and structured exchange to secure discipline in the dynamic within the Community.

Discipline provides safety and helps maintain confidence that joining the CoP is not a waste of time. Discipline in VISConti came from outside the CoP dynamic in open but present management throughout the lifetime of the project as well as from the online interaction in the CoP that was a mix of school activity and structured tools on the platform.

The discipline was around professional profiling and publishing ideas that become part of one's profile. It was about planning submissions and being conscious about the fact that what one chooses to publish and share is a reflection of what and who one is.

It is for this reason that:

***one strong recommendation from VISConti is to adopt publishing as a quality strategy in school, teacher education, VET and HE.***

This recommendation is one based on experience before and during VISConti and will continue after its lifetime. A large portion of the partnership came together into a new project called UPPScience that will continue VISConti, enlarge the size and scope of its CoP and bring publishing of small research projects by teachers into the game.

The experience in UPPScience will be wider because of the large partnership and will be an excellent platform for furthering this recommendation of bringing publishing as a tool for quality strategies especially with the research culture and peer review UPPScience will put into practice.

It is our firm belief that with the adoption of publishing from early stages in teacher education and the continuation of the practice throughout one's career in education and management in education can bring about a new generation of professionals. It would secure continued and continuous learning in education and it would break the myth that research is only for academics.

#### ***4. On new dynamics between VET and industry***

Much has been said about the fostering of closer relationships between VET industry. Much has been done in this direction however, from what we see around us:

- most initiatives are specific initiatives ie. annual, periodical events most organised by schools and this in the shape of job fairs etc.,
- many activities are related to internships or work exposure in which students spend days or weeks in companies to gain practical experience and
- some initiatives are special in form and philosophy like scouting and therefore very specific cases.

VISConti has made its small contribution to enforcing relationships between VET and industry in the engagement of one partner that is an IT company and that had an important role in the production of the platform for the CoP of VISConti. Its role was to design and mentor the production of the platform by VET IT students in another partner school in another partner country.



Albeit a small contribution it is of major significance that this was a first experience for the company, for the school and for the students. It was a successful adventure in business world dynamics for all involved. The students are now engaged in their own start up directly as a result of this cross border work they carried out in the VISConti project.

The IT company and the school will continue the VISConti cooperation in the new UPPScience project in which most of the VISConti partners are also involved. This inspires an important recommendation by VISConti that:

***VET can get closer to industry by putting students in practical production while they learn.***

This means that industry can obtain service from the school be it production or experimental this with strict social consideration that it is a learning process for students and teachers too.

Some of the VISConti partners have already started experimenting this dynamic and they have also started a new project Creative InternPrize also funded by the Erasmus+ programme. It is for students of marketing and subjects that can lead them to careers in the creative industries.

This recommendation comes along with a suggestion that this special kind of productive relationship between VET and industry be implemented with the community school philosophy ie. a school that becomes a space in which all the local community partakes of the upbringing and future careers of the next generation. It also comes with a smell of new avenues for the school forming partnerships with local authorities that inspire and mentor start-ups.

VISConti also contributed to the new dynamic between VET and industry in its very own mission to set up a Community of Practice in which students and teachers of STEM, IT and science related subjects interact with science professionals from industry. The CoP will continue its dynamic after the end of the project lifetime now that the new UPPScience project will continue its CoP dynamic covering new areas of interaction and a larger community.

One cannot maybe recommend that the CoP method be adopted as a normal vehicle for interaction between VET and industry because maintaining a CoP requires dedicated mentors and energisers all the time. Few schools can realistically dedicate such resources in a sustained manner without external specialist support. It is however apt to recommend that the results of the successful dynamic of the CoP of VISConti be used to inspire tools and methods of interaction between VET and industry:

- the VISConti CoP removed the corporate relationship between school and industry and brought it down to interaction at individual level. The VISConti experience will continue teaching us about the benefits of individual interaction between students, teachers and professionals. It has already taught us that this interaction would best be constructive and creative as opposed to generic discussion about career etc.

***One can recommend a number of avenues in which VET providers and science professionals interact at individual level through visitor lecturer format, engagement of tutorials by science professionals this possibly sustained by the school forming an ex alumni organisation to maintain contact and solicit intervention from science professionals in school.***



- in key with the previous recommendation and by way of a step further the interaction between students, teachers and professionals from industry needs to be structured. It needs to become a practice. Activities need to have a specific aim, preparation and need to be integrated in a way that the dynamic invades the school space thus thinning the borders between school and community and industry.

***It is recommended therefore that, be it at education policy or at individual school level, there be a relationship between students, teachers and science professionals structured to be extremely close to the formal education environment.***

It is impossible to list all the benefits of bringing such valuable informal learning into the school environment through direct intervention of professionals from industry since this would need volumes of discussion and derail us from the recommendations being made here.

- ***it is recommended that the interaction between VET and industry (or ideally professionals) is organised by domain.***

By this we mean that it is best to have interactions on specific topics or sector ie. not technology but robotics or automation. In the VISConti profiling process the tools require users to identify sectors, sub sectors, specialisation and interests because this is how human beings work. Specificity may sound surgical and possibly exclusive to students sharing the same interest however it can also attract interest and arouse curiosity in students who never thought they would be interested in a topic or another because they never had a close encounter with it.

Anyone with some exposure to the requisites for a CoP to exist (ie. members' commitment to the group, domain of interest and mission / structured interaction for a purpose) will realise that each one of the three recommendations are related to the three requisites of a CoP. This is to say that even if schools or the education system would probably find it difficult to implement a CoP because of the discipline and energy required to keep it alive and going one can adopt one or two areas of the CoP and create a community that works enough even if not strictly a CoP.

## ***5. On new ways of adopting concepts and financing initiatives***

A CoP is a method of social and community learning. It is therefore an optimum platform for consultation. The difference between usual consultations and a CoP dynamic is the discipline of the interaction within it. A normal consultation would already have a specific domain for discussion and would already have the commitment of members in the consultation.

A disciplined interaction would mean a stricter form of interaction, more supported by research, one with more record keeping of the interactions possibly for future consultation of the records.

We see this is form of consultation as a beneficial one and though maybe not to the strength of a recommendation it would be worth the thought and due consideration. This may be applied to the adoption of new concepts in education at policy making level in the same manner as is applied in some countries in the preparation for annual budgets etc.