

Section 1 - Summary

1.1 Author(s)

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1.2 Background

I have been teaching for a long time, at the beginning Physics and later Mathematics. Because of the small number of enrolled students this year, the management team has decided that we have to change and give another perspective to the school in order to have more students the next years.

1.3 Descriptive title

Diversity of learning including STE(A)M activities

1.4 Abstract

Girls don't pick scientific and technical careers. That's a huge problem. We can change it with our STE(A)M education policy at the school.

Inclusive classes, considering the students with slow learning, the disadvantaged ones and those with special needs.

Co-education, with two teachers in a classroom, for a small group of students with slow learning.

Offer extra-curricular activities for students from the school and the neighborhood.

Maintain a permanent teaching staff, also creating specific profiles for them which will benefit the students.

Section 2 Goals

2.1 General goal

One of the goals is to improve the academic results of our students. In the last two years we have seen a decline in our students external exams and also in the internal ones.

We want them to improve their linguistic competence in English and French and also boost the scientific and technological spirit in them, especially in girls.

2.2 General goal description

One of the main purposes to take into account is the abandonment and absenteeism of our students; some of them because they don't want to continue studying, others find superior levels difficult and then it is late to change to other kind of studies, and finally some have family problems.

The stakeholders are:

- The school community: *Principals can encourage, facilitate and positively affect teachers and students. To this purpose, school leadership must know the specific challenges and problems, the processes teachers navigate, and obstacles teachers need to overcome.*
- The *Educational Department is given the chance to participate in a planning, improvement process, development of a new idea, they will feel more invested in the work and in the achievement of its goals.*
- *Parents can support and influence the adoption and implementation of an innovation as they desire a successful educational system for their children.*

2.3 Strategic goals

Some of the teachers have the CLIL accreditation, so they can teach their subjects in English, especially in small groups, in projects...

We have two projects ("*Aquí STEAM*" and "*Inspira STEAM*") where a group of teachers are taking the courses in order to apply what they have learned in the different projects with their students.

Section 3 Targets

3.1 Beneficiaries

Teachers taking different kinds of courses in order to use them in the school lessons which will benefit the students.

Improving the results of external exams (*Basic Skills*: Mathematics, English, Catalan, Spanish and scientific-technological) of our students with preparatory lessons.

The encouragement of girls, to contact their higher education in science and technological degrees.

Inclusive classes, considering the students with slow learning, the disadvantaged ones and those with special needs.

3.2 Recipients

Maintain a permanent teaching staff, also creating specific profiles for them which will benefit the students.

3.3 Special needs

Teachers belonging to the intensive support for inclusive schooling (SIEI) for the students with special needs.

A pedagogical counselor supervises an *individual plan* for some students, the most unfavorable ones: students with slow learning and some disadvantaged ones.

Co-education, with two teachers in a classroom, for a small group of students with slow learning.

Section 4 Value Proposal

4.1 Value proposal

Equal conditions and academic improvements of our students

4.2 Results

4-5 teachers are introduced to the STE(A)M educational approach, mainly the ones that have more groups of students of the same level.

Teachers taking different kinds of courses in order to use them in the school lessons which will benefit the students.

4.3 Impact

We aim to make our training courses useful for both parts: students and teachers.

Application of STE(A)M activities after the teachers attending the projects "*Aquí STEAM*" and "*Inspira STEAM*" not only for students from 12-14 years old but also for the older ones.

Section 5 Costs

5.1 Cost structure

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

- Labor (internal staff)
- Hardware
- Software
- Miscellaneous services

5.2 Funding opportunities

The *Education Department* pays for the reforms inside the school (painting, adapting classes for computing, installing computers and projectors in each class...).

This year we are preparing for the application of an Erasmus + grant for our students and teachers the optional mobility and the implementation of a new project in our school.

Section 6 Action Plan

6.1 Activities

- For students of 12-14 years old STE(A)M activities based on the courses, "*Aquí STEAM*" and "*Inspira STEAM*", learned by the teachers. (all year)
- During one week, students from 12-16 years old make a project involving different subjects.
- For students of 13-14 years old, "*Tourist world congress*" project (one term)
- For students of 15-16 years old, exchange with students a college in Holland (one week), before that preparation of letters of presentation, welcoming party...
- Invite academic personalities for conferences about scientific/technological themes (one hour each).

Section 7 - Risks

7.1 Risks/Competition

a. Risk description

Every two weeks, on Wednesday afternoons, teachers can take formative courses and students take extra-curricular classes during the week, such as, Sports, English academies...

b. Probability

2

c. Severity

2

d. Mitigation strategy

Teachers of different disciplines can work in groups to prepare STE(A)M activities and make students get more involved letting them see that the subjects can be explained with a different approach and not only with the traditional methods.

7.2 Risks/Opposition

a. Risk description

Most of the older teachers (45 years onwards) would like to continue with the traditional lessons, while the younger ones are more receptive for changes.

b. Probability

2-3

c. Severity

2

d. Mitigation strategy

Trying to convince the older teachers to try to change or make some variations in their way of teaching in order to encourage and attract more students in their learning path.

7.3 Risks/External Menace

a. Risk description

The change of our autonomic government has lead a group of teachers to modify one of the courses we were taking for the last two years.

b. Probability

2

c. Severity

2-3

d. Mitigation strategy

During and after the pandemic situation of Covid-19 some students had a digital devise (some of them didn't have a computer at home, only internet connection and they have to use their mobiles).

The *Education Department* provided all teachers with computers and students (from 15-18 years old) with tablets. In special cases, because of extreme family situations it gave them an internet connection.