

Section 1 - Summary

1.1 Author

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1.2 Background

I am the Computer Science teacher of my school and I am the representative of my colleagues due to my previous experience in STE(A)M education.

1.3 Descriptive title

Different language? Same STE(A)M project!

1.4 Abstract

International humanitarian crises are changing the nature of classroom dynamics. In our school a significant percentage of student force is refugees fleeing war in countries such as Syria, Afghanistan and Iraq. These students present poor academic performance due to poverty, language barriers and low levels of preschool enrollment even if they often hold high aspirations for themselves.

We want our refugee students to improve their academic performance and level of socialization, and obtain a deep appreciation for and interest in STE(A)M, and a sense of self-efficacy in being capable of pursuing STE(A)M career if they choose to.

We propose the collaboration of the class teachers and the welcoming class teacher with the translators of our school in extra – curricular STE(A)M activities, the purchase of new equipment for our STE(A)M lab and the co-teaching between older refugee students and teachers of the classes.

The policy will be implemented the whole coming school year and this policy should be adopted as a part of the Yearly Activity Plan of the 8th Primary School of Nea Filadelfeia.

Section 2 – Goals

2.1 General goal

The general goal is to improve the academic performance and level of socialization of refugee students through STE(A)M projects, raise their interest to the STE(A)M subjects and motivate them to pursue a STE(A)M career.

2.2 General goal description

Inspire refugee students to exploit their interests and their talents regarding the disciplines of STE(A)M and improve their educational attainment.

Through STE(A)M workshops, motivate them to pursue a STE(A)M degree or a career in the future.

To get socialized through communication and collaboration while implementing a STE(A)M activity in a team with other students.

2.3 Strategic goals

Planning STE(A)M activities at the beginning of the school year based on the needs of refugee students

Activate a capacity building program on the STE(A)M approach for teachers, divided into four 2-hour workshops to be held at the beginning of the school year.

Organize the program of STE(A)M workshops of the school year with the collaboration of class teachers, the welcoming class teacher and the municipality's translators.

Ensure appropriate funding from school's funds and donations from the parent-teacher association.

Inform municipality and the local community about the STE(A)M policy and its goals.

Organize an open STE(A)M event at the end of school year to disseminate the project to the school and to the local community.

Section 3 – Targets

3.1 Beneficiaries

The final beneficiaries are the refugee students and all students of our school. They will get socialized, they will be taught to respect different cultures and they will improve their digital skills and competences.

On the other hand, teachers will be beneficiaries too. They will practice new teaching methodologies and they will improve their teaching by implementing STE(A)M problem based learning projects and by targeted training.

Almost 10% of our student dynamic will participate in this program improving their educational level and a percentage of 60% of our teachers.

3.2 Recipients

The recipients are the same with the beneficiaries

3.3 Special needs

The STE(A)M policy involves beneficiaries with language barriers and different cultural background. Thus, there is the need for cooperation between the class teachers, the welcoming class teacher and the municipality's translators and targeted training.

Section 4 – Value Proposal

4.1 Value proposal

Improving the academic performance and the socialization of refugee students through STE(A)M projects.

4.2 Results

- 12 teachers of our school are introduced to the STE(A)M educational approach
- Training of teachers about STE(A)M methodologies with 8 hours' workshops
- 146 students (including refugee students) participate in STE(A)M projects
- New digital equipment for the school's STEAM lab.
- At least 8 STE(A)M activities are implemented in the school year

4.3 Impact

We aim to help our refugee students to improve their educational and socialization level.

We aim to the cooperation of our municipality in order to apply this policy the next school years too.

We aim to present the results of our STE(A)M projects to the local community in order to get support and funding

We aim to equip our STE(A)M lab in order to cope with our objectives and needs

Section 5 – Costs

5.1 Cost structure

- Labor (internal staff)
- External consultants
- Administrative costs
- Hardware
- Software
- Miscellaneous services

5.2 Funding opportunities

Funding from the school's funds and the parent-teacher association.

Funding from the municipality's Education sector

Section 6 – Action Plan

6.1 Activities

Presentation of the STE(A)M policy from a STE(A)M expert to the headmaster, teachers and parents (60 minutes)

Brief presentation of the STE(A)M activities to the students (45 minutes)

Training of teachers to STE(A)M methodology synchronous or asynchronous (8 hours) at the beginning of the school year (1 – 15 September)

Planning activities with the collaboration of the class teachers and the welcoming class teacher (2 weeks)

Planning of project curriculum and visits from the municipality's translators (3 hours)

Creating multilingual teams of 3-4 students and assigning each team to teachers and translators

STE(A)M workshops (45 minutes) 3 days a week and one day after school

Uploading the products and the results of the activities to the school's website twice a week.

Evaluation of the STE(A)M projects by students and teachers

STE(A)M event at the end of school year presenting students' products for the dissemination of the projects and their results

Section 7 - Risks

7.1 – Risks/Competition

a. Risk description

The limited time of students and teachers due to the fixed curriculum and the small number of municipality's translators.

The list of activities is described above (paragraph 6.1)

b. Probability: 3

c. Severity: 2

d. Mitigation strategy

After school STE(A)M workshops or integration of the STE(A)M projects to the new Skills Workshop of the Ministry of Education.

Early applying to the Education Sector of our municipality for the number of the translators needed.

7.2 – Risks/Opposition

a. Risk description

Some teachers are not adaptable and they find it difficult to apply new methodologies in their teaching. So perhaps, preferring the traditional way of teaching, they will oppose to this STE(A)M policy.

b. Probability: 2

c. Severity: 2

d. Mitigation strategy

A team of experts in STE(A)M can be created so the above teachers can be supported at every stage of the policy.

7.3 – Risks/External Menace

a. Risk description

During the Covid-19 pandemic, the refugee students could not attend distance learning due to the lack of digital equipment. If there is a quarantine again, the implementation of the policy may be jeopardized.

b. Probability: 3

c. Severity: 3

d. Mitigation strategy

The school, the municipality or the parent-teacher association can fund some students in order to buy the required equipment for distance learning.