621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Schools Plastic freE Movement

Training Module 1

Inclusion at school

Polo Europeo della Conoscenza
Junta de Castilla y León Consejería de Educación
Panevėžio rajono švietimo centras
Make IT Better
Republic of Turkey Ministry of National Education
Friends of Education
Universidad de Burgos

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Schools Plastic freE Movement

Unit 1

Diverse school and characteristic of Inclusive school

Polo Europeo della Conoscenza
Junta de Castilla y León Consejería de Educación
Panevėžio rajono švietimo centras
Make it better
Republic of Turkey Ministry of National Education
Friends of Education
Universidad de Burgos

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSION AT SCHOOL – WHAT IS IT?

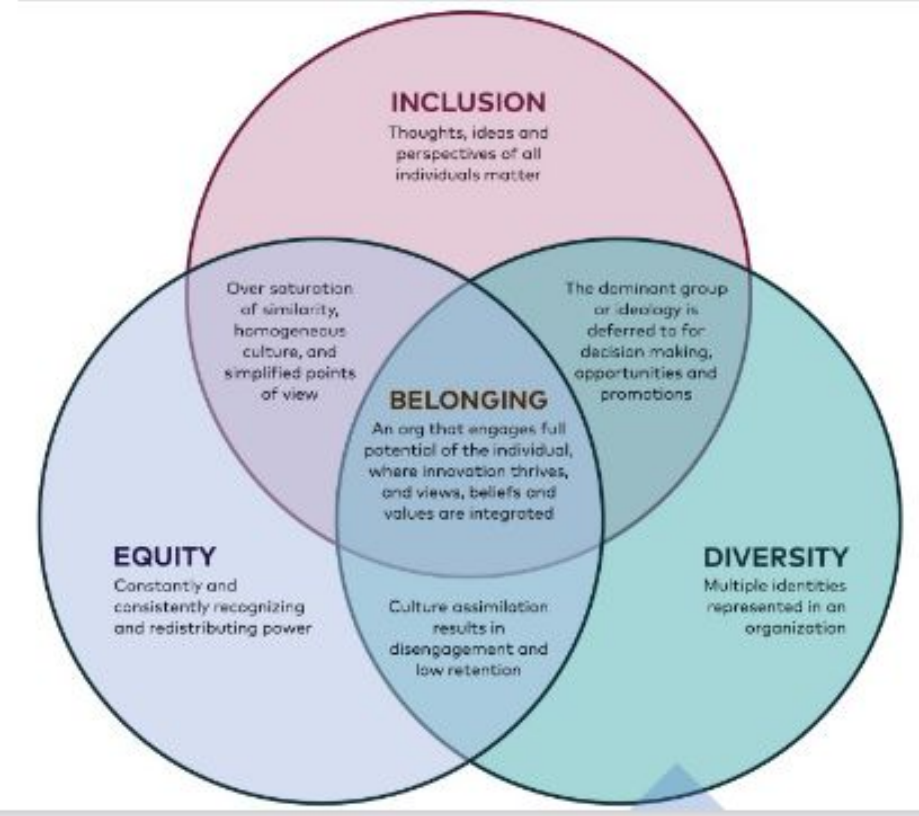
"The fundamental principle of the inclusive school is that all children should learn together, wherever possible, regardless of any difficulties or differences they may have. Inclusive schools must recognize and respond to the diverse needs of their students, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organizational arrangements, teaching strategies, resource use and partnerships with their communities."

(UNESCO, 1994)

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSION AT SCHOOL



621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

LEARNING OUTCOMES

The lesson goals are to **raise awareness** among teachers:

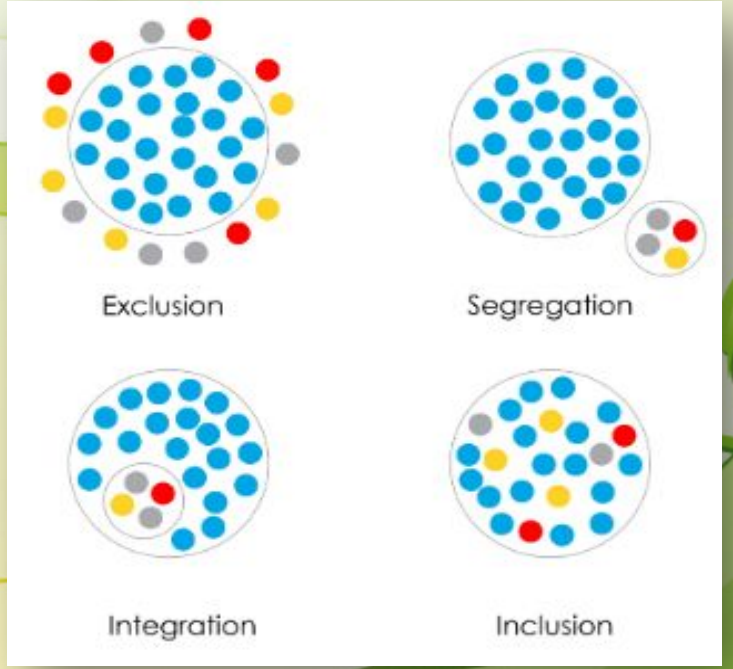
- of diversity among teachers to teach children about a particular type of disability to understand and accept differences, develop tolerance and respectful attitudes to teach children that being different is normal because all human beings are individual and different.
- to give particular examples for inclusion in their classrooms.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSION AT SCHOOL

The commitment to inclusive schools requires interpreting individual differences as opportunities to improve learning rather than as problems to be solved.



Co-funded by the Erasmus+ Programme of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

INCLUSION VALUES

- Respect for diversity (differences are the source and means of education)
- Supporting learning and development (belief in the possibility of progress and education of all children)
- Teaching flexibility (diverse teaching strategies and methods and assessments that are aligned with different learning styles and experiences)
- Cooperation (team work)
- Continuous personal and professional development (lifelong learning)

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

CHILDREN AT RISK OF SOCIAL EXCLUSION

Children who, due to their biological, economic, cultural, family characteristics or other characteristics, have a lower level of participation or availability of resources in the community are at risk of social exclusion

Co-funded by the
Erasmus+ Programme
of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Work in group

Schools Plastic freE Movement

List three things that make you special and unique among us.

Polo Europeo della Conoscenza
Junta de Castilla y León Consejería de Educación
Panevėžio rajono švietimo centras
Make it better
Republic of Turkey Ministry of National Education
Friends of Education
Universidad de Burgos

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Work in Group

List all the characteristics that make you different in your workplace.

Co-funded by the Erasmus+ Programme of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Work in Groups

1. What minorities do you have in your classroom among your students?
2. How do you respect diversity?
3. How do you use differences as the source and means of education?

Co-funded by the Erasmus+ Programme of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

LET'S REFLECT

Schools Plastic freE Movement

All children have the right to see themselves in books and have the 'right to occupy this literary space'

Diversity is more than just seeing yourself reflected in the world of literature, it's about others being able to see you too.

Every child should have a voice.

Polo Europeo della Conoscenza · Junta de Castilla y León Consejería de Educación · Panevėžio rajono švietimo centras · Make it better · Republic of Turkey Ministry of National Education · Friends of Education · Universidad de Burgos

Co-funded by the
Erasmus+ Programme
of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Work in Groups

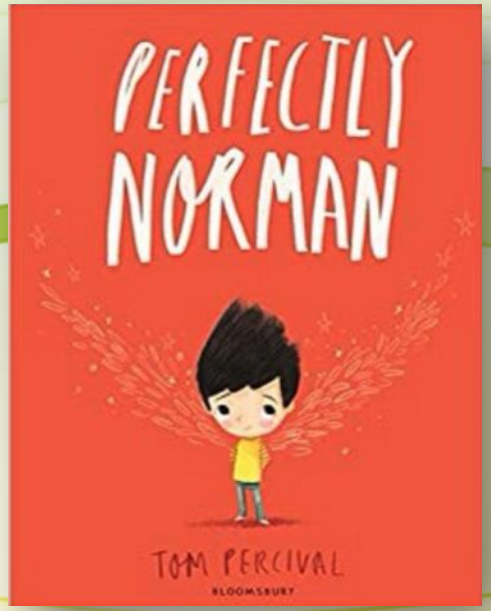
- 2 groups
- 2 stories
- 10 minutes discussion about the story
- Present the impressions and conclusions with the other participants

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Schools Plastic freE Movement

Story No. 1 - “Perfectly Norman”



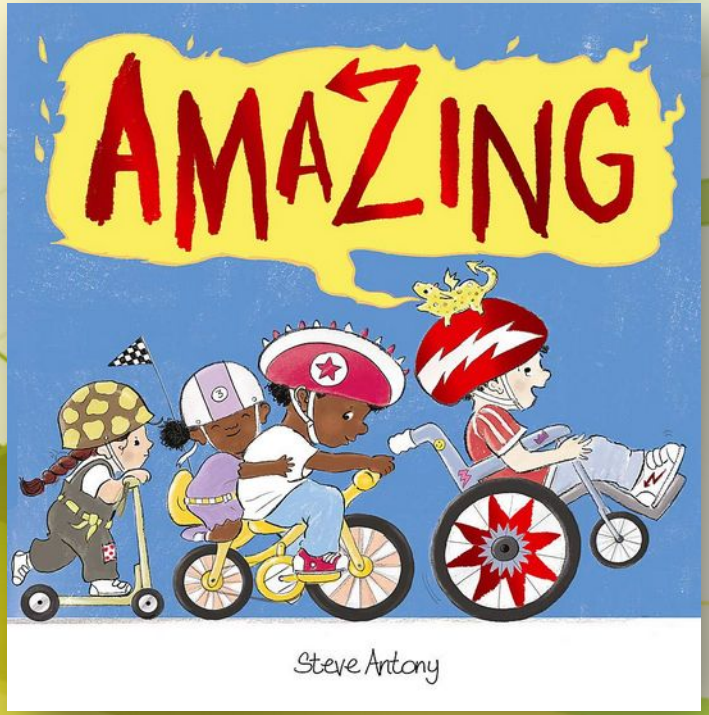
https://www.youtube.com/watch?v=PuquD9-2l-w

Polo Europeo della Conoscenza
Junta de Castilla y León
Consejería de Educación
Panevėžio rajono švietimo centras
Make it better
Republic of Turkey Ministry of National Education
Friends of Education
Universidad de Burgos

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Story No. 2 – “Amazing”



https://www.youtube.com/watch?v=ueAoTqkuIMQ

Co-funded by the Erasmus+ Programme of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Let's discuss together

- What type of diversity is presented in the story?
- Find the message of the story, and how can we use it to raise the awareness in our schools?
- What can teachers do to overcome the stereotypes connected to diversity?
- Can you reshape the disability of the characters in the story into something unique and amazing?

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Schools Plastic freE Movement

A powerful speech by Stella Young

https://www.youtube.com/watch?v=SxrS7-I_sMQ

Polo Europeo della Conoscenza
Junta de Castilla y León Consejería de Educación
Panevėžio rajono švietimo centras
Make it better
Republic of Turkey Ministry of National Education
Friends of Education
Universidad de Burgos

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Schools Plastic freE Movement

Unit 2

Processes that inhibit learning and innovative strategies for the inclusion and harmonious growth of children

Polo Europeo della Conoscenza
Junta de Castilla y León Consejería de Educación
Panevėžio rajono švietimo centras
Make it better
Republic of Turkey Ministry of National Education
Friends of Education
Universidad de Burgos

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the Erasmus+ Programme of the European Union

SOCIAL EXCLUSION - WHAT IS IT?

Coexistence has been somewhat ingrained in human nature. There have always been some people with better adaptability skills. Society has simultaneously advocated actions that have some people finding it difficult to identify where they have the right to count, in some way making them the mainstream's victims. Vulnerable educational groups receive special attention in European Union and are committed to addressing issues like discrimination, and inequality, enabling the development of active citizenship for all.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SOCIAL EXCLUSION – Children (I)

The risk of social exclusion in childhood is present in several countries of the European Union. Social exclusion may be caused by a variety of socio-cultural circumstances. These kids begin their lives at disadvantage because of the danger of exclusion. They have less access to fundamental services like health and education than their peers, and other barriers, such as language barriers for immigrants, may be introduced.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the Erasmus+ Programme of the European Union

SOCIAL EXCLUSION – Children (II)

The reasons why a child is a victim of social exclusion can be:

- to be born or grew up in families with low levels of both education and economic support.

- to have few social support networks

- to be part of a culture that is either in a minority or socially excluded from itself

- Have had family or personal breakdown, or both.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SOCIAL EXCLUSION - Immigrants

Due to the effects of climate change, wars and conditions in which basic human rights are not guaranteed we may assume that **a new era of mass migration** is already active, which will further increase the variety already present in European nations. To foster strong **interethnic interactions** and long-term social peace among its residents, today's societies must undergo acculturative processes for both immigrants and non-immigrants from the host society.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SOCIAL EXCLUSION – Children with disabilities

Children with disabilities have very high needs from the point of view of structuring inclusive teaching. It is most important that they be included within the class group without taking advantage of spaces dedicated to them. Social interaction greatly aids in a child's development and facilitates his or her learning process, both in the social-emotional-relational and cognitive spheres.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SOCIAL EXCLUSION – Children with high potential (I)

The gifted , or Children with High Potential, are one of the groups that are rarely taken into account when discussing school dropout rates. The substantial learning level gap between them and the group, and the unprepared didactics to acknowledge this diversity as an enrichment, causes exclusion and increasing demotivation in school attendance.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SOCIAL EXCLUSION – Children with high potential (II)

The gifted child, compared to peers, shows, or has the resources to show, amazing ability at a given time and in specific areas, considered to be prominent in his or her home culture. These children score very high on IQ tests. The higher the score, the greater the discrepancy between the subject's chronological age and mental age.

This aspect has repercussions on both the emotional-relational and educational levels. The paradoxical aspect is that these students often do not perform well in school.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the Erasmus+ Programme of the European Union

SOCIAL EXCLUSION – Gender Discrimination (I)

Another issue that concerns exclusion is **gender discrimination**. Despite efforts to rectify the situation, there is still a persistent underrepresentation of women in STEM fields. Despite achieving greater digital literacy scores in education surveys, in 2018 women represented 26% of students in engineering, manufacturing and construction; and only 18% in ICT studies"

(Data for ISCED 5-8, European Education Area by 2025, EC, 2020).

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SOCIAL EXCLUSION – Gender Discrimination (II)

As the report on Gender Equality and Women's Empowerment in the Digital Age (A8-0048/2016) points out, stereotypes that start as early as the school years (and also include hobbies and toys) limit girls' participation in studying and pursuing professions in the sciences.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSION

Inclusion means **welcoming without judgment** the characteristics of people who are part of a community. In an inclusive context, diversity is seen as an asset, an added value. Each member of the community, thanks to his or her characteristics can initiate processes that enhance the **sensitivity and empathy of others**. The context must, therefore, have elements that point in this direction. Teachers, for example, must be followed and supported by constant training that ensures this kind of vision and attitude.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SOCIAL INCLUSION AT SCHOOL - A new perspective (I)

It is very important for educational institutions to develop a s**ystem for monitoring the well-being** of each individual pupil in school. This step is worth much more than any formal document drawn up for children with special educational needs. **All children are special**, and an evaluation system that takes into account how they feel at school, how accompanied and supported families feel, and how effective certain teaching strategies have been proved to be encourages the implementation of the inclusive aspect

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SOCIAL INCLUSION AT SCHOOL - A new perspective (II)

Every child manifests needs or demands for attention that may be related to the behavioral or cognitive sphere. **Each** also **holds the potential** to be developed. The educational setting must keep both aspects in mind in order to include each child and ensure the most nurturing and positive learning process possible.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSION AT SCHOOL - Tools, Policies and Strategies (I)

Teachers' training is important because through it they can **learn** about the **mental processes, strongly linked to emotions**, that regulate learning; they can inform themselves about the new frontiers of pedagogy and gain knowledge about the organization of the learning space, including a whole range of tools that activate cooperative learning.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSION AT SCHOOL - Tools, Policies and Strategies (II)

Tools for teaching include **educational robotics**. In recent years, children have been able to benefit from this new element that **stimulates computational thinking, creativity, cooperation, and inclusion.** Robotics fosters autonomy and puts the teacher in a position of an observer, not directly responsible for the process of growth and learning. Let's say, robotics is a Montessorian tool of the new millennium, helping the child to do it on his own without the fear of being judged.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSION AT SCHOOL - Tools, Policies and Strategies (III)

Schools Plastic freE Movement

There are challenges in the school system such as absenteeism and early school dropout, which occur more frequently among children at risk of exclusion.

STEAM can be an excellent way to **involve** children and **stimulate** them in a new way. Math, art, robotics and technology have a universal language that can include everyone. This methodology combine these disciplines as opportunities to participate through free expression, shared planning and experimentation.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSION AT SCHOOL - Tools, Policies and Strategies (IV)

Using math, science, and technology through cooperation and game play helps all children experiment, find solutions, and express themselves to arrive at a shared end product in which stereotypes related to the male/female distinction disappear

Co-funded by the
Erasmus+ Programme
of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

INCLUSIVE SCHOOL

The reality of education is not always well suited to an inclusive focus due to the numerous factors, dependent on very many variables, that can be summarized by the importance of two pillars of inclusion: knowledge and experience.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL - Developing Leadership for inclusion and diversity

Schools Plastic freE Movement

The leadership team must be able to develop a shared vision for a school that is inclusive of all cultures if the inclusion proposal is to succeed.

This group must actively participate in identifying the problem and the goals to work toward. Policies and strategies will guide this group's actions.

The leadership team must include teachers, students, governors, and parents.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL – High expectations and achievement for all

It is necessary to develop and maintain a clear plan for inclusion over the course of the project. Data are applied to produce goals for schools, departments, and specific students. This will help to discover areas for interventions by creating a realistic picture of student progress despite various realities.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL – Respond positively to diversity

The role of the school is to plant the seeds for a brighter future. While diversity enhances the learning environment for all students, school is a welcome place for students and families from many backgrounds and is sensitive to the needs of recently arrived pupils.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL – Encouraging innovation and change

The school will almost always introduce innovative change.

All essential resources must be made accessible, and those adjustments must be thoroughly studied.

Change must be viewed as a tool to test new laws, which may be changed once more if outcomes are unfavorable.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL – Learners' voice

The ideas and ambitions of students at school must be known, understood, and taken seriously by schools that have made the decision to follow the path of inclusion. Since students positively influence the school's culture, decision-making at the school benefits from their input.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL – Ethos of Respect

Bullying-free, safe learning environments are essential in inclusive schools.

According to national policies, bullying incidences must be monitored and dealt with quickly and effectively.

Understanding other people's cultural realities must be the primary means of fostering respect for diversity.

This knowledge is gained throughout the entire educational setting, not only in class instruction

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL –
Culturally inclusive curriculum

Schools must encourage students to acquire knowledge by providing appropriate curriculum, but much more crucially, by experiencing the benefits of this understanding. For students to grasp the modern world, the curriculum must reflect the contributions made by various cultures and realities over the course of history.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL –
Engaging parents, carers & families

Parents and caregivers must be included in the educational process so that the schools may offer them support for encouraging their children's learning as well as ongoing communication. It could be accomplished by providing parents with educational opportunities, such as diversity and inclusion training.

It is critically important to create a sense of community through formal and nonformal moments. The latter help people to act more spontaneously and relaxed.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INCLUSIVE SCHOOL –
Staff learning for inclusion & diversity

Headteacher leadership programs have to address issues of diversity and inclusiveness. This training must be ongoing and offer educators a variety of learning opportunities, including participation in complicated processes to enhance professional practice, as we live in a changing environment.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

STEAM APPROACH FOR INCLUSIVE SCHOOLS (I)

Integrated STEAM is the educational approach that involves the students on solving relevant and authentic problems close to their everyday life.

The educational environment is organized to let the students cooperate.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

STEAM APPROACH FOR INCLUSIVE SCHOOLS (II)

This kind of school wants an interdisciplinary and transdisciplinary

Approach STEAM contemplates the inclusion of the arts. These are special subjects the encourage sustainability and social inclusion through creativity.

The goal of this approach is to train students to develop skills in order to live their everyday life through innovation, creativity, critical thinking, effective communication, collaboration.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

STEAM APPROACH FOR INCLUSIVE SCHOOLS – Theoretical Approach (I)

The theoretical freamework for STEAM education is based on the epistemological position of the American philosopher of science Larry Laudan.

Integrated STEAM is a model that suggests an epistemological study of scientific evolution and is made up of three degrees of commitment to the same standing in science, each of which interacts complexly and is not necessarily modified simultaneously: **dedication to theories, methodologies, and goals.**

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the Erasmus+ Programme of the European Union

STEAM APPROACH FOR INCLUSIVE SCHOOLS – Theoretical Approach (II)

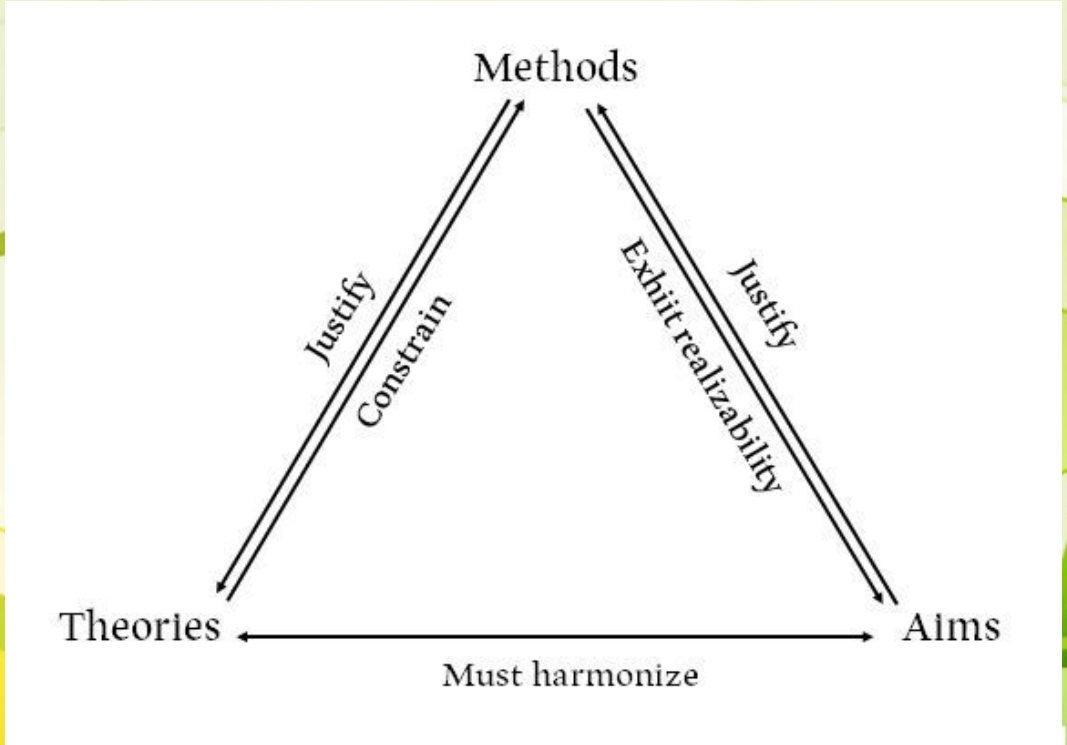
The theoretical freamework for STEAM education is based on the epistemological position of the American philosopher of science Larry Laudan.

Integrated STEAM is a model that suggests an epistemological study of scientific evolution and is made up of three degrees of commitment to the same standing in science, each of which interacts complexly and is not necessarily modified simultaneously: **dedication to theories, methodologies, and goals.**

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

STEAM APPROACH FOR INCLUSIVE SCHOOLS – Theoretical Approach (III)



621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

STEAM APPROACH FOR INCLUSIVE SCHOOLS – Theoretical Approach (IV)

The goals of integrated STEAM education according to the framework we follow are the **integral competency development of all students** assuming a much wider perspective in which various dimensions converge.

These goals can be achieved by **using a proper methodology.**

The use of active approaches is suggested in keeping with the idea that science is a constant problem-solving activity

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

WIDE SCOPE of ACTION for INCLUSION
Students, teachers, families

Schools need to be supported by a favorable legal, policy, and financial environment; they also will be impacted by how the various actors interact.

The majority of the characteristics for a better society are disseminated through educational institutions. For such a source to exist, a number of requirements must be fulfilled by the educational system, educators, and families.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

WIDE SCOPE of ACTION for INCLUSION
Legal framework and policy

A sufficient legal framework must be instituted through national policy, but targeted funding will show that inclusion is a clear priority. A long-term plan with intermediate goals is also necessary in addition to this first phase.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

WIDE SCOPE of ACTION for INCLUSION
Teachers' Training

Schools Plastic freE Movement

One of the first issues to be addressed when schools are made more inclusive is teacher preparation. It is extremely challenging to provide specialized instruction for every kid at risk of exclusion due to the wide variety of circumstances they face. Staff must learn and internalize general principles that apply to all exclusionary circumstances. People from comparable cultural backgrounds are still frequently found in academic teams today, therefore schools must give their teachers the required cultural training.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

WIDE SCOPE of ACTION for INCLUSION
Regional support

The regional level can help schools with monitoring, advising, and assessment tasks like those that make it easier to identify students who are at danger of being excluded, encourage innovation and the spread of best practices, and build strong ties between schools and the community.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

WIDE SCOPE of ACTION for INCLUSION

Parental engagement

Parent involvement is essential. The inclusive school must give parents chances to help their children learn about inclusion. This tool tries to give parents the **resources** they need to care for their kids, but it also aims to change the dynamics of the family. Some parents need to be guided by the school's professional figures to become active participants in the inclusive learning process

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Schools Plastic freE Movement

Unit 3

Inclusive methodologies

Polo Europeo della Conoscenza
Junta de Castilla y León
Consejería de Educación
PANEVĖŽIO RAJONO ŠVIETIMO CENTRAS
REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION
FRIENDS OF EDUCATION
UNIVERSIDAD DE BURGOS

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

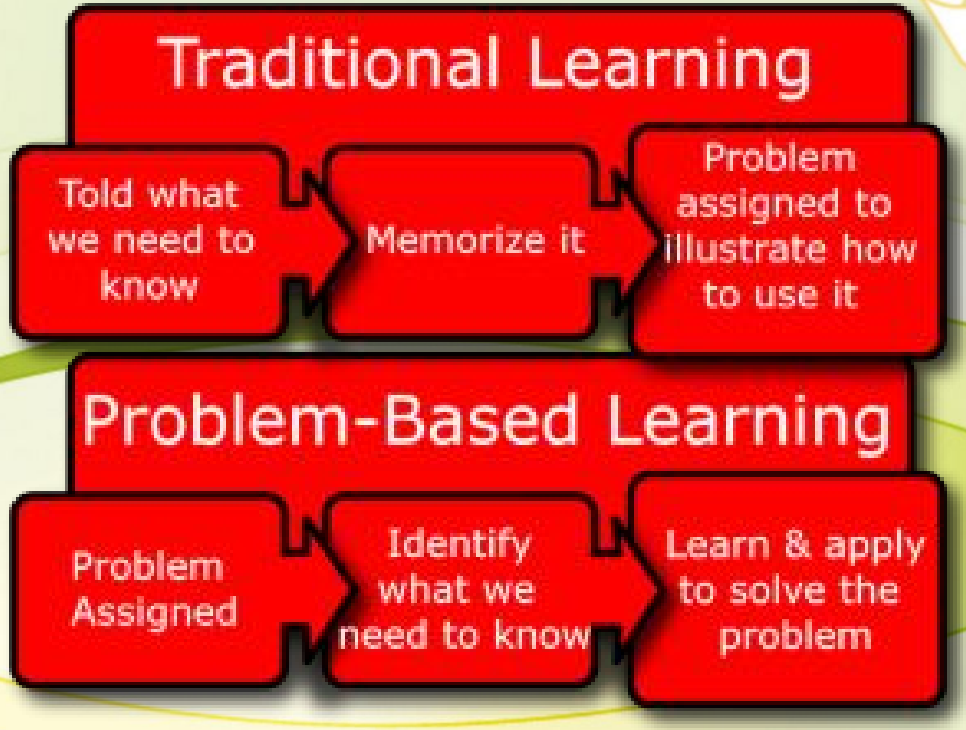
PROBLEM BASED METHOD - Definition

Problem-Based Learning (PBL) is a student-centered approach to learning, in which complicated real-world problems are used to challenge students. The problems are used as a tool to achieve both the required knowledge base and the skills to ‘solve’ them. The basis of PBL is that students learn by doing.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

Schools Plastic freE Movement



Polo Europeo della Conoscenza
Junta de Castilla y León Consejería de Educación
Panevėžio rajono švietimo centras
Make IT Better
Republic of Turkey Ministry of National Education
Friends of Education
Universidad de Burgos

Co-funded by the Erasmus+ Programme of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

PROBLEM BASED METHOD

PBL is based on the messy, complex **problems** encountered in the **real world** which encourage to **learn, integrate, and organise the information** obtained so that it could be used to solve future problems.

PBL encourages students to solve problems effectively and think critically. It can also provide opportunities for working in groups, finding and evaluating research materials, and life-long learning.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Implementation in the Classroom (I)

What are the steps in problem-based learning?

1) **Explore the issue**. Gather necessary information; learn new concepts, principles and skills about the proposed topic.
2) **State what is known**. Working individually and in groups, students list what they already know about the scenario as well as the areas in which they are lacking information.
3) **Define the issues.** Frame the problem in a context of what is already known and information the students expect to learn.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Implementation in the Classroom (II)

4) **Research the knowledge.** Find resources and information that will help create a compelling argument.
5) **Investigate solutions.** List possible actions and solutions to the problem, formulate and test potential hypotheses
6) **Present and support the chosen solution.** Clearly state and support your conclusion with relevant information and evidence.
7) **Review your performance.** Often forgotten, this is a crucial step in improving your problem-solving skills. Students must evaluate their performance and plan improvements for the next problem

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Main Components of the Method (I)

In the PBL learning process, students face a problem and use their previous knowledge try to solve it. In the process they **find out what they do not know and what they need to learn** to do their best.

Once they have found out what they need to learn, students search for information necessary to solve the problem in different sources (internet, books, magazines or people's experience). By doing so, they **personalise their learning**.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Main Components of the Method (II)

The students then get back to the problem and apply their knowledge to work with their problem further on and solve it.

Once the problem has been solved, the students assess themselves and their peers. In this way, they learn to evaluate each other constructively. This assessment skill will be very valuable for their future learning experiences.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Suitability for STEAM (I)

PBL can be used to study all subjects, just a little bit of creativity is necessary. While the main problems can differ for various subjects, there are some features of good PBL problems that are useful.

The problem must be motivating. Students must be motivated to do deep research into the problem.

The problem should ask students to justify their decision and be ready to prove it.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Suitability for STEAM (II)

The problem should be connected to the students' previous knowledge.

One of the most attractive features of PBL is that it helps develop in students both, subject-specific skills (using diagrams and abstract models, acquiring and using relevant data, analysis of real-world issues, etc.) and transferable skills (time management, teamwork, independent learning, decision making, problem solving, communicating ideas and results, etc.).

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Strategies for inclusion

- Take time to explain instructional processes, answer the questions, consider their suggestions, and probe their hypotheses.
- Embed lessons with connections to the real world, and show relationships between the content/skills and the lives of real people.
- Monitor the disadvantaged students as they work, prod their learning, and support their hesitation.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the Erasmus+ Programme of the European Union

PROBLEM BASED METHOD - Roles

TEACHER'S ROLE

The principal role of the teacher in PBL is that of an assistant or educational coach leading the students in the PBL process. As learners become more proficient in the PBL learning process, the teacher becomes less active.

STUDENT'S ROLE

In PBL, learners are progressively given more and more responsibility and become increasingly independent of the teacher for their education. PBL produces independent learners who can continue to learn on their own in life and in their chosen careers.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Advantages for teachers

- Students are more engaged during lessons;
- It increases the time students spend studying;
- It fosters crossdisciplinarity.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

PROBLEM BASED METHOD - Advantages for students

- it is a student-oriented approach;
- students find it more engaging and rewarding;
- it facilitates comprehension;
- students who have PBL experience evaluate themselves higher;
- PBL prepares for lifelong education.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Definition

Inquiry-based learning is a learner-centered approach that channels learning through questioning and discovery. Students pursue their interests in search for answers to their own questions. They can collaborate to formulate their examination and then organize their quest for relevant information

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Basic Components (I)

1) Making observations;
2) Posing questions;
3) Examining books and other sources of information to see what is already known;
4) Planning investigations;
5) Reviewing what is already known in light of experimental evidence;

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Basic Components (II)

6) Using tools to gather, analyze and interpret data;
7) Proposing answers, explanations, and predictions;
8) Communicating the results and
9) Personal evaluation and response

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Teacher's Role (I)

Teachers' inquiry about the topic of interest is of paramount importance for the success of children's inquiry.

First teachers need to "become "inquiry literate" and then, encourage students to "engage" in inquiry at a deep, personal level. A teacher must know and must understand what the inquiry process is like.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Teacher's Role (II)

Teachers will have to teach students skills and gradually move them through stages that eventually increase students' independence and intellectual capacity.

Teachers can take up "six key behaviors" or roles with the process of transition: that of "direct instruction provider", "organizer", "questioner", "discussion facilitator", "mentor" and "facilitator of interpretation".

Teachers' role is also to support students, care for the development of the whole student and lead towards situated and authentic learning.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Main Components (I)

The major focus of design thinking is problem solving. All problems that need creative solutions can be addressed by design thinking. Design thinking methods are organized into three broad categories of need finding, idea generation and idea testing. More specifically the phases are to empathize, define, ideate, prototype and test.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Main Components (II)

To describe the problem context from different stakeholders' perspective, designers use human-centered and empathetic methods. With their empathetic understanding, they reframe the problem and start to generate solutions. With prototypes designers find opportunities to take stakeholders' opinions on the solutions and test the effectiveness. After the test phase, the cycle may end, or relevant revisions can be made to improve the product.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Implementation in the classroom (I)

To implement design thinking in the classroom, teachers provide guidance in each of the design phases. First, in the **empathy phase** students will engage in “try, observe, and ask” activities to understand the problem thoroughly from different perspectives.

For **“define and ideate” phases,** open-ended questions and brainstorming techniques will encourage students to reflect their empathetic understanding into their solution strategies by further research.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Implementation in the classroom (II)

Within the **"prototype" phase** students are allowed to develop many rapid prototypes to take opinions from different audiences, so that they can improve their product and solutions according to their needs.

For the **"test" phase** students both test their design products with respect to the problem and reflect on the overall design cycle. Students also prepare presentations to share their process and products.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Student's Role

Students' role in design thinking is to participate in design thinking activities to create innovative solutions for complex problems. Students have individual accountability in all group activities. Developing a participatory approach to find and understand the complex problems of the 21st century, developing an open, explorative attitude, willingness to take part in the solution process and developing an ethical mindset are also among the roles of students within design thinking practices.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Teacher's Role

The roles of the teachers in design thinking are to plan the process carefully to encourage all students' participation in the activities. By asking questions, providing resources and materials, and creating opportunities for students to experience design thinking skills teachers create an effective learning environment. Teachers' monitoring and facilitator roles are prominent.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Strategies for inclusion

Following the equity principle of design thinking education, all students must be given opportunities to participate in activities regardless of their gender, academic achievement, socio-economic status, etc. Having high expectations from all students, teachers can use differentiated learning strategies to encourage participation of all students in the learning process. Research shows that design thinking helps students reduce cognitive bias in different categories such as projection bias, which is very valuable in terms of inclusion.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

INQUIRY BASED LEARNING - Advantages and disadvantages

Having strong goals and outcomes, design thinking practices also have some limitations.

Lack of creative confidence or mastery, wrong priorities, shallow ideas, anxiety and frustration, creative overconfidence, and teamwork conflicts are among the major limitations that students and teachers can face during the implementation.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SCAMPER - Definition of the Method

The Philosophy of SCAMPER is based on the concept that „Any idea has emerged from another idea”. SCAMPER is a practical and joyful brainstorming technique in the discussion method, leading to an actual implementation in real life and supporting creative thinking. The SCAMPER brainstorming technique uses steps to review an object.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SCAMPER - Main Components

SCAMPER is the most convenient technique to use when students reach a dead end, or when they are about to steer away from the core of the subject. The questions used help to think fluently and flexibly, so as to lead to a creative thinking system.

While implementing SCAMPER, a unique object is chosen and transformed, improved, disintegrated or compounded with other objects through a brainstorming process. Questions asked allow a variety of opinions to emerge, enabling learners to develop their creativity as they start thinking in new ways about an object.

Co-funded by the
Erasmus+ Programme
of the European Union

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

SCAMPER - Implementation phases

According to the English dictionary, to “scamper“ means „to run with quick light steps, especially through fear or excitement’’. The acronym stands for an educational technique covering seven steps.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the Erasmus+ Programme of the European Union

SCAMPER - Implementation phases (I)

Lets look at the letters which make up the acronym:

S: Substituting parts of the product or process for something else.

Sample questions: What/Who else instead? What other materials, strategies, should I substitute?

C: Combining two or more parts of the product or process to create something new or to leverage synergies.

Sample questions: What elements could I mix together? What parts may I join together? Which processes could I combine?

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SCAMPER - Implementation phases (II)

P: Put to another use - How would you put this object to another use, how could you reuse something from somewhere else?

Sample questions: What other ways are there to use this? Can the same solution be used in another place? Who else could benefit from this?

E: Eliminate - Think of what might happen if you eliminated parts of the product or process and consider what you might do in that situation.

Sample questions: What could I remove? If I do remove it, what could I miss, what could go faster, or slower? How can I reduce the amount of material used, or the amount of time dedicated? How can I make it lighter, or smaller?

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SCAMPER - Implementation phases (III)

R: Reverse - Think of what you might do if parts of the product or process worked in reverse or were sequenced differently.

Sample questions: Which parts can I rearrange? Which layout fits best? Which functions can be swapped?

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SCAMPER - Teacher's Role

The teacher determines the specific problem students need to solve. The students then brainstorm a wide range of solutions using the different techniques defined by the acronym. Recording every idea expressed during the brainstorming without judging it increases the production of creative ideas. The students apply the technique, following each step indicated by the letters of the acronym. The teacher acts as an assistant by addressing any question, contradiction or conflict that may arise.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SCAMPER - Strategies for Inclusion

Ensure that everyone receives a similar share of air-time, and everyone is actively engaged; ask probing questions if needed. Criticise no idea, as wild as it might appear to be; in fact, try to encourage outlandish ideas, as they are very useful to open up the conversation. Encourage students to build upon each other's idea. Provide specific, repeated, evidence-based, personal and collective encouragement.

Be flexible in giving students opportunities to build and check understanding.

621506-EPP-1-2020-1-IT-EPPKA3-IPI-SOC-IN

Co-funded by the
Erasmus+ Programme
of the European Union

SCAMPER - Advantages and disadvantages

Whereas the SCAMPER technique has been used for visual design to compose creative, productive ideas, some shortcomings can be observed like the lack of inclusion of the educational context.

Although the new technique is challenging, lessons promote student engagement, creative thinking and the ability to recall content knowledge. SCAMPER can be utilized for learners who lack motivation or who have learning difficulties. SCAMPER is used as a learning tool that fosters awareness, drive, fluency, flexibility, and originality.