



PRO INNO EUROPE

**INNO
LEARNING PLATFORM**

**Good practice Identification –
Advice for transferability
Innovation Awareness
Flashes of Genius**

February 2008



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CHAPTER I: Good practice identification

1 General description of the good practice

'Flashes of Genius' (Snilleblixtarna) is an initiative launched in Western Sweden in the mid-nineties to encourage creative thinking and problem-solving, and to enhance entrepreneurial spirit among young people. The programme was designed to expose young children to innovation, to help them in developing curiosity and to increase their creativity. The goal is to stimulate initiative and self-confidence among children aged 6-11 years by encouraging them to work both independently and by teaching them how to cooperate with other children. The activities are organised by schools while teachers, parents and business owners support the activities. It works as a network and the activities are built on voluntary participation. The activities include a 'problem box' in the classroom where children formulate and collect everyday problems. Then, they try to find solutions to these problems in small groups, and document the solutions by drawing and sometimes also by building prototypes. The aim is not necessarily to find the perfect answer, but to consider a variety of ideas and then refine them. 'Pottering days', when children put technical items (such as old TVs and radios) into pieces to see what they look like inside and how they work, are also organised.

2 Please describe the selected good practice¹ in terms of:

2.1 Uniqueness:

Please describe the innovative characteristics of the practice when compared to others within the same theme (e.g. if any other exist) regarding its methodology, organization, function and/or results. Also provide a short description of the rationale of the measure.

Measure Name:	Flashes of Genius		
General description/rationale:			
Launched in 1994 in Western Sweden and running since to encourage creative thinking and problem-solving and to enhance entrepreneurial spirit among young people. The initiative now is spreading also to other countries. It was first created to promote awareness of innovation. The programme "Flashes of Genius" was designed to expose young children to innovation and inventing activity. Local and national "Flashes of Genius" exhibitions are organised every year where the children's inventions are exposed. Its main goal is to stimulate creativity, initiative and self-confidence among children by encouraging them to solve daily problems independently.			
Innovative characteristics as regards:			
Methodology	Organization	Function	Results
The vision of Flashes of Genius that led the programme to success is the following: <ul style="list-style-type: none"> • To visualize and stimulate the childrens' amazing creativity, power of initiative and thinking • To give children trust through the creative force the have within 	The region realised that children could play a determinant role in developing a strong entrepreneurial future and decided to start a number projects, departing from more traditional educational techniques, to encourage children to be more creative. "The activities	Usually schools work with "Flashes of Genius" one whole day a week. The activities include a 'problem box' in the classroom where children formulate and collect everyday problems. Then, they try to find solutions to these problems in small	Flashes of Genius has become part of the Swedish school curriculum, and is having a positive effect on children's creativity and self-confidence – building the foundations of the key entrepreneurial ability to assess and

¹A technique or methodology that has proven to reliably lead to the result that has been aimed for; An activity or procedure that has produced outstanding results in another situation and could be adapted to improve effectiveness, efficiency, ecology, and/or innovativeness in another situation.

<p>themselves</p> <ul style="list-style-type: none"> • That children have their own ways of thinking that have to be stimulated and be taken seriously by adults • To get the schools' learning process more entrepreneur like • That the individual can use and deepen his or hers knowledge by solving their own problems – a problem based learning • To make the school more creative, fun, and more joyful for both teachers and students • To create new networks of knowledge between the school and its surroundings • To cross boundaries and stimulate variety 	<p>of "Flashes of Genius" are organised by schools. Teachers, parents and business owners support the activities. It works as a network and the activities are built on voluntary participation.</p> <p>There are six phases in the Flashes of Genius program: Hands-on; Put Together; Discover; Figure Out; Construct; and Exhibit. According to a tutorial for teachers, these phases enable students to “get both an outlet for their creativity and a wealth of inventiveness, at the same time learning everything from presentation techniques, group collaboration, the English language, mathematics, technology and a lot more.”</p>	<p>groups, and document the solutions by drawing and sometimes also by building prototypes. The aim is not necessarily to find the perfect answer, but to consider a variety of ideas and then refine them.</p> <p>Finding solutions to everyday problems in small groups, and document the solutions by drawing and sometimes also by building prototypes. ‘Pottering days’, when children put technical items (such as old TVs and radios) into pieces to see what they look like inside and how they work, are also organised. Local and national “Flashes of Genius” exhibitions are organised every year where the children’s inventions are exposed.</p>	<p>to take measured risks later in life. Approximately 70,000 children are involved in local Flashes of Genius activities in Sweden. The initiative is now spreading to Norway, Denmark, Germany, Mauritius, Italy and the United States.</p>
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2.2 Relevance:

Problem	Solution that was provided
How to create a positive attitude to risk-taking and to enhance entrepreneurial spirit among young people.	It encourages creative thinking and problem-solving, and enhances entrepreneurial spirit among young people due to the fostering of innovations
How to raise awareness on innovation	Everyday problems are collected and then answered by considering a variety of ideas. Local and national “Flashes of Genius” exhibitions are organised every year where the children’s inventions are exposed.
How to encourage creative thinking and problem-solving on school students	Finding solutions to everyday problems in small groups, and document the solutions by drawing and sometimes also by building prototypes.

2.3 Effectiveness:

The project, Flashes of Genius, is ongoing since 1994. Approximately 70,000 children are involved in local Flashes of Genius activities in Sweden. Local and national exhibitions are organised every year where the children’s inventions are exposed. A follow-up initiative to Flashes of Genius has been

launched for 11 – 16 year-olds: “Mini Entrepreneurs”. The initiative is now spreading to Norway, Denmark, Germany, Mauritius, Italy and the United States. By 2004, the programme has additionally involved more than 50.000 children in 7 countries.

The strongest indication about the long-term effects of this practice is that fact that the programme first began in the mid-1990s and since then, has strongly developed into a concrete aspect of the Swedish school curriculum. Having evaluated the positive effects the program has on children’s creativity and self confidence, they found that the programme contributes to building the foundation of the key entrepreneurial ability to assess and to take measured risks later in life. Long-term results have made an impact, for example, the replication of the best practice in different regions.

2.4 User satisfaction:

User group	Primary target group (yes/no)	Feedback provided	Explanation for feedback
Students (4-12 yrs old)	Yes	No official evaluation has been provided, but there exist photographs and comments of students that have participated in the programme. Every year, the students have a chance to show their creativity of innovative inventions at the exhibition. They don’t feel like it is a competition, and everyone is a winner for participating. The students take pride in showing their inventions each year. Feedback from one female student after receiving her completion of the programme T-shirt was that she was as proud as if had received the Nobel Prize.	This represents feedback that demonstrates the involvement that such an initiative has on the user group and in this sense also the awareness raising effect.
Federal departments (political stakeholders)	No	Political Appointee from the US Office of Educational Technology from the Department of Education, provided feedback directly to the founder by commenting on the Flashes of Genius Programme after she attended the conference in the US. She saw the value in the program as an effective way to inspire the next generation of learning. The programme has reached the US, and a school in Maryland has already implemented the programme; the students received Flashes of Genius diplomas.	This feedback shows the capability of the program to effectively replicate and be transferred to a completely different region and school system. Although the program originated in Sweden, it was seamlessly repeated in a non-European atmosphere in the United States.

The programme is successful largely due to the fact that the support from the stakeholders is strong. The programme has come a long way; especially taking into account that the first 14 years, the programme was not funded. It’s imperative that school systems remain active and cooperative in maintaining this programme within the school curriculum in order for the programme to continue to receive public funding from the Swedish Government.

In order for the programme to grow, more regions will need to become aware of this good practice. For example, the feedback given by the US Political Appointee was particularly interesting for future stakeholders as it showed a European Programme replicated effortlessly in a non-EU environment.

2.5 Recognition:

The practice has been recognized since the initiative has become part of the Swedish school curriculum, is supported by NUTEK, the Swedish Business Development Agency, and is having a positive effect on children's creativity and self-confidence – building the foundations of the key entrepreneurial ability to assess and to take measured risks later in life. Approximately 70,000 children are involved in local Flashes of Genius activities in Sweden. This initiative is now spreading to Norway, Denmark, Germany, Mauritius, Italy, and the United States.

2.6 Context dependency:

The entire programme began in Stenungsund in 1994. The inventor, Anders Rosén (founder and leader), organized a contest, “The Egg Drop” at a school. The concept of the contest was to come up with solutions on how to drop an egg from 25 meters and still be whole when it landed. When Rosén saw the childrens' enthusiasm and their amazing imagination he understood that these activities should be continued and further developed. Children should be inventing in schools.

The market has evidently recognized the necessity to invest in raising awareness on creativity and innovation especially in an early stage. The most evident sign of this recognition in the Flashes of Genius initiative is the replication of the programme in other regions. The initiative has spread from Sweden to Norway, Denmark, Germany, Mauritius, Italy and also recently, to the United States. The recognition in Sweden started when they fully realized that children could play a determinant role in developing a strong entrepreneurial future. They decided to start a number of projects to promote creativity and innovation, departing from older, more traditional educational techniques, to encourage children to be more creative.

During the first 14 years the programme had no public funding and all who worked on the programme worked voluntarily. Now, because of its success, the programme receives support from the Swedish Government. The practice has been recognized since the initiative has become a standard part of the Swedish school curriculum. The program has also been recognized and is supported by NUTEK, the Swedish Business Development Agency, as they see the positive effects the programme has on entrepreneurship development.

2.7 Replication:

This programme can most definitely be adapted and replicated in other education systems of all regions. The practice is already spreading to various countries (Norway, Denmark, Germany, Mauritius, Italy and the United States). Because the vision of the program is about openly promoting creativity and innovation - “to think outside of the box,” through easy and fun activities - the programme activities can be implemented in any school system. The reason the programme was first invented was because there was a lack of creativity and entrepreneurial spirit. Unfortunately this is the case in many school systems, and schools in many regions could use a change towards greater creativity and innovation.

The main factors of success which are necessary in implementing a similar initiative lie in the vision and mission of the Flashes of Genius programme. The programme aims to not only develop children's minds but also the mentality of the Swedish school system. They realised the importance of

developing the most important resources: not only the children, but also the schools they attend. A main goal was to develop the schools' learning process to be more entrepreneur like, thus making the school more creative, fun and more enjoyable for both students and faculty. It's important when trying to replicate this initiative in a different region, that they receive the acceptance and cooperation from the region's public school system.

The programme has been structured in a "9-step path" aimed to help children to develop inventiveness and to train teachers on how to guide students in bringing out their abilities. Given the universal necessity to develop creativity in students and the well structured methodology of the programme, "Flashes of Genius" can positively be applied to any school and adapted to any language.

The organized methodology- which includes activities that vary from how and why the programme works to "inspiration workshops"- can be summarized as follows:

- How does the programme work?
- "Touching and manipulation" workshop
- Initiation to imaginative thinking
- Ideas Inspiration workshop-phase 1-2
- Problem Solving workshop
- Idea and Invention
- Model working
- Results Exhibition Day

DVDs and a handbook "Handbook for Enthusiasm" by Roland Jönsson are available to order free of charge online and can be used to integrate the information provided by the workshop series. This methodology and material are the tools necessary to execute this programme.

3 Additional information sources

Name:	<u>Anders Rosén</u>
Organisation:	Flashes of Genius
Position:	Inventor
Role experience within the good practice:	
Telephone:	39 06 68803253
Email:	roseninnovation@cytanet.com.cy
Address:	
Web address:	<u>http://www.snilleblix.tn</u>

CHAPTER II: Advice for transferability

4 Introduction to the proposed action

4.1 What are the main actions to be promoted to meet the objective?

Without education as a core policy, innovation will remain unsupported. It must promote talent and creativity from an early stage. Improving education (particularly to create interest and excitement in science and technology) and high level of training is essential to keep Europe's human capital (researchers, engineers and other employees) up to date with the skills and knowledge necessary for innovation. Thus, the aim is to facilitate exploration of experiences and attitudes towards creativity, promote new constellations of collaboration and enhance innovation within and across education, scientific fields, business sectors, public sectors and virtual communities.

Three complementary approaches are proposed to exploit maximum potential from Europe's innovation potential. In broad outline these approaches are:

- the creation of a European wide electronic portal which will capture and stimulate innovation;
- the creation of synergies between existing initiatives (awards and contests);
- the promotion of real life events already existing or under development.

4.2 What is the problem for which the cited measure is trying to provide an answer?

In general:

- Low level of awareness and involvement of EU citizens in creativity and innovation;
- Innovation is a complex and multidimensional matter in raising awareness;
- Failure to recognise the importance of social innovation;
- Failure to recognise the importance of capturing all innovative activity, especially from non-traditional sources;
- Innovation requires more examples of approachable mentors and support for innovation;
- EU citizens do not debate innovation;

Flashes of Genius try to provide answers on:

- How to create a positive attitude to risk-taking and to enhance entrepreneurial spirit among young people;
- How to raise awareness on innovation;
- How to encourage school students to creative thinking and problem-solving;

4.3 What is the general status of the recognition in the market of the necessity to invest in the proposed policy theme?

We can't find what the general status of the recognition of raising the awareness and the fully exploitation of Europe's potential to innovate is, though the feasibility study shows that there are already some initiatives around this policy theme.

4.4 How is the main policy theme communicated in the market/which guidance material is already available?

The existing material, suitable for further developments and customizations, can be grouped in two main categories:

1) Existing guidance materials and methodologies developed over time that could provide a framework, i.e. a model or template, to prepare tools such as guidelines, training materials.

Nonetheless, a better approach for innovation is to focus on individuals and how they can transfer their expertise from one domain to another to achieve innovation. Combined with the concept of ‘learning by practice’- that is people learning about innovation via the practice of others – (on-line) networking is more likely to be effective than the best guidance materials.

2) The existing initiatives can be grouped in the context of the potential innovation communities in four major strands:

- School Students and Youth;
- Higher and Further Education;
- Small and Medium Sized Enterprises;
- Social and Community Innovation activities - Research and Development sector;

4.5 What is the expected outcome of the proposed actions?

The following points could come out:

- Information about ongoing activities: Our proposal gives a structure to diverse parallel activities and provides them concrete information about the activities that exist in their region. Additionally, with the events they have the possibility to participate and thus learn the practicalities of innovation and creativity in action.
- Increase in participation in the innovation activities: It is more than evident that the new generations are investing their time even more in social collaboration tools and in creative activities like for example preparing videos with their mobiles or with their PCs which they then share with their friends via collaborative tools, or by uploading them in the web e.g. in YouTube. Yet this does not mean that we should not enforce events and physical activities.
- Promotion of creativity and the entrepreneurial spirit: The innovation portal could lead together with the real-life physical events that creativity and entrepreneurship are promoted even more and in collaboration with competitions and awards that the entrepreneurial spirit (especially if some sort of incentives e.g. prizes are provided for this) is fostered.
- Synergies: As many of the existing initiatives are comparable, synergies could be achieved by networking these activities via the online platform and to generate an incentive to engage in innovative projects via the creation of a related pan-European innovation initiative.

5 The innovation policy measure and its context

5.1 National and regional governance: please provide a description of the modalities of implementation of the proposed actions. Examples of elements to be taken into account are the role of the institute, the nature and characteristics of that institute that are important for a successful implementation of the good practice.

During the first 14 years, the programme had no public funding and all who worked on the programme, worked voluntarily. Now the programme receives support from the Swedish government.

The programme is structured in a “9-step path” aimed to help children to develop inventiveness and to train teachers on how to guide students in bringing out their abilities. The programme has an organized methodology for implementation as listed in the replication section. Note that DVDs and a handbook are available to help execute the programme.

The organized methodology- which includes activities that vary from how and why the programme works to “inspiration workshops”- can be summarized as follows:

- How does the programme work?
- “Touching and manipulation” workshop
- Initiation to imaginative thinking
- Ideas Inspiration workshop-phase 1-2
- Problem Solving workshop
- Idea and Invention
- Model working
- Results Exhibition Day

5.2 National and regional economic structure of the region where the practice has been developed. We are looking for the main factors for success for implementing the suggested measure.

The economic structure of Sweden is a bit different than other European countries. The public sector takes an important and large part in the economy. This makes the government responsible for health- and education systems. The reason the program was first invented was because there was a lack of creativity and entrepreneurial spirit. This is the case in many school systems and schools in many regions could use a change towards greater creativity and innovation.

The main factors of success which are necessary in implementing a similar initiative lie in the vision and mission of the Flashes of Genius programme. The programme aims to not only develop children’s minds but also the mentality of the Swedish school system. They realised the importance of developing the most important resources: not only the children, but also the schools they attend. A main goal was to develop the schools’ learning process to be more entrepreneur like, thus making the school more creative, fun and more enjoyable for both students and faculty. It’s important when trying to replicate this initiative in a different region, that they receive the acceptance and cooperation from the region’s public school system.

Given the universal necessity to develop creativity in students and the well structured methodology of the programme, this programme can most definitely be adapted and replicated in other education systems of all regions. Because the vision of the program is about openly promoting creativity and innovation - ‘to think outside the box’ through easy and fun activities – the programme activities can be implemented in any school system and adapted to any language.

5.3 The policy measure itself: what was it all about? Who were the actors involved, what actions have been undertaken and which result and impact has been achieved?

'Flashes of Genius' (Snilleblixtarna) is an initiative launched in Western Sweden in the mid-nineties to encourage creative thinking and problem-solving and to enhance entrepreneurial spirit among young people. The programme was designed to expose young children to innovation, to help them in developing curiosity and to increase their creativity. The goal is to stimulate initiative and self-confidence among children aged 6-11 years by encouraging them to work both independently and by teaching them how to cooperate with other children. The activities are organised by schools while teachers, parents and business owners support the activities. It works as a network and the activities are built on voluntary participation. The activities include a ‘problem box’ in the classroom where children formulate and collect everyday problems. Then, they try to find solutions to these problems in small groups and document the solutions by drawing and sometimes also by building prototypes. The aim is not necessarily to find the perfect answer, but to consider a variety of ideas and then refine them. ‘Pottering days’, when children put technical items (such as old TVs and radios) into pieces to see what they look like inside and how they work, are also organised.

Flashes of Genius has become part of the Swedish school curriculum and having a positive effect on children's creativity and self-confidence – building the foundations of the key entrepreneurial ability to assess and to take measured risk later in life. Approximately 70,000 children are involved in local Flashes of Genius activities in Sweden. Usually schools work with Flashes of Genius one whole day a week. A follow-up initiative to Flashes of Genius has been launched for 11-16 year olds: 'Mini Entrepreneurs'. The initiative is now spreading to Norway, Denmark, Germany, Mauritius, Italy and the United States.

6 The adaptability and transferability of the proposal

6.1 Why is it worthwhile to invest in the proposed action/tool? Did the feasibility study and good practice identification demonstrate substantial added value?

Without education as a core policy, innovation will remain unsupported. It must promote talent and creativity from an early stage. Improving education (particularly to create interest and excitement in science and technology) and high level of training is essential to keep Europe's human capital (researchers, engineers and other employees) up to date with the skills and knowledge necessary for innovation.

Flashes of Genius stimulate creativity, initiative and self-confidence among children in an early stage. The initiative builds the foundations of the key entrepreneurial ability to assess and to take measured risks later in life.

6.2 If there is to be decided to invest in the proposed action/tool, what are the main factors to pay specific attention to?

For being successful, the initiative must become part of the school curriculum in the whole region. The programme aims to not only develop children's minds but also the mentality of the Swedish school system. They realised the importance of developing the most important resources: not only the children, but also the schools they attend. A main goal was to develop the schools' learning process to be more entrepreneur like, thus making the school more creative, fun and more enjoyable for both students and faculty. It's important when trying to replicate this initiative in a different region, that they receive the acceptance and cooperation from the region's public school system.

6.3 What is the expected impact of implementing the proposed action/tool?

Young people are the future. Flashes of Genius make children more creative, more self-confident and let them take more initiative. This will have a good influence on innovation later. It encourages creative thinking and problem-solving and enhances entrepreneurial spirit among young people due to the fostering of innovations.

The programme first began in the mid-1990s and since then, has strongly developed into a concrete aspect of the Swedish school curriculum. Having evaluated the positive effects the program has on children's creativity and self confidence, they found that the programme contributes to building the foundation of the key entrepreneurial ability to assess and to take measured risks later in life. Long-term results have made an impact, for example, the replication of the best practice in different regions.

6.4 Based on the insights gained in the feasibility studies and good practice identification, what is the judgement/advice on the support that already has been created by stakeholders?

The programme has come a long way; especially where the first 14 years, the programme was not funded. It's imperative that school systems remain active and cooperative in maintaining this programme within the school curriculum in order for the programme to continue to receive public funding from the Swedish Government.

In order for the programme to grow, more regions will need to become aware of this good practice. For example, the feedback given by the US Political Appointee was particularly interesting for future stakeholders as it showed a European Programme replicated effortlessly in a non-EU environment.

6.5 What is the advice on how to disseminate the action/tool?

Flashes of Genius is an interesting initiative and an interesting way to raise awareness at a very early stage (school students). Having evaluated the positive effects the program has on children's creativity and self confidence, they found that the programme contributes to building the foundation of the key entrepreneurial ability to assess and to take measured risks later in life.

What is remarkable about the proposed initiative is that it is not only on creating awareness for innovation but the method (9 steps) also includes problem definition, problem solving and an exhibition in which solutions are presented. As such it is an initiative that covers the full cycle of innovation.

As mentioned in the preceding, it is necessary that the initiative receives the acceptance and cooperation from the region's public school system. It may be worthwhile to investigate the possibility to do so.