

Section 1 - Summary

1.1 Author(s)

First name: Tamara, **Last name:** Maio,

Affiliation: LICEO INNOCENZO XII, Anzio(Rome, Italy),

Role:

- Maths and Physics teacher,
- Member of the digital team,
- Responsible for teacher training,
- Responsible for evaluation and self-evaluation,
- one of the Responsible for the Physics laboratory of the Liceo Innocenzo XII.

1.2 Background

Explain who are you and why you are entitled to present this proposal. It might be because of your role in the institution you belong to, or because you represent an influential group of constituents or stakeholders.

Max 800 characters.

As Head for the evaluation and self-assessment of the training activities for the school community of my high school, I refer to the third of the three priorities and the related goal that our high school has set itself as a strategic goal to be pursued in the three-year period 2019-22.

The following:

Priority n. 3: 'enhance European key competences'

and the related

- **strategic goal n.3: 'achievement by students of the first two years of at least 60% of medium-high evaluations in civic education',**

are certainly linked to the acquisition of soft skills and life skills with reference to life long learning (EU 2018), as suggested by the objectives of the AGENDA2030 (UN 2015).

Keeping in mind this important strategic objective also suggested by the latest indications of our Ministry of Education, **our school has questioned how to involve our students and the international territory, through concrete activities related to objectives 4 (quality education for all) and 11 (making cities and human settlements inclusive, safe, resilient and sustainable) of the 2030 Agenda (UN 2015).**

1.3 Descriptive title

Use a short sentence to communicate the point of your policy immediately. The shorter the better.

Max 200 characters.

'STEAM, IBSE, CBL approaches: european skills to discover, protect, enhance and promote our sustainable cultural Heritage for everyone':

1.4 Abstract

Use content from your pitch to explain:

- what is your policy about;

Which STE(A)M activities (innovative, concrete, sustainable), the students of our Liceo can design for the local and international community just to discover, protect, promote and enhance our historical-artistic, cultural and naturalistic resources?

- who is going to benefit and why it is important to them;

The beneficiaries of our educational STE(A)M, IBSE, CBL policy, therefore linked to the development of civic education skills (with reference to objectives 4 and 11 of the Agenda2030), will be all members of the school community of our Lyceum and of all our neighboring territory, as well as the whole international community that wants to know or discover (physically or on the web) the artistic-historical-cultural and naturalistic resources of our territory.

-duration and scope (for example: the whole coming school year at your school district);
All the activities will be developed during the school year 2020-2021 and in the three-year period 2019-22

-why it is important for the reader;

It is essential to cultivate in future generations, even at a distance, the sense of belonging to one's own culture and its promotion and enhancement, giving it even more value if one contributes to protecting it with concrete actions but also with innovative tools with STEAM, IBSE, CBL approaches such as also suggested by our Ministry of Education.

-how the reader can support your proposal (for example, by adopting it as part of the Yearly Activity Plan of your school).

Max 3000 characters

Anyone can support the initiatives envisaged by our Policy by taking advantage of the multimedia services and products that it will allow to produce or even just by advertising the educational and motivational nature of these

Section 2 – Goals

2.1 General goal

- What is the general problem that you want to address? State it in no more than three or four lines.

Our students often consider scientific knowledge as tools for an end in themselves and not linked to challenging and concrete laboratory activities, also aimed at the discovery, conservation, protection and enhancement of our artistic-cultural and naturalistic heritage.

- What is the solution that you envision? State it in no more than two three or four lines.

Our solution could be much more effective than the others because students will be able to design and create innovative multimedia services and products themselves, free and accessible for all, created through the STEAM, IBSE and CBL approach in order to discover, protect, enhance and promote resources of our cultural heritage.

2.2 General goal description:

- Explain your goal in detail.

Under the guidance of a selected team of our 10 teachers, the students (between the ages of 14 and 15 of the Liceo Scientifico Innocenzo XII) in Anzio will be the creative minds who, through a stimulating and exciting peer challenge, will develop innovative multimedia services and products. freely accessible to the entire local and international community to discover, enhance and protect our historical-artistic-cultural and naturalistic heritage.

Think about the

- ✓ Creation of a resource repository,
- ✓ virtual or augmented reality tours,
- ✓ quizzes, prize surveys,
- ✓ curiosity

that will tell in digital storytelling our wonderful cultural heritage always accessible to all, even in a foreign language, simply by framing a QRcode with a simple smartphone.

It will allow the Collaboration with other schools in the area and with our administrative institutions to share the best products and services created and accessible to all

- Cite official documents that demonstrate the relevance of the problem you want to address and the widespread interest in it. It is a way to reassure those who have to decide whether to adopt the policy you propose. Also, it shows that you have done the necessary research and seriously investigated the problem. If you don't show that you have invested your time in your proposal, you cannot expect others to do it. Check again the content of MOOC's W5.3 module on advocacy and policy making to find useful references.

Max 2000 characters.

Here are links to examples of products in digital storytelling created by students just to discover. promote and take care of our cultural Heritage

https://1drv.ms/v/s!AI9bbMhuN_Fsl35rP_cWEq8J9-yc

https://1drv.ms/v/s!AI9bbMhuN_Fsl381h0DVLU13kBtS

https://1drv.ms/v/s!AI9bbMhuN_FsmAHf1AyV1MGZtGlr

2.3 Strategic goals:

- Translate your overall goal into one or more strategic objectives.

A strategic goal is always measurable and indicates the time frame to achieve it. For example: Activate a capacity building program on the STE(A)M approach for teachers, divided into five 2-hour workshops to be held by the end of the next school year.

Max 500 characters per strategic goal

- To train 10 teachers in the school year 2021/22 to carry out laboratory activities in the STE (A) M, IBSE, CBL approach in their classes.
- To design and implement in the three-year period 2022-2025 a school curriculum based on skills for the classes of the first two-year scientific high school through

concrete laboratory activities with the STE (A) M approach that are aimed at developing civic education skills in order to discover, protect, promote and enhance our cultural heritage.

• To carry out 1 event in the three-year period 2022-25 with workshops to share the results obtained.

Section 3 – Targets

3.1 Beneficiaries

- Who are the final beneficiaries of the policy you propose?

Beneficiaries: the whole community of our local and/or international territory eager to discover our cultural heritage through innovative, sustainable and accessible tools.

- What benefits will they receive?

- Discover, protect and enhance one's artistic-historical-cultural and environmental heritage through the acquisition and strengthening of civic education skills, soft skills, life skills, through the use of innovative and accessible tools (in STEAM, IBSE, CBL).
- Promote our cultural heritage also through remote collaborative activities with other international school communities.
- Promote in our younger generations the sense of belonging, the motivation to learn and to achieve something concrete but wonderfully sustainable for all.

- If possible, quote statistics. For example, the percentages of improvement achieved by applying policies similar to the one you are proposing. (supporto) a supporto

Increase of 10% of laboratory activities in STEAM, IBSE, CBL, scheduled in the classes of the first two years of our scientific high school

Max 1000 characters per beneficiary.

3.2 Recipients:

- Indicates the recipients of the policy if they are different from the beneficiaries. Explain how they are functional to achieving strategic goals.

Max 1000 characters per recipient.

Under the guidance of their 10 selected and previously trained teachers, the students of the Liceo Innocenzo XII of Anzio will be the creative minds who, with a stimulating and exciting peer challenge, will develop effective and innovative strategies through concrete activities of STEAM, IBSE, CBL approach that allow to the whole community, including international ones, to know, appreciate and protect our historical-artistic-cultural and naturalistic heritage. The most voted ideas by n. 10 external teachers and experts will be created, published on the school website and proposed to our local administrations as resource tools accessible to all.

3.3 Special needs :

- Clarify whether your policy involves beneficiaries or recipients with special needs or disadvantaged. For each category explain their special needs and how you plan to meet them.

Max 1000 characters per item.

These activities designed as a team by our students will encourage cooperation and sharing even at a distance, resilience, critical thinking.

The needs of the teachers and students involved as beneficiaries and recipients will be related to the

- training of teachers in the use of innovative multimedia tools related to the STEAM, IBSE, CBL approach (apps to create virtual tours and QR CODE in AR and VR, 360 photos, 3D design and modeling, detection of the state of health of our heritage archaeological-artistic-environmental etc ...
- accessibility by the local and international community to information on our cultural heritage
 - ✓ from the websites of our local schools,
 - ✓ from multimedia stations placed on our sites of a-artistic-historical and naturalistic interest such that they can always be accessed with a simple smartphone.

- Create a free local internet connection that covers our places of interest.

The advantages would far outweigh the cost disadvantages at the level of

- ✓ training,
- ✓ education,
- ✓ Culture
- ✓ promotion of our territory.

Some activities in the STEAM, IBSE, CBL approach can also be carried out with low-cost material (scientific laboratory experiments aimed at evaluating the 'state of health' of our archaeological finds and artistic monuments (measurement of atmospheric and/or acoustic pollution in our places of interest, evaluation of the Ph of the rainwater on our territory, etc.).

Section 4 – Value Proposal

4.1 Value proposal

- Describe the main value proposal of your policy in one sentence. If you think you need more than one sentence, you have not refined your value proposal enough.

The main value proposal of our policy is:

STEAM, IBSE, CBL, European skills in favor of our sustainable cultural heritage for all.

4.2 Results

- List the immediate results that you expect. For example: “30 teachers of our schools are introduced to the STE(A)M educational approach.”

- ✓ The 14_15 aged students of our scientific high school will be involved in concrete and transdisciplinary STE (A) M activities that stimulate the acquisition and enhancement of soft skills, life skills according to the latest EU 2018 guidelines regarding life long learning,
- ✓ At least 10 of our teachers and at least 20 of our students will be able to enhance their skills in carrying out STEAM peer tutoring activities within our high school but also towards those in other schools that will want to adhere to our educational policy.
- ✓ The community of our territory will be able to fully know and take advantage of our local resources through the potential of new technologies, stimulating in it a sense of belonging that enhances the principles of civic education (Ministry of Education, Agenda 2030 UN 2015, life long Learning UE 2018).
- ✓ Our territory will also be able to increase cultural exchanges with other international school communities.

- For each result share one or more quantitative or qualitative indicators.
 - **enhancement of students' transdisciplinary learning.**
 - **involvement of at least 10 teachers and at least n. 10 students of each class of the two years of our scientific high school**
 - **use of the products and / or consultation of the web services created by at least 60% of the schools in our area**
 - **at least n. 2 collaborations with other schools in Italy and abroad.**

Max 500 characters per result.

4.3 Impact

- Describe the long-term impact you hope to achieve. Include one or more quantitative or qualitative indicators. For example: "We aim to make our five-workshop program a stable presence in the Annual Education Plan of our school."

Max 500 characters per item.

- **We hope to carry out 1 training workshops for teachers and students in STEAM, IBSE, CBL approach in the school year 221-22**
- **We hope to create a curriculum for skills in the STEAM, IBSE, CBL approach that involves at least 5 disciplines also through collaborations with other schools in the three-year period 2022-25.**
- **We hope to organize an event in each of the three school years from 2022 to 2025 that can present and share the results achieved even remotely.**

Section 5 – Costs

5.1 Cost structure

Keep the entries in the below list that are appropriate for your polices:

- Labor (internal staff)

The management costs will relate to:

n. 10 Teachers as tutors for our students in STEAM activities (10 additional hours for each teacher)

- External consultants

n. 2 external consultants in IBSE, CBL, STEAM methodologies operating free of charge

- Administrative costs

management of a free platform as a repository and sharing of projects and services designed and implemented with the STEAM, IBSE, CBL approach in the school, out-of-school community and throughout the territory, including internationally.

- Financial costs (interests on loans, etc.)

Nobody

- Travel & Accommodations

Due to the Covid19 health emergency, our educational policy currently provides for travel and cultural exchanges only on the web. In the future, at the end of the covid health emergency, it will be possible to plan trips and exchanges with international schools in the territories with which Anzio is twinned.

- Rental of premises

Nobody

- Furnishing

Nobody

- Hardware

- ✓ **n. 10 Arduino microcontrollers to carry out analysis projects of the 'state of health' of our historical and artistic heritage.**

- Software

free open source tools as web apps and digital platforms

- Miscellaneous services

Authorizations from local administrations to publish virtual tours and applications on services that can be used by users, including international ones, regarding the enhancement of our cultural heritage.

5.2 Funding opportunities

- List the funding opportunities for your policy.

Our educational policy would allow us to participate in calls and competitions or PON projects funded by the EU on the subject of STEAM activities, inclusion and sustainability

- Avoid vague suggestions like “crowdfunding”.

Organize an event to share our educational policy with local administrations, representatives of the Ministry of Education to promote a fundraiser.

- Cite the appropriate budget chapters of your school, or of a potential sponsor institution.

Local, regional and provincial and state institutions can sponsor the costs to carry out STEAM projects with a maximum budget of 1,000 Euros

- Mention recurring public call at any level and explain why it makes sense to apply.

EU PON projects in support of STEAM activities, inclusion, calls and competitions of the Ministry of Education.

Section 6 – Action Plan

6.1 Activities

- List the main activities required to implement your policy. Optionally, you can add an estimated duration for each of them.

- **Update the strategic documents of our RAV, PdM and PTOF school with our educational policy: 'STEAM European skills in favor of our sustainable cultural heritage for all'.**
- **Share and approve our education policy with all teachers in our school.**
- **Organize a survey for the recruitment and selection of 10 teachers to be trained in the STEAM, IBSE, CBL approaches**
- **Organize a survey for the recruitment and selection of students to be involved in STEAM, IBSE, CBL approach activities**
- **Organize an initial event on the web to promote the activities**
- **To train 10 teachers in the 2021/22 school year selected to carry out laboratory activities in the STE (A) M, IBSE, CBL approach in their classes.**

- Design and implement in the three-year period 2022-2025 a school curriculum based on skills for the classes of the first two-year scientific high school through concrete laboratory activities with the STE (A) M approach that are aimed at developing civic education skills in order to discover, protect, promote and enhance our cultural heritage.
- Establish contacts with our public administrations for the promotion and publication of products and services created with a view to sustainability of our Policy.
- To carry out 1 event in the three-year period 2022-25 with workshops to share the results obtained.

Section 7 - Risks

7.1 – Risks/Competition

a. Risk description

- List the main activities required to implement your policy. Optionally, you can add an estimated duration for each of them.

Currently there are no real risks of competition in the implementation of our Policy as it would allow local administrations and the entire community to benefit from

b. Probability

- Assign an integer value in the range 1-4, with 1 equal to very low probability and 4 equal to very high probability

Probability value: 1

c. Severity

- Assign an integer value in the range 1-4, with 1 equal to negligible impact on the project and 4 equal to high risk of failure.

Negligible impact: 3

d. Mitigation strategy

- Describe what you would do to avoid or mitigate the risk

7.2 – Risks/Opposition

a. Risk description

- List the main activities required to implement your policy. Optionally, you can add an estimated duration for each of them.

Currently, the implementation of our Policy provides for the only risk of not finding the necessary funds from local administrations (3,000 euros) to cover the cost of purchasing the n. 10 Arduino microcontroller and the payment of the fees of the 10 teachers involved.

b. Probability

- Assign an integer value in the range 1-4, with 1 equal to very low probability and 4 equal to very high probability

Probability value:1

c. Severity

- Assign an integer value in the range 1-4, with 1 equal to negligible impact on the project and 4 equal to high risk of failure.

Negligible impact: 3

d. Mitigation strategy

- Describe what you would do to avoid or mitigate the risk

This risk can be removed by using the Institute fund available for our school.7.3

– Risks/External Menace

a. Risk description

- List the main activities required to implement your policy. Optionally, you can add an estimated duration for each of them.

Currently there are no external threats to the implementation of our Policy except the covid emergency: the collaborative training activities of students and teachers could also take place remotely if the health emergency still continues. The team work that the students will have to carry out in the three-year period 2022-25 can be carried out on the web digital platform as well as the publication of the web services for the promotion and dissemination of our cultural heritage. The digital platforms will be managed by local administrations and by that of our school again in the three-year period 2022-25.

b. Probability

- Assign an integer value in the range 1-4, with 1 equal to very low probability and 4 equal to very high probability

Probability: 1

c. Severity

- Assign an integer value in the range 1-4, with 1 equal to negligible impact on the project and 4 equal to high risk of failure.

Negligible impact: 3

d. Mitigation strategy

- Describe what you would do to avoid or mitigate the risk

Create a network of schools and local administrations that promote and support the activities set out in our Policy.