STEAME GOES HYBRID

IO2.

TRAINING PROGRAMME FOR FACILITATING **THE IMPLEMENTATION OF STEAME L&C PLANS BY SE TEACHERS AND PILOTING THE BLUEPRINT GUIDELINES**

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

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STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

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www.steame-hybrid.eu

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IO2. Training Programme for facilitating the implementation of STEAME L&C Plans by SE teachers and Piloting the Blueprint Guidelines

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Contents

1 Introduction

The Covid-19 pandemic showed the need for fast and rapid transition to digital learning. Moreover, it revealed the lack we had in modernization and digitalization of our education. Related to this, during the 10 focus groups (with education experts and with teachers and trainers) carried out in the initial phase of this project, it was stated on numerous occasions that, in order to implement a STEAME approach in a hybrid way, it is necessary to create materials that help teachers make their work easier and guide them in their work. The *Training Programme for facilitating the implementation of STEAME L&C Plans by SE teachers and Piloting the Blueprint Guidelines* targets STEAME teachers and represent a useful resource, that was developed based on the findings, results and professional feedback from the Output 1 activities (A1, A2, A3) of this project (STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations) and piloted during a C1 Training implemented in Athens in Autumn 2022. It will help teachers to carry out successful STEAME project-based activities in a blended-learning/hybrid manner. In addition to teachers, those who will benefit from the creation of this material there are students aged 12 to 15 and their parents who now have to come into play when students work from or at home.

The document consists of four core chapters:

- STEAME HYBRID Training Programme overview
- Modules outlines
- Module syllabus template
- A set of syllabuses for Modules

2 STEAME goes Hybrid eLearning Platform

2.1 Introduction

The purpose of this document is to describe the requirements for the STEAME-HYBRID platform in the context of the research project.

2.1.1 Definitions and Acronyms

Term	Definition
LMS	Learning Management System
BBB	Big Blue Button

2.1.2 Terminology

Term	Description	Moodle related	Comments
Hybrid Learning & Creativity Plan	Holds Hybrid L&C activities	Activities that can be used in a **Class**	Collection of Hybrid L&C Material
Class	A group of 25-30 students with one Main Teacher and Collaborative Teachers	Course	Classes must not be visible from Frontpage.
Hybrid L&C Material		Activities: Word, PDF, Link to videos, PPTs, …	Need to have 2 options Use ready Hybrid L&C Plans Create your own Hybrid L&C Plan
Main Teacher	The person that requests a class to be created. It has full rights in the class.	Teacher	
Collaborative Teacher	The person that collaborates with main teacher. Has full rights but cannot ENROL ANYONE	Custom Role	
Student Group Forum	The original Moodle Forums	Forum	Enable student communication

2.1.3 STEAME goes Hybrid Platform Short Description

STEAME goes Hybrid Platform handles Classes (we have renamed Course definition using Language Files to achieve this) that support the STEAME goes hybrid methodology of Project Based Learning. A class composes of Students (20-25 k12 students), Teachers (1 Main Teacher) and Collaborative Teachers (Manage smaller groups).

Basic Enrollments:

How Students Enroll: Students are enrolled using a short code presented by their Teacher.

How Collaborative Teachers Enroll: Main Teacher enrolls the collaborative teachers and assigns them to groups.

How Main Teachers enroll: Two step procedure:

1. Get access to the Training the Teachers course. Committee approves request. Committee members are Platform users with the "Manage Apply Enrollment" capability. More documentation in later chapters
2. Apply for Class (Course) creation. Committee approves request. Committee members have the system role to approve courses.

Class Basic Structure: Student will belong in one group of 3-7 students as a division from a class of 25-30 students. Main teacher belongs to all groups of his/her class. Collaborating teachers may belong to all groups or to some groups.

STEAME goes Hybrid Project Based Teaching: Students in groups participate in synchronous meetings to solve problems. Students can access the meetings from anywhere. Only mandatory is a high-speed internet connection and a device with audio/video enabled.

2.1.4 STEAME goes Hybrid Platform common use case scenarios

2.1.4.1 How Teachers connect

Teachers get online and register on the platform using the Platform Registration form.

They take the online course "Training the Teachers".

> Request for enrollment in the course using Approval (Committee members approve requests).

Once they complete the Training the Teachers course

> They get a Certificate of completion.
>
> Teachers gain the **Class Requesters role**. With this role they have the option to Request a New Class to be created.

Teachers request access to a class

The Committee approves/declines the class request.

Once a class is approved:

> The class settings page appears and should be evaluated by the Committee member who had approved the class.

The most important part of the class settings is the Class Format. Committee member should select Template as the class format and Save the course.

Once the course is saved, the list with class templates appears (currently one template). Committee member selects it.

Class is then automatically created online.

Teacher (Class Requester) is enrolled in the class as Main Teacher.

Student enrollment via code is created with specific access code.

Generico is used to produce a random code.

Extra code development has be done to automatically assign a class code to the enrollment instance.

Teacher (Class Requester) receives a confirmation email.

Codes and links are provided to the Teacher via the Course (**GENERICO**).

2.1.4.2 How Students get accounts

Students are asked to create accounts online.

2.1.4.3 How Students are enrolled in classes

They are provided with the enroll codes by the Main Teacher.

They search for their class.

They Enroll themselves in each Class they got the codes.

All their enrolled **Classes** can be found in their Dashboard

2.1.4.4 How Students communicate

Using specific Audio/Video/Presentation virtual spaces that are available only for the specific group (synchronous communication). Each MAIN TEACHER will be responsible to INTRODUCE HIS/HER OWN Synchronous Communication Tool from the list of sharing activities.

Using Mail Student Group Forums that are available only for the specific group (asynchronous communication.

2.1.4.5 How we train Teachers

Teachers must complete the “Training the Teachers” course.

To become competent in:

L&C methodology

Hybrid L&C methodology

Creating activities online

Participate in online activities

Group students in small teams

Assign L&C activities in Groups

2.1.4.6 How Teachers organize L&C plans online

L&C plans are pre-created.

L&C skeleton is setup on initial creation

Teachers assign students in groups.

Teachers assign resources per student group in the Class.

2.2 Requirements

2.2.1 Technical Requirements

ID	Requirement	Role	Comments	
TR1	Cloud Based Application	Mandatory		Y
TR2	Learning Management System Deployment	Mandatory	Open Source LMS	Y
TR3	Must have Own Domain	Mandatory	learning.steame-hybrid.eu	Y
TR4	Must support Email server functionality	Mandatory	smtp.zoho.eu	Y
TR5	Must be GDPR Compliant	Mandatory		Y
TR6	Must include Copyrights	Mandatory		Y
TR7	Must include Video conference system subscriptions	Mandatory	Big Blue Button	Y
TR8	Must take care of Security	Mandatory		Y
TR9	Should support Scheduled tasks	Mandatory		Y
TR10	Must be SEO friendly	Mandatory		Y

Table 1: General Technical Requirements

2.2.2 Theming Requirements

ID	Requirement	Role	Comments	
ThR1	Must be compatible with Bootstrap 4 and above	Mandatory		Y
ThR2	Must support Fully Responsive Layout	Mandatory		Y
ThR3	Cross Browser Compatibility	Mandatory		`Y
ThR4	Compatibility with Moodle LMS	Mandatory		Y
ThR5	Clean, Modern & Simple Design	Mandatory		Y
ThR6	Easy to use	Mandatory		Y
ThR7	Multilingual support	Mandatory		Y
ThR8	JavaScript, AJAX support	Mandatory		Y
ThR9	Custom CSS	Mandatory		Y

ThR11	Easy for Kids UX experience	Mandatory		Y
ThR12	Custom Logo	Mandatory		Y
ThR13	Custom favicon	Mandatory		Y

Table 2: Theming Requirements

2.2.3 Functional Requirements

ID	Requirement	Type	Role	Comments	
FR1	OAUTH2 or OpenID Connect or SAML authentication	Authentication	Optional	OpenID and OAUTH2 (can support SAML2)	
FR2	Has a Learning Theme	Appearance	Mandatory		Y
FR3	Has a Front Page (Homepage)	Page	Mandatory		Y
FR4	Has a Login Page	Page	Mandatory		Y
FR5	Has a GDPR Page	Page	Mandatory	projects@cms.org.cy	Y
FR6	Has a Copyrights Page	Page	Mandatory		Y
FR7	Has a Main Menu on top	Menu	Mandatory	Link to STEAME HYBRID website, Link to STEAME website Observatory	Y
FR8	Has a Footer area in every page (bottom of page)	Structure	Mandatory		Y
FR9	Supports Linking to social media	Links	Mandatory	Only Facebook	Y
FR10	Has social media on Footer		Mandatory		Y
FR11	Has instructions on Homepage		Mandatory		Y
FR12	Has instructions on How to be a Teacher on Homepage		Mandatory		Y
FR13	User logins using a login form	Authentication	Mandatory		Y
FR14	User Login Form is multilingual	Form, Multilingual	Mandatory		Y
FR15	User Registration form (with email)	Registration	Mandatory	Fields: Name, Surname, Email, Username, Country, City	Y
FR16	User Registration Form is multilingual	Form, Multilingual	Mandatory	Languages: Italian, Romanian, English, Greek, Polish	Y
FR17	Can restore password/username	Authentication	Mandatory		Y
FR18	Change Course to Class	Terminology	Mandatory		

FR19	Change Language using a Button on top	Multilingual	Mandatory		Y
FR20	Multilingual Homepage	Multilingual	Mandatory	Languages: Italian, Romanian, English, Greek, Polish	Y
FR21	Support 1 to N classes	Configuration	Mandatory		Y
FR22	Train the Teacher class link from the Homepage	Link	Mandatory		Y
FR23	Student Classes are not visible from the Homepage	Structure, Access Rights	Mandatory		Y
FR24	Create a *Train the Teachers* class	Course	Mandatory		Y
FR25	Supports User Roles of Collaborative Teacher, Main Teacher, Student	Configuration, Access Rights	Mandatory		Y
FR26	Collaborative Teacher cannot enroll students	Configuration, Access Rights	Mandatory		Y
FR27	Main Teacher can enroll Collaborative Teachers	Configuration, Access Rights	Mandatory		Y
FR28	Main Teachers can request for new courses		Mandatory	site role with course request capability	Y
FR29	Integrated with Video Conferencing Systems	Activities	Mandatory	ZOOM, BBB	Y
FR30	All Teachers can enroll in Train the Teacher class upon approval	Course, Enrolment	Mandatory	Used for teachers in Train the Teachers class	Y
FR31	Students can Self-enroll in class based on password	Course, Enrolment	Mandatory	Used for students	
FR32	The Request Class Form should have requested fields	Form	Mandatory	Fields: SCHOOL, Grade level, Teacher, Collaborating Teachers (more than 1), School Year, Learning Groups 1,2,3,.....	
FR33	Main and Collaborating Teachers can use all activities	Configuration, Access Rights, Activities	Mandatory		Y
FR34	Students can share content	Configuration, Access Rights, Activities	Mandatory	Enable the Student Folder plugin	Y

FR35	Has Automations for the course creation		Optional		
FR36	Supports messages between students		Mandatory		Y
FR37	Change Forums to Student	Terminology	Mandatory		
FR38	Homepage has reference to Erasmus	Link	Mandatory		Y
FR39	Supports 1 – N Class Templates	Course	Mandatory		
FR40	The Class Layout is easy to be used by 7-12 children	Course	Mandatory		Y
FR41	Provides certificate of completions		Mandatory		
FR42	Has a Help page with Frequent Answered Questions	Page, Help	Optional		Y
FR43	Search for classes through front page	Search	Optional		
FR44	Has News and Announcements		Optional		
FR45	Has Blog (connected with Website's content)		Optional		
FR46	Supports Google Analytics		Optional		
FR47	Has scheduled task jobs for LMS		Mandatory		Y
FR48	Has a personalized user tour	Help	Optional		
FR49	Supports class groups	Course	Mandatory		Y
FR50	Teachers assign activities to groups	Course	Mandatory		
FR51	Self-Enrollment has fixed seats	Course	Optional		
FR52	Supports learning activities PDF, DOC, PPT	Course, Activities	Mandatory		Y
FR53	Teachers can add own content in own class	Course, Activities	Mandatory		Y
FR54	Teachers can drag and drop activities and L&C from "sharing cart"	Course, Activities	Mandatory		

FR55	Teachers cannot alter or delete activities and L&C from "sharing cart"	Course, Activities	Mandatory		
FR56	Administrator can add L&C plans in "sharing cart"	Course, Activities	Mandatory		Y
FR57					

Table 3: Functional Requirement List

2.2.4 Class Requirements

ID	Requirement	Group	Type	Comments	Status
LC-R1	Can handle small student class		Mandatory	Each STEAME L&C Hybrid class will have maximum of 25-30 students (We need to restrict these kind of classes capabilities and not allow Teachers to add more.). Lets use STEAME L&C Hybrid Class	PENDING
LC-R2	Must be simple to navigate and find information		Mandatory	Flat design All topics opened Simple to find resources Grouped resources We will have 6 completed ready to use Hybrid STEAME Learning & Creativity Plans. These plans are composed of learning material. These resources are shareable through the Sharing Cart Plugin Templates (word, ppt, …) should be used for teachers to create their own Hybrid STEAME L&C Plan.	PENDING
LC-R3	Can handle more than one teacher			One is the "Main Teacher" and the others are collaborating teachers. The most should be the number of letters of STEAME (that is 6	PENDING

				together the main in the worst case of on L&C Plan involving one teacher per topic.	
LC-R4	Can manage group of students			Teachers will form the groups	DONE
LC-R5	Can sort activities based on student groups			Restrict access based on group The Main Teacher defines student groups and assigns access to them per group. The Main Teacher should be able to give access to collaborating teachers, sometimes a different collaborating teacher for different groups. **IS THERE AN EASY WAY TO ASSIGN RESOURCES TO GROUP?**	PENDING
LC-R6	Each group has it one Virtual Space			BBB room or any other VC service for each group	PENDING
LC-R7	Can communicate with students			Enable Student Group Forums in the classroom based on groups	PENDING
LC-R8	Can reused Hybrid L&C Plan activities from templates			Create Learning Group or Learning Environment (not course) . Each Student Working group of 3-7 students is a separate Learning Group (course) as each has its own project to work. Install Sharing Cart Create a **CLASS** to have all the template activities	PENDING
LC-R9	Enable Students to share content			Student Folder plugin: https://moodle.org/plugins/mod_publication	DONE
LC-R10	Class must be easy to navigate and edit				

Table 4: Class Requirement List

2.3 Specifications and Configurations

2.3.1 Technical

ID	Spec	Comments
1	Cloud Provider	VULTR using LEAFNET account
2	Hosting Server	LEAFNET ErasmusPlus
3	Learning Management System	Moodle 3.11.5+ (https://moodle.org/)
4	PHP	7.3.33
5	Domain	https://learning.steame-hybrid.eu/
6	Email Provider	Zoho (provided by STEAME)
7	GDPR Compliant	Document Provided by LEAFNET
8	Copyrights	Document Provided by LEAFNET
9	Video conference systems	BBB subscription by LEAFNET Zoom subscription by LEAFNET
10	Security	
11	Scheduled tasks	Run Moodle cron 1 min
12	Backups	Automated

Table 5: Technical Requirement List

2.3.2 Theme

Theme was bought by LEAFNET LTD and installed in the STEAME LMS based on the specifications below.

ID	Spec	Comments
1	Bootstrap Compatibility	Bootstrap 4.x.x
2	Responsive Layout	YES
3	Cross Browser Compatibility	Firefox, Safari, Opera, Chrome, Edge
4	Compatibility with LMS	Moodle LMS v3.9+
5	Advanced Typography	Supported
6	Form Builder	Supported
7	Supports Javascript, AJAX	YES
8	Clean, Modern & Simple Design	YES
9	Easy to use	YES
10	Multilingual	YES supports filter_multilingual 2
11	Custom CSS	YES

Table 6: Specifications Table

2.3.3 Learning Management System

2.3.3.1 Appearance

Theme customized and configured to meet Design requirements.

2.3.3.2 Translations

Some LMS pages will be translated into the required languages to match the project requirements.

Site Home / Frontpage

Login form

Registration form

Dashboard

2.3.3.3 *Terminology (such as Course to Class Transcription)*

Custom Terminology specified for the STEAME goes Hybrid Project: Course to Class.

To do this we used the specific language debugger (Moodle) to identify the language strings of wordings in the Site appeared as “Course”. Then, we searched the EN language pack through Site Administration for the EN identifier and replaced it with Class.

2.3.3.4 *Moodle Configurations*

Task	Default settings	STEAME modified settings
User Roles		Add Teacher and Collaborative Teacher roles. See X for details.
Manage activity restrictions		By group By activity completion
Available activities		Choice BigBlueButton Assignment Feedback Folder Forum Label Page Student Folder File URL
Completion tracking	Activity default	Do not indicate activity completion
Blogs		Disable
Course Default layout	Edumy default	Edumy Focus
Add Sharing cart block to all courses by default		

Table 7: Moodle Configurations Table

2.4 Implementation & Design

2.4.1 Business Logic

Limitations

Sharing cart plugin’s contents are visible per user. Therefore, a teacher can copy any wanted activities from the Train the Teachers repository and then add it in their course.

Course Group privileges: Teachers should be aware of groups and know how to assign material to group using Activity settings and activity permissions.

2.4.2 User Interface (screens)

2.4.2.1 Log In Form

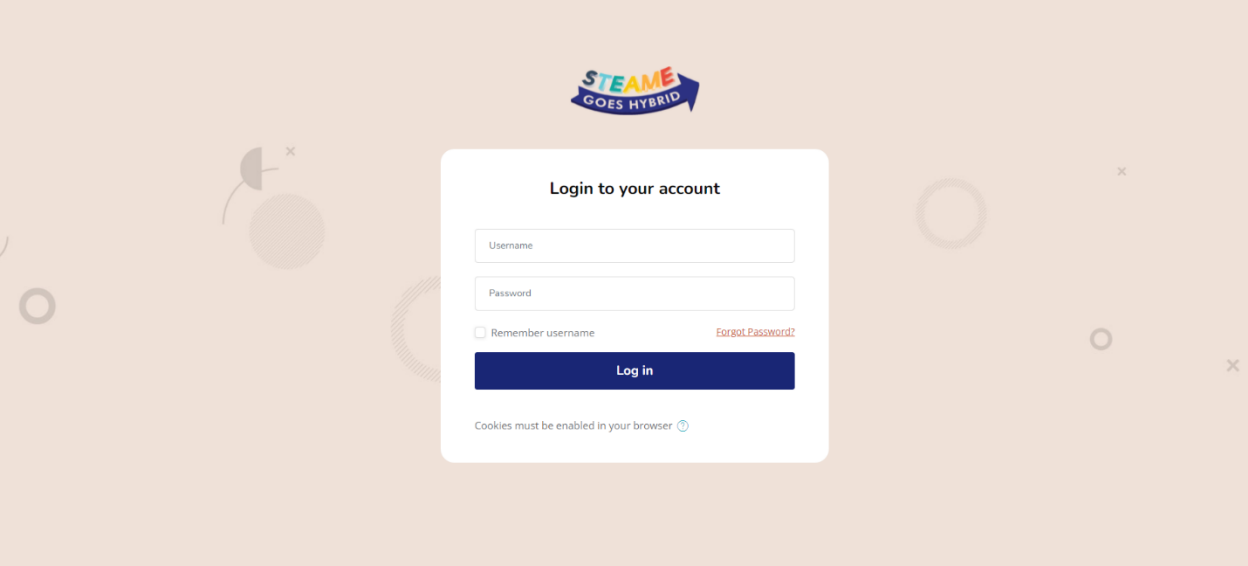


Figure 1: English login form

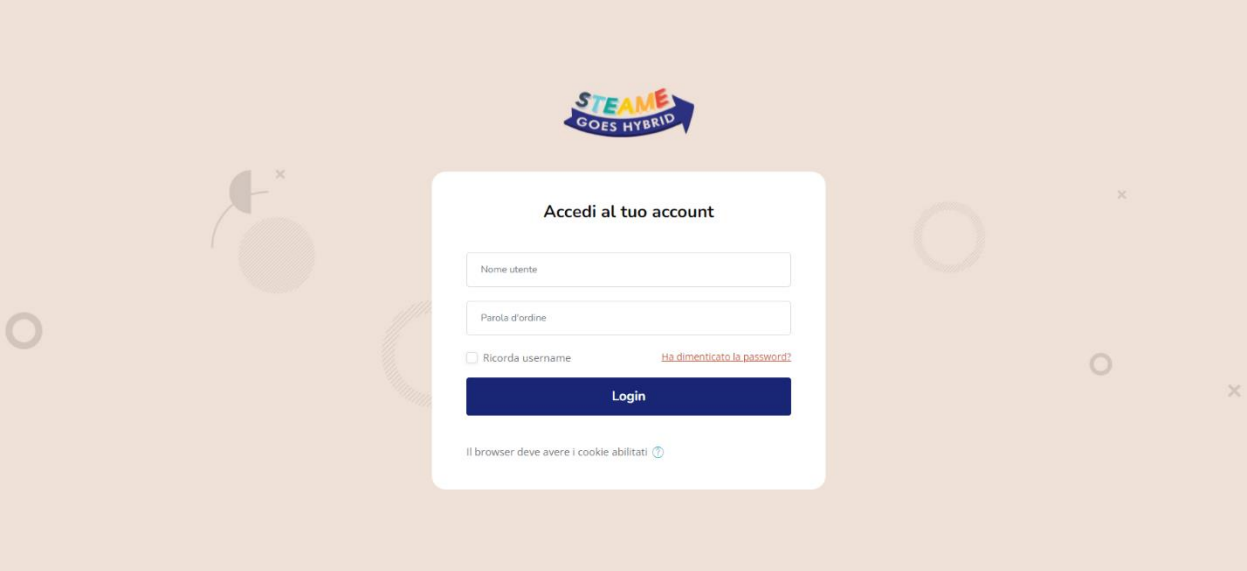


Figure 2: Italian login form

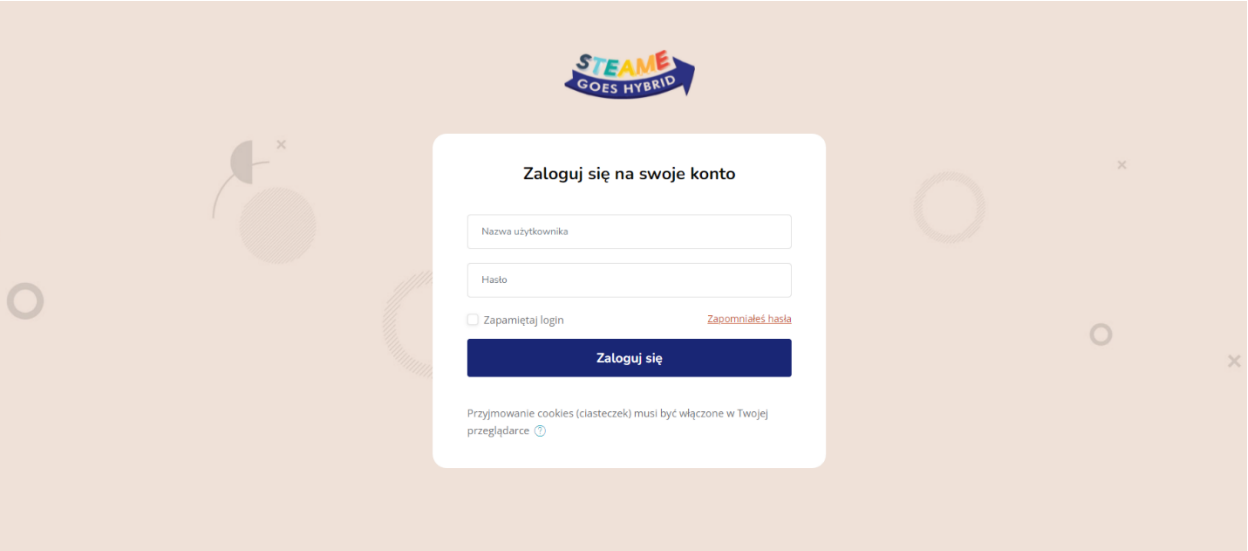


Figure 3: Polish login form

2.4.2.2 Registration Page

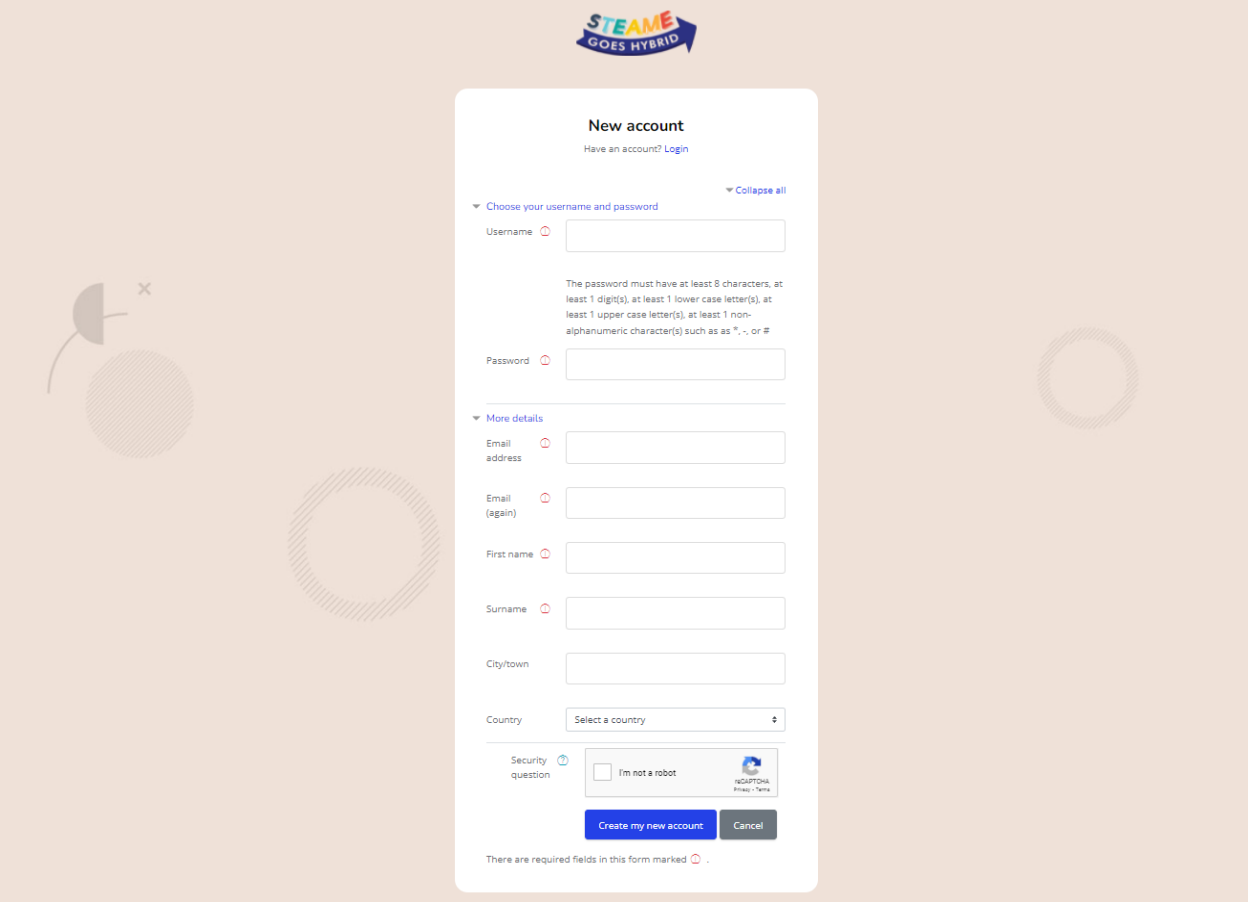


Figure 4: Registration page in English

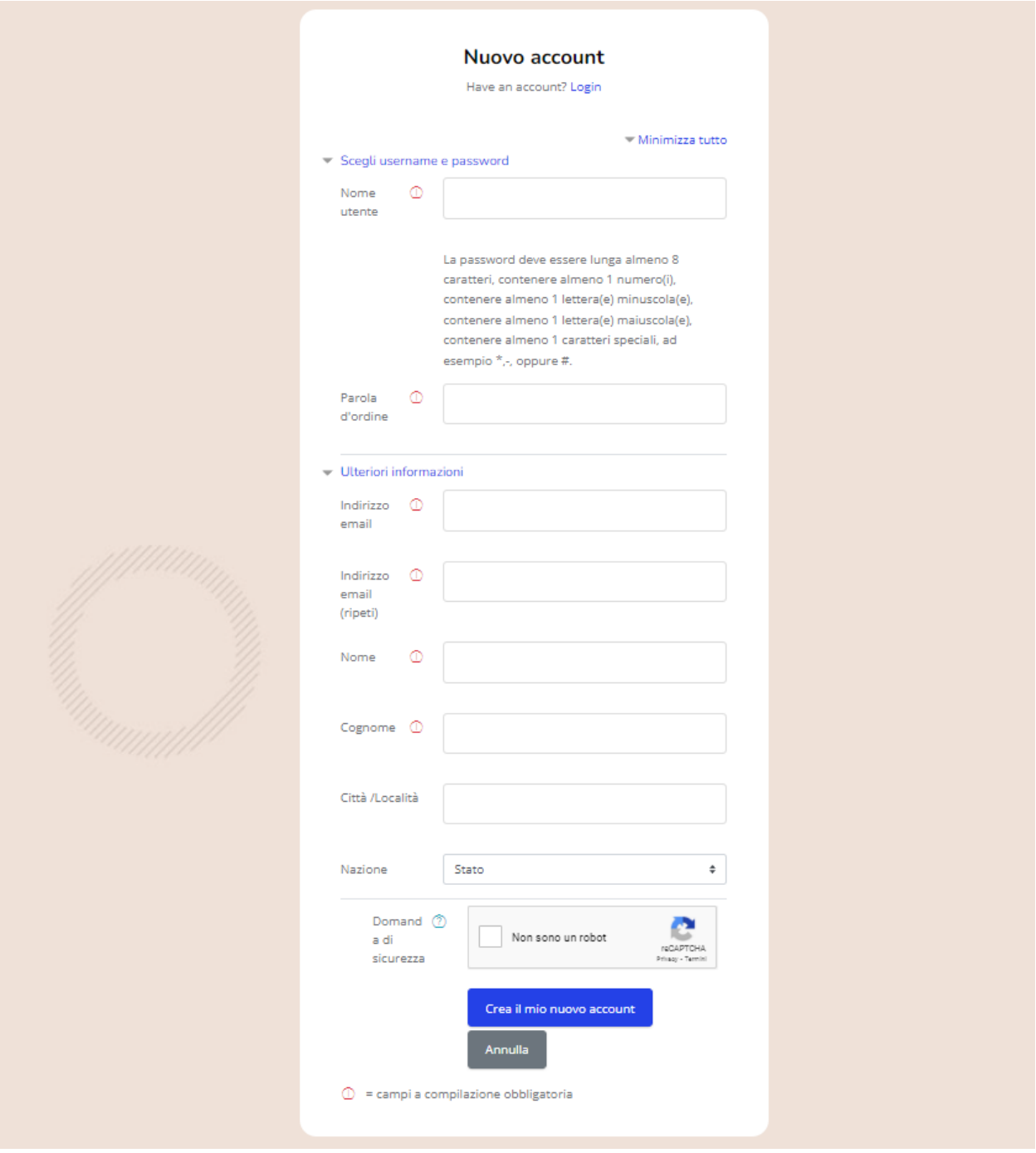
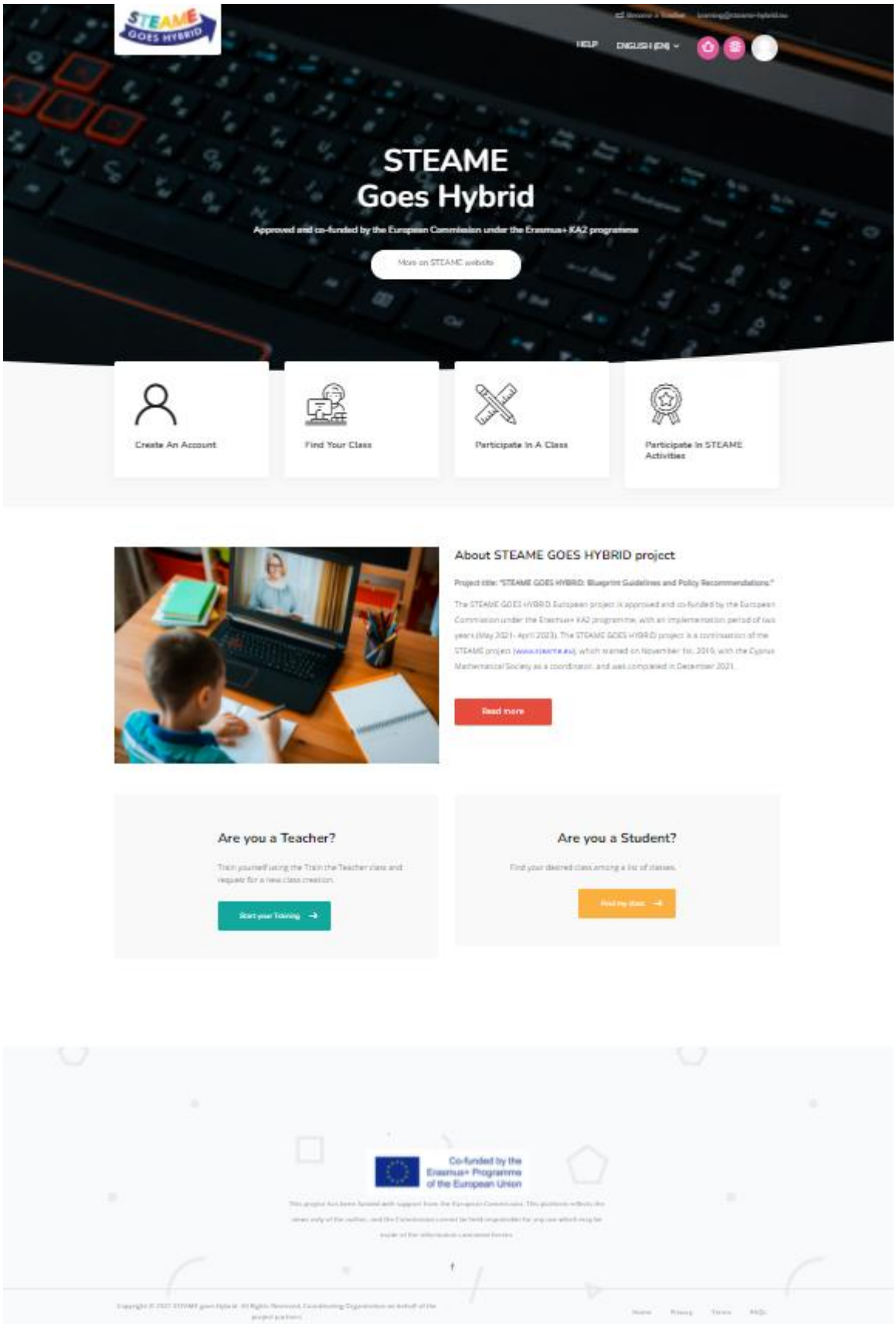


Figure 5: Registration form in Italian

2.4.2.3 Site Home



Site Home comprised of 5 areas:

2.4.2.3.1 Top Bar:

Access to profile

Language Menu, Message icon

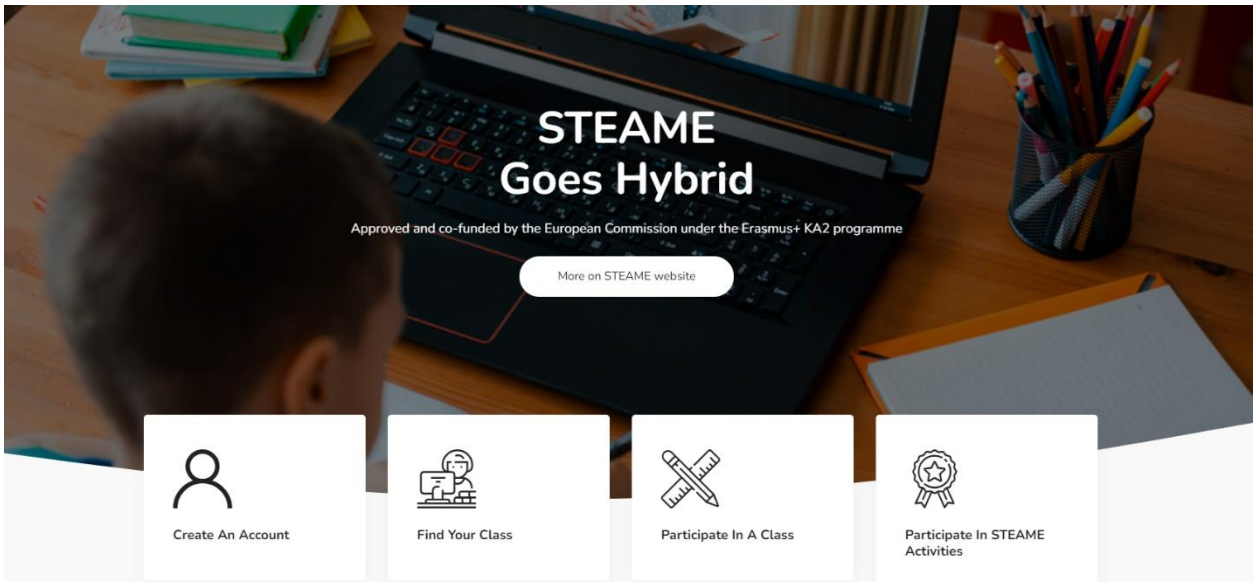
Logo

Information about the email

2.4.2.3.2 Slideshow banner

Slide with link to STEAME website

Informative boxes



2.4.2.3.3 Info Text about the Project

About STEAME GOES HYBRID project

Project title: "STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations."

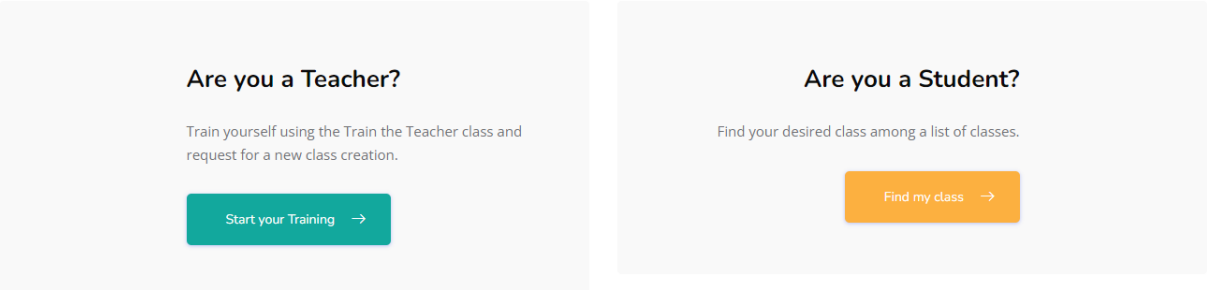
The STEAME GOES HYBRID European project is approved and co-funded by the European Commission under the Erasmus+ KA2 programme, with an implementation period of two years (May 2021- April 2023). The STEAME GOES HYBRID project is a continuation of the STEAME project (www.steame.eu), which started on November 1st, 2019, with the Cyprus Mathematical Society as a coordinator, and was completed in December 2021.

Read more

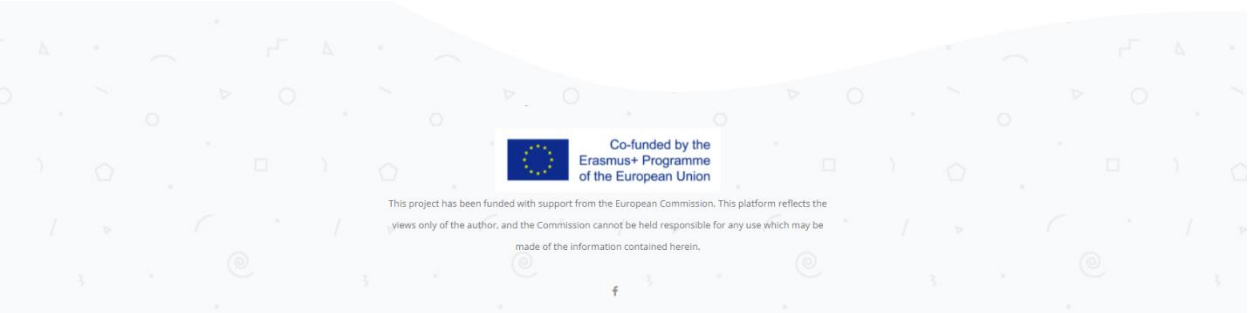
2.4.2.3.4 Links for Students and Teachers

Link the train the Teachers course (for Teacher)

List of available classes (for Students)



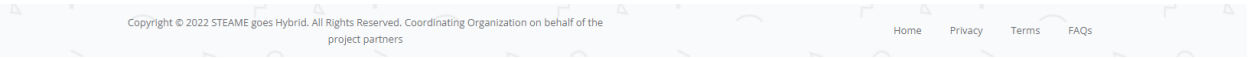
2.4.2.3.5 Footer



2.4.2.3.6 Bottom

Contains

- Copyrights
- Important links
  - Privacy
  - Help
  - Terms of use



2.4.2.4 Dashboard

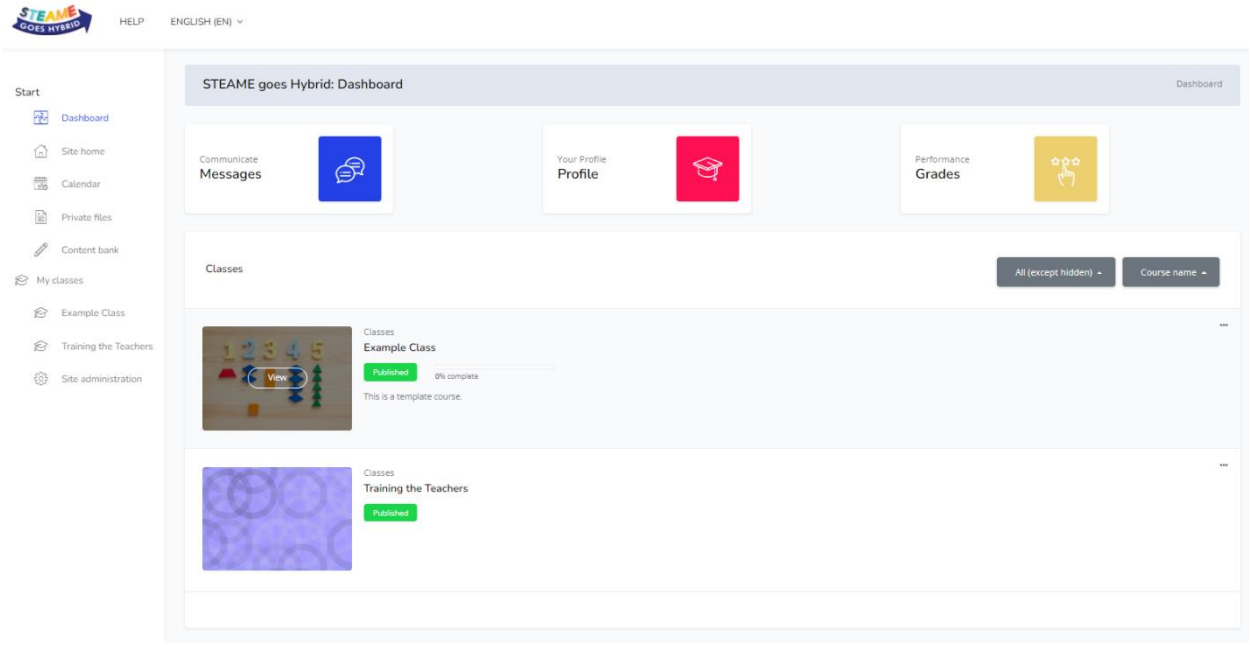
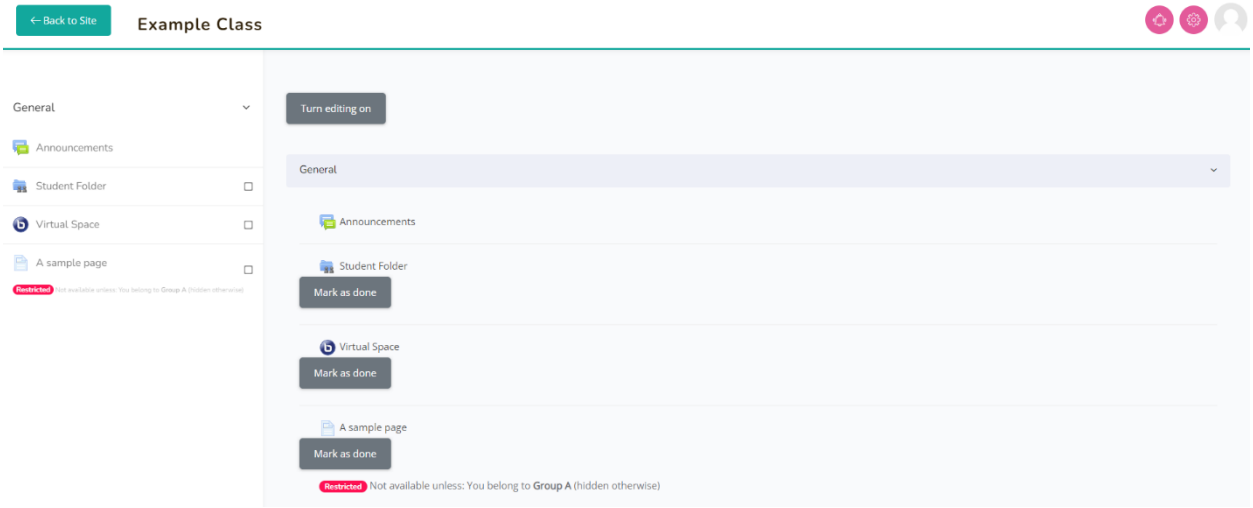


Figure 6: Dashboard page is the default page once users are logged in

2.4.2.5 Course Page



2.4.3 Functionality

What does the application do, and how quickly does it do it?

What are possible failure conditions and how are they handled?

What one-time operations are done at the first execution (i.e., after installation)?

If the user creates entries of any kind (e.g., bookmarks), what are the limitations?

2.4.3.1 Enrollments

Teacher Enrollments

Approve Enroll Request on Training the Teacher Course

Collaborative Teacher Enrollments

Manual

Student Enrollments

With Class code

Manual

2.4.3.2 System Roles

2.4.3.2.1 Student

Common material is automatically assigned to student groups.

Student can see the common material of their group

Student cannot see the common material of the other group

Student cannot see any Activities with Activity Allowance for their group.

Can request for a new course

2.4.3.2.2 Main Teacher

All Moodle Teacher rights.

Remove restore, import, reset, accessibility toolkit?

Can assign students in Groups using Class Settings

Can create groups.

Can add Group Activity Restriction for specific activities of the class.

Hidden for all other groups.

Can enroll Collaborative Teachers using Manual Enrollment

2.4.3.2.3 Collaborative Teacher

Collaborative Teachers have exactly the same capabilities with the Main Teacher but they cannot enroll others using Manual Enrollment.

2.4.3.3 Class

2.4.3.3.1 Class Settings

Group Mode is **ON**

Each activity in the class is automatically assigned to group mode if exist.

Separate groups allowed: Participants can see only content assigned to their group.

Completion Mode is **ON**

2.4.3.3.2 Enrollments

Manual Enrollments:

Automatically created upon course creation

Main Teacher is automatically enrolled

Main Teacher enrolls Collaborative Teachers

Easy Enrollment with Password:

Automatically created as an enrollment instance during the class creation.

Extra development code needed to automatically create a custom code for the newly created class (ex. abc23QQ).

Enrollment code appears on class How to for Teachers.

2.4.3.3.3 Blocks

Sharing Cart:

Default Block

Available only for Main and Collaborative Teachers upon Editing.

Which are the sharing activities we need to import?

BBB

Where is the default class to add any new material?

2.4.3.3.4 Activities

All COMMON activities have Group Mode ON (if exist)

Announcements (forum) is created by default

For group specific/extra activities Teachers need to enable Activity Restriction (keep eye off)

2.5 Training

2.5.1 Procedures

Find them in the Procedures folder as diagrams and manuals (it also contains a word file describing them). User Manual: steame-manual.docx

2.5.2 How-to and Training Material

Training	Type
How to register	Text+Video+voice
How to Login	Text+Video+voice
Request a new class	Text+Video+voice
Request to enroll in the TtT class	Text+Video+voice
How to enroll Collaborative Teachers	Text+Video+voice
Access my class	Text+Video+voice
Enroll students in the class using class code	Text+Video+voice
Assign Collaborative Teachers to groups	Text+Video+voice
Assign students to groups	Text+Video+voice
Managing New Class Requests	Video
Accepting Training the Teachers course enrolments	Video

2.6 System wide documentation

2.6.1 TtT Enrolment and Class creation

2.6.1.1 Create Manage Training the Teachers enrolments role

Create a new role as **Manage TtT enrolments** in the Site Administration => Roles

Context types where this role may be assigned: **CLASS**

Disable all capabilities

Set capability **Manage apply enrolment**

Access the TtT course

Assign the role to all users that will manage the enrolments for the specific class.

Define who gets notified about new enrolment applications for this class

Class Enrollment instance options => Select users from Define who gets notified about new enrolment applications.

Note: The plugin works with participants in a course with the capability **Manage Apply Enrollment**.

Note: The plugin shows all people in role so that the admin can select also individual people to get notified

2.6.1.2 Create a STEAME Class Approval committee role

Create a new role as **STEAME Class Approval committee** in the Site Administration => Roles

Context types where this role may be assigned: **SYSTEM**

Disable all capabilities

Set capability **Approve course creation**

Access Site Administrator => Assign system roles

Select the STEAME class approval committee role and assign users in.

2.6.1.3 STEAME goes Hybrid class template

To make templates of classes to be used once a new class is created, we used the **Kickstart Course Format** Moodle plugin. This plugin uses templates to create classes.

2.6.1.3.1 How To create the template

Install kickstart plugin (https://moodle.org/plugins/format_kickstart)

Create a new course in any course format and customize it as needed.

For STEAME goes Hybrid Project purposes Topics course format is used

We used custom CSS (In Administration > Theme's CSS modifications)

We used Generico for any automated course add ons (explained later)

Backup the course and export it (.mbz).

Go to *Site Administration > Courses > Course Templates*

Create Template

Put a template name and a description

Upload the .mbz in the course backup file area.

2.6.1.3.2 How to configure it as Default

Add the default course format as **Kickstart** from *Administration > Courses > Course default settings*

Select Kickstart.

2.6.1.3.3 How to use

Any course that is now on created has the default course format in the course settings as **Kickstart**.

Once course settings are saved a new setting appears requesting for the template selection. If course main teacher or SIte Administrator miss to select the template, users can enter the course but a message that the course is not ready will be shown.

2.6.1.4 How to use Generico

Generico is a simple filter for creating templates of code snippets and text that can be inserted into Moodle text areas.

We used Generico in STEAME goes Hybrid to display the course enrollment code in course area for teachers. Teachers can disseminate it to students so that students will enroll themselves in the course.

2.6.1.4.1 Installations

Install Generico filter plugin (https://moodle.org/plugins/filter_generico)

Install Generico atto extension (https://moodle.org/plugins/atto_generico)

To be able to put any template created in Generico directly from ATTO editor.

Enable it from *Site Administration -> plugins -> filters -> manage filters*

2.6.1.4.2 How To Create Generico Templates

Create a new template in *Site Administration > Plugins > Filter > Generico*

Enter a key and a template name, version

HTML body to be added in **The body of the Template.** However, if there are any data added from DB then put them as **@@DATASET:nameofvaluetaken@@** where nameofvaluetaken is the name of the value given (or name of column) in the select query.

Dataset is used to write your SQL query (use SELECT only for security reasons)

Put any variables to be used during runtime in the **Dataset Variables** field as **@@GLOBAL:nameofvariable@@.**

Global variables are USER, COURSE etc. More detailed infortmation will be fould in the official Generico documentation.

2.6.1.4.2.1 STEAME scenarios

2.6.1.4.2.2 Course Enrollment code

The enrollment code should be shown automatically in a class page once class is created. We used a SELECT query to get the enrollment code from DB by using the Global variable COURSE:id and then added it in the Body of the Template.

2.6.1.4.2.3 Course Action Links to groups

An HTML code including a URL to Groups will be automatically created during the class initial setup. The code is included in the **The Body of template** using the @@COURSE:id@@ predefined Global variable.

2.6.1.4.2.4 Course Action Links Collaborative Teachers

An HTML code including a URL to Participants where Manual Enrollment is active will be automatically created during the class initial setup. The code is included in the **The Body of template** using the @@COURSE:id@@ predefined Global variable. This will be used from main teacher to enroll any collaborative teachers using manual enrollment.

3 STEAME HYBRID Training Programme overview

The STEAME GOES HYBRID Training Course was developed by the consortium in the first half of the year 2022. At the first stage there was a template for the Methodology and Structure of a Learning Plan for each module developed. These templates are available among the pdf materials for each Module in the Training Course.

Following the proposed Methodology and Structure the content of each Module was developed either by one of the Partners or in the cooperation between the Partners. The Training Course was piloted during a meeting in Athens in July 2022. The Training Course consists of nine modules:

MODULE 1: Blueprint Guidelines for Hybrid STEAME activities

MODULE 2: Introduction to STEAME Hybrid L&C Plans

MODULE 3: How teachers and students can work together in hybrid environment

MODULE 4: How teachers can work together/cooperation in hybrid environment

MODULE 5: Project Based Learning Methodology in hybrid environment

MODULE 6: How to support students in making oral presentations, communicate online and work in projects together

MODULE 7: The STEAME Hybrid Platform

MODULE 8: Experiences from using the 5 proposed L&C Plans with students, illustrating scenarios with pros and cons

MODULE 9: STEAME Hybrid Blueprint - Policy Recommendation discussion

We provide below outlines of each module which provide a glimpse of what can be expected. However, reading the main ideas cannot replace engaging in the course itself!

4 Modules outlines

4.1 MODULE 1: Blueprint Guidelines for Hybrid STEAME activities

The purpose of developing Blueprint Guidelines for Hybrid STEAME activities is to help teachers to carry out successful STEAME project-based activities in a blended-learning/hybrid manner. Blueprint Guidelines for Hybrid STEAME activities consist of:

- Hybrid STEAME Competence Framework
- Cloud tools and platforms for Hybrid STEAME activities
- Scenarios for hybrid learning
- Learning and Creativity Plan Template
- A set of Hybrid STEAME Learning and Creativity Plans

The Hybrid STEAME Competence Framework is a framework for developing skills in science, technology, engineering, arts, mathematics and entrepreneurship (STEAME) in a blended learning environment. The framework is designed to support the integration of online and offline learning experiences to help students develop a comprehensive understanding of STEAME concepts and apply them to real-world problems.

The framework includes four key components:

1. STEAME Content: This component focuses on the knowledge and skills students need to master in each of the STEAME disciplines.
2. Hybrid Teaching and Learning: This component focuses on the integration of online and offline learning experiences to support student engagement and collaboration.
3. Assessment and Feedback: This component focuses on the use of formative and summative assessments to evaluate student learning and provide meaningful feedback to support growth and development.
4. 21st-Century Skills: This component focuses on the development of critical thinking, problem-solving, communication, and collaboration skills that are essential for success in the 21st century.

The Hybrid STEAME Competence Framework provides a comprehensive and flexible approach to developing STEAME skills in a blended learning environment, and it can be adapted to meet the needs of different learning contexts and student populations. By integrating online and offline learning experiences and leveraging technology to support student engagement and collaboration, the framework can help students develop a deep and meaningful understanding of STEAME. concepts and apply them to real-world problems.

4.2 MODULE 2: Introduction to STEAME Hybrid L&C Plans

STEAME hybrid learning and creativity plans refer to educational programs that integrate online and offline learning experiences to support student engagement and creativity in STEAME subjects. The goal of these plans is to provide students with opportunities to explore, experiment, and apply STEAME concepts in engaging and meaningful ways, and to support the development of critical thinking, problem-solving, communication, and collaboration skills.

In a STEAME hybrid learning and creativity plan, students may participate in a combination of online and offline learning experiences, including:

1. Online Lessons and Instruction: Online lessons and instruction can be used to provide students with access to STEAME content and resources.
2. Virtual Labs and Simulations: Virtual labs and simulations can be used to provide students with hands-on, interactive learning experiences that allow them to explore and experiment with STEAME concepts.
3. Collaborative Projects and Challenges: Collaborative projects and challenges can be used to support student engagement and collaboration, and to provide opportunities for students to apply STEAME concepts to real-world problems.
4. Creative and Artistic Projects: Creative and artistic projects can be integrated into the STEAME curriculum to support the development of critical thinking and creativity.
5. In-Person Experiences: In-person experiences, such as field trips and hands-on workshops, can be used to provide students with opportunities to engage with STEAME concepts in real-world settings.

By combining online and offline learning experiences, STEAME hybrid learning and creativity plans provide students with opportunities to explore, experiment, and apply STEAME concepts in engaging and meaningful ways, and to support the development of critical thinking, problem-solving, communication, and collaboration skills.

4.3 MODULE 3: How teachers and students can work together in hybrid environment

In a hybrid learning environment, where both in-person and remote learning take place, teachers and students can work together in several ways to ensure a smooth and effective learning experience:

1. Regular Communication: Teachers should communicate regularly with students, whether through email, video conferencing, or other platforms, to ensure everyone is on the same page.
2. Collaborative Tools: Teachers can use online tools such as Google Classroom, Microsoft Teams, or other collaborative platforms to facilitate teamwork and keep students engaged in learning.

3. Flexible Scheduling: Teachers and students can work together to find a flexible schedule that works for everyone, allowing for in-person and remote learning to be balanced effectively.
4. Personalized Instruction: Teachers can tailor their instruction to meet the needs of individual students, whether they are in-person or remote, by using technology and other resources.
5. Student Feedback: Teachers can solicit regular feedback from students to gauge their understanding and progress, and adjust their teaching methods as needed.
6. Clear Expectations: Teachers should establish clear expectations for both in-person and remote students, including guidelines for participation, submission of work, and attendance.

Overall, working together in a hybrid learning environment requires teachers and students to be flexible, communicative, and proactive in their approach to learning.

4.4 MODULE 4: How teachers can work together/cooperation in hybrid environment

In a hybrid learning environment, where students receive both online and in-person instruction, teachers must work together to provide a seamless and consistent educational experience for students. Here are some ways teachers can collaborate effectively in a hybrid environment:

1. Communication: Regular and open communication between teachers is essential to ensure that students receive consistent and coherent instruction across both online and in-person settings. Teachers can use tools like email, instant messaging, and video conferencing to stay in touch and coordinate their efforts.
2. Planning and Coordination: Teachers must work together to plan and coordinate lessons, assessments, and other educational activities. This may involve sharing resources, creating common assessments, and aligning instruction to ensure that students receive a consistent educational experience regardless of whether they are in-person or online.
3. Professional Development: Teachers must continuously develop their skills and knowledge to effectively teach in a hybrid environment. This may involve participating in professional development opportunities and sharing best practices and resources with each other.
4. Student Support: Teachers must work together to provide students with the support they need to succeed in a hybrid learning environment. This may involve coordinating online and in-person tutoring sessions, providing individualized support and feedback, and working together to ensure that students have access to the resources they need.
5. Collaborative Classroom Management: Teachers must work together to establish and maintain effective classroom management practices in both online and in-

person settings. This may involve developing and enforcing common rules and expectations, and working together to address behavior issues and support student engagement.

By working together, teachers can provide students with a seamless and consistent educational experience in a hybrid learning environment, and support student learning and success.

4.5 MODULE 5: Project Based Learning Methodology in hybrid environment

Project-based learning (PBL) is a teaching method that involves students working on real-world projects to develop their knowledge and skills in a particular subject area. In a hybrid learning environment, PBL can be a powerful tool to engage students, foster critical thinking and problem-solving skills, and support student learning and success.

Here are some key components of PBL in a hybrid learning environment:

1. Real-World Problems: Students work on projects that are tied to real-world problems, challenges, or issues, providing a context for learning and helping to make the learning experience more meaningful and relevant.
2. Collaboration and Communication: PBL often involves students working in teams, allowing them to develop collaboration and communication skills as they work together to complete their projects.
3. Technology Integration: Technology can be used to support PBL in a hybrid environment, providing students with access to online resources and tools, and allowing for online collaboration and communication.
4. Flexibility and Adaptability: PBL in a hybrid environment must be flexible and adaptable to accommodate the needs of both in-person and online students, and to support student learning and engagement regardless of the setting.
5. Assessment and Feedback: PBL projects often involve a combination of formative and summative assessments, providing students with regular feedback on their progress and allowing them to reflect on their learning and make improvements as they work on their projects.

By integrating PBL into a hybrid learning environment, teachers can provide students with opportunities to explore real-world problems, develop critical thinking and problem-solving skills, and support student learning and success.

4.6 MODULE 6: How to support students in making oral presentations, communicate online and work in projects together

Supporting students in making oral presentations, communicating online, and working on projects together can be challenging in a hybrid learning environment. However, there are several strategies teachers can use to support student success in these areas:

1. Provide clear expectations: Clearly communicate the goals, expectations, and criteria for oral presentations, online communication, and project work. This can

help to ensure that students understand what is expected of them and how their work will be evaluated.

2. Use technology effectively: Utilize technology, such as video conferencing, online collaboration tools, and presentation software, to support oral presentations, online communication, and project work. This can help students to stay engaged and connected, even when they are learning online.
3. Foster online communication skills: Provide students with opportunities to practice online communication skills, such as active listening, clear and effective writing, and respectful discourse. This can help to ensure that students are able to communicate effectively in both online and in-person settings.
4. Encourage collaboration: Foster a collaborative learning environment by encouraging students to work together, share ideas, and provide feedback to one another. This can help to build teamwork skills and promote student engagement and success.
5. Provide support and feedback: Regularly check in with students, provide feedback on their work, and offer support as needed. This can help to ensure that students are able to make progress, stay on track, and succeed in their presentations, online communication, and project work.

By implementing these strategies, teachers can support students in making oral presentations, communicating online, and working on projects together, and help to ensure student success in a hybrid learning environment.

4.7 MODULE 7: The STEAME Hybrid Platform

STEAME Hybrid Platform is a European education platform that focuses on the integration of Science, Technology, Engineering, Arts, Mathematics, and Entrepreneurship (STEAME) in education. The platform provides teachers and educators with resources, tools, and support to help them integrate STEAME education into their curricula, and to foster creativity, innovation, and entrepreneurship skills in students. The STEAME Hybrid Platform is a resource for educators looking to integrate STEAME education into their teaching practice.

4.8 MODULE 8: Experiences from using the 5 proposed L&C Plans with students, illustrating scenarios with pros and cons

The STEAME goes HYBRID project is aimed at developing policy recommendations for hybrid education in the EU. It is a training program for teachers and others interested in the implementation of STEAME hybrid learning and curriculum plans. The objective of the policy recommendations is to provide a basis for strategic policy development and better understanding of challenges and needs in the digital transition of education, contribute to the definition of new learning spaces, and increase awareness on digital readiness. The policy recommendations will have an impact on the school education authorities and teachers, increasing their readiness and capability to implement hybrid learning processes. The training program will include presentations on EU priorities in digital education and the policy recommendations of the STEAME project, followed by group discussions and collection of

participant inputs. The training will be conducted in a classroom setting with the trainees playing the role of the audience.

4.9 MODULE 9: STEAME Hybrid Blueprint - Policy Recommendation discussion

Policy Recommendations for STEAME Hybrid Education revolve around the following pillars:

1. Adequate funding and support: Adequate funding and support should be provided for STEAME hybrid education programs to ensure that teachers and students have access to the technology, resources, and support they need to succeed.
2. Professional development opportunities: Professional development opportunities should be made available for teachers to help them integrate STEAME education into their teaching practice and to ensure that they are equipped with the skills and knowledge they need to succeed in a hybrid learning environment.
3. Technology infrastructure: Adequate technology infrastructure should be put in place to support STEAME hybrid education, including high-speed internet, video conferencing tools, and online collaboration platforms.
4. Student engagement and support: Programs and initiatives should be put in place to support student engagement and success in STEAME hybrid education, including tutoring and mentorship programs, peer-to-peer support networks, and opportunities for hands-on learning and project-based experiences.
5. Collaboration and partnerships: Collaboration and partnerships should be encouraged between schools, universities, businesses, and community organizations to help support STEAME hybrid education and provide students with opportunities to apply their learning in real-world settings.
6. Evaluation and assessment: Evaluation and assessment strategies should be developed to assess student learning and progress in STEAME hybrid education and to ensure that students are provided with the support and feedback they need to succeed.

By implementing these policy recommendations, policymakers can help to support the successful implementation of STEAME hybrid education programs, and ensure that students have access to high-quality STEAME education that prepares them for success in a rapidly changing world.

5 Module syllabus template

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

STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Template (*for the Methodology and Structure of a Learning Plan for Presenting a Module for the STEAME GOES HYBRID course programme, module of 3 days duration).*

Module Number and Area/ Topic:

Introduction and Broad Description of the Context and Goal of the area/ topic addressed: …….

Learning Outcomes: With the completion of this module the trainees will be able to ……
1….
2…
3….

Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration): ……

Methodology and approaches for the module training presentation: ……
Instruments/ Tools/ Supporting Material/ Resources to be used: ……
(list of files, web links, videos, PPT…. use file names inserting the Module number)

Pedagogical/Learning Sequencing and Activities Plan:
Introductory activities (creation of interest, reference to real value issues, relation to background experiences etc)

Activity Number and broad Description:	
Development	
Materials	
Resources	
Estimated Time	
Environment/Room Setting	
Trainees' role	

1. Development activities

Activity Number and broad Description:	
Development	
Materials	
Resources	
Estimated Time	
Environment/Room Setting	
Trainees' role	

(add more Activity sections as needed)

2. Practicing Activities (hands-on activity)

Activity Number and broad Description:	
Development	
Materials	
Resources	
Estimated Time	
Environment/Room Setting	
Trainees' role	

3. Evaluation of Learning Outcomes

Activity Number and broad Description:	
Development	
Materials	
Resources	
Estimate Time	
Environment/Room Setting	
Trainees' role	

4. Reflection and Closure activity:

6 A set of syllabuses for Modules

6.1 Module 1: Blueprint Guidelines for Hybrid STEAME activities

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

STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Template (for the Methodology and Structure of a Learning Plan for Presenting a Module for the STEAME GOES HYBRID course programme, module of 3 days duration).

Module Number and Area/ Topic: *Module 1. Blueprint Guidelines for Hybrid STEAME activities*

5. **Introduction and Broad Description of the Context and Goal of the area/ topic addressed:**

The Covid-19 pandemic showed the need for fast and rapid transition to digital learning. Moreover, it revealed the lack we had in modernization and digitalization of our education. Related to this, it was stated on numerous occasions that, in order to implement a STEAME approach in a hybrid way, it is necessary to create materials that help teachers make their work easier and guide them in their work. *The Blueprint Guidelines for Hybrid STEAME activities* target STEAME teachers and represent a useful resource, that was developed based on the findings, results and professional feedback from the Output 1 activities (A1, A2, A3) of this project (STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations) and will help teachers to carry out successful STEAME project-based activities in a blended-learning/hybrid manner. The goal of this module is to present, analyse and evaluate the structure and contents of this resource.

6. Module 1

Learning Outcomes: With the completion of this module the trainees will be able to:

- Acknowledge and use the Hybrid STEAME Competence Framework
- Analyze and select cloud tools and platforms for Hybrid STEAME activities
- Assume a reflective attitude in developing and evaluating Learning and Creativity Plans
- Manifest willingness to collaborate within the school and project teams

7. Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):

The European Commission organized consultations (February till September, 2020) with stakeholders and one of the needs that has been underlined was the need for practical guidelines on how to implement effective and inclusive distance, online and blended learning. This module presents the structure and the contents of the *Blueprint Guidelines for Hybrid STEAME Activities*. The trainees will complete their knowledge on the following topics:

- Hybrid STEAME Competence Framework
- Cloud tools and platforms for Hybrid STEAME activities
- Scenarios for hybrid learning.

The trainees will analyze the set of competencies recommended for the STEAME teachers, will explore the benefits of various cloud tools and platforms for Hybrid STEAME activities, and will get familiar with the structure of the Learning and Creativity Plan Template, in order to better understand how to use various resources for effective teaching in a hybrid environment.

An important aspect is that the trainees will learn about Bloom's Digital Taxonomy that will enable them to provide children with learning experiences tailored to their needs and adapted to the world we live in.

8. Methodology and approaches for the module training presentation:

- Introduction to the subject – Outlining the context in which the resource in question was created.

- Presentation and analysis of the structure and the contents of the *Blueprint Guidelines for Hybrid STEAME Activities*.

- Evaluation of the learning outcomes.

- Closure discussion.

9. Instruments/ Tools/ Supporting Material/ Resources to be used:

- Blueprint Guidelines for Hybrid STEAME activities
- PowerPoint Presentation – Module 1
- FINAL steamed-cover IO1- option1 (steame-hybrid.eu)
- What is Bloom's Digital Taxonomy? - YouTube
- Political-guidelines-next-commission_en_0.pdf (europa.eu)
- Digital Education Action Plan (2021-2027) | European Education Area (europa.eu)

10. Pedagogical/Learning Sequencing and Activities Plan:

Introductory activities (creation of interest, reference to real value issues, relation to background experiences etc.)

Activity Number and broad Description:	
Development	Introduction to the subject - Outlining the context in which the resource in question was created.
Materials	PowerPoint Presentation
Resources	Computer, projector, internet connection
Estimated Time	10 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Passive + active (combined)

11. Development activities + Practising Activities (hands-on activity)

Activity Number and broad Description:	
Development	The activity will include the main presentation of the module with various exercises for trainees
Materials	PowerPoint Presentation, ***Blueprint Guidelines for Hybrid STEAME activities,*** the video – The Bloom's Digital Taxonomy
Resources	Computer, projector, internet connection
Estimated Time	60 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Passive + active (combined)

12. Reflection and Evaluation of the Learning Outcomes:

Activity Number and broad Description:	
Development	To reflect on the module's key point
Materials	Discussion
Resources	Computer, projector, internet connection
Estimate Time	10 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Active. To participate and share his/her ideas on the discussed topic.

6.2 Module 2: Introduction to STEAME Hybrid L&C plans

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of the European Union

STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Module Number and Area/ Topic: *Module 2. Introduction to STEAME Hybrid L&C plans*

13. Introduction and Broad Description of the Context and Goal of the area/ topic addressed:

The STEAME activities are designed to be able to be implemented in a hybrid learning environment, in at least one of the forms that a hybrid learning environment has been described by the STEAME GOES HYBRID project.

To enable teachers to record their learning and creativity plan ideas in a way that will allow them to exchange ideas and practices, the project suggests the use of a Learning and Creativity (L&C) plan template.

This module aims to train teachers in the use of the L&C plans both in recording their ideas and being able to comprehend and implement a L&C plan designed by one or more of their peers.

14. Module 2

Learning Outcomes: With the completion of this module the trainees will be able to:

- Comprehend and use the Hybrid L&C Plans
- Analyse and select the appropriate L&C Plans that align with the learning objectives they have set for their students
- Develop a STEAME L&C plan that may be implemented in a hybrid learning environment

15. Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):

The main resources used to develop and design this modules are the following:

- Blueprint Guidelines for Hybrid STEAME Activities, and
- STEAME GOES HYBRID Learning & Creativity plan template

The Blueprint Guidelines describe the forms of hybrid learning by recording the different most common and possible hybrid scenarios. Furthermore, the guidelines describe the way to approach the development and design of a learning and creativity plan that will describe a set of STEAME learning activities in parallel adapting a Project Based Learning (PBL) approach.

The Learning & Creativity plan template, also part of the Blueprint Guidelines, describes and provides a template for effectively recording the L&C plan. The template aims to assist teachers in recording their ideas while at the same time ensuring a uniformity between the L&C plans, thus enabling teachers to share them and successfully exchange ideas.

16. **Methodology and approaches for the module training presentation:**

The module has two different approaches in its delivery. A part of it will be delivered in the form of a presentation and explanation of the resources and the way of working to develop a STEAME GOES HYBRID L&C Plan and another part of the module will be delivered through the participation of the trainees in team activities.

The module has the following topics:

- Introduction to the module and its aims
- Presentation of the Blueprint Guidelines that refer to the development of the L&C Creativity Plans
- Presentation of the L&C Plan template
- Brief presentation of a STEAME GOES HYBRID L&C plan
- Team Activity 1.1: Hybrid Scenarios and appropriate types of activities
- Team Activity 1.2: Design of a STEAME HYBRID L&C Plan

17. **Instruments/ Tools/ Supporting Material/ Resources to be used:**

- Blueprint Guidelines for Hybrid STEAME activities
- STEAME GOES HYBRID L&C Plan
- PowerPoint Presentation – Module 2
- STEAME GOES HYBRID Customised e-shop L&C Plan
- Module 2 activity sheet (on-line L&C plan template for each team to complete)

18. Pedagogical/Learning Sequencing and Activities Plan:

Introductory activities (creation of interest, reference to real value issues, relation to background experiences etc.)

Activity Number and broad Description: Introduction to the module and its aims	
Development	Introduction to the subject of the module and presentation of the training objectives
Materials	Power Point Presentation
Resources	Computer, projector, internet connection
Estimated Time	10 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Passive + active (combined)

Activity Number and broad Description: Presentation of the Blueprint Guidelines that refer to the development of the L&C Creativity Plans	
Development	Presentation of the Blueprint Guidelines that refer to the development of the learning and creativity plans (hybrid scenario, development of the L&C Plan, etc.)
Materials	Power Point Presentation
Resources	Computer, projector, internet connection
Estimated Time	15 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Passive + active (combined)

Activity Number and broad Description: Brief presentation of a STEAME GOES HYBRID L&C plan	
Development	Presentation of the template used to record a learning and creativity plan
Materials	PowerPoint Presentation
Resources	Computer, projector, internet connection
Estimated Time	10 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Passive + active (combined)

Activity Number and broad Description: Design of a STEAME HYBRID L&C Plan	
Development	Presentation of a learning and creativity plan (customised e-shop) that was developed by the project partners
Materials	PowerPoint Presentation
Resources	Computer, projector, internet connection
Estimated Time	10 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Passive + active (combined)

19. Development activities + Practicing Activities (hands-on activity)

Activity Number and broad Description: Hybrid Scenarios and appropriate types of activities	
Development	Participants work in teams and two hybrid scenarios are assigned to each team to suggest an appropriate structure of a learning activity that would be suitable for that scenario.
Materials	Powerpoint and paper and markers
Resources	Computer, projector, internet connection
Estimated Time	15 minutes
Environment/Room Setting	Classroom environment
Trainees' role	active

Activity Number and broad Description: Hybrid Scenarios and appropriate types of activities	
Development	Participants work in teams to develop and design a STEAME GOES HYBRID learning and creativity plan.
Materials	Powerpoint and Module 2 Activity Sheet
Resources	Computer, projector, internet connection
Estimated Time	20 minutes
Environment/Room Setting	Classroom environment
Trainees' role	active

20. Reflection and Evaluation of the Learning Outcomes:

Activity Number and broad Description:	
Development	To reflect on the module's key points
Materials	Discussion
Resources	Computer, projector, internet connection
Estimate Time	10 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Active.

6.3 Module 3: How teachers and students can work together in hybrid environment

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STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Module Number and Area/ Topic: *Module 3: How teachers and students can work together in hybrid environment*

21. Introduction and Broad Description of the Context and Goal of the area/ topic addressed:

During lockdown the teachers found themselves managing a Hybrid learning environment. Such situations can recur for various reasons.

Teaching in a hybrid environment is a new way of teaching and for many teachers and students it can seem overwhelming. As in all new environments, to move effectively, it is necessary to know spaces, possibilities, resources, risks.

Teachers should keep students' attention and participation alive in a blended learning environment that moves between online and classroom learning. They must also redesign the educational relationship. But when teachers struggle to work in this new school environment, we must also try to avoid burnout.

Teachers therefore need support when managing a hybrid learning environment, not only technical but also pedagogical support.

To avoid constant stress it is necessary to provide them with the necessary communication tools to navigate hybrid learning environments.

A great help comes from project-based learning (PBL) and problem solving, recognized as a learning system that can combine the acquisition of standard content material with significant tasks and activities for the direct involvement of students.

The PBL methodology implies a well planned and well organized process to guide the teachers in the different phases of the planning and it adapts to the Hybrid mode. This way teachers have an outlined work plan that somehow avoids guiding them throughout the process.

The importance of this methodology is the ability to promote motivation, enhance critical thinking and push students to use the skills of everyday life. Problem solving is the process of analyzing a specific problem situation and finding a solution.

22. **Learning Outcomes:** With the completion of this module the trainees will be able to

    1. Improve their and students' digital skills
    2. 2. Use new digital tools in hybrid environments
    3. 3. Use new and different strategies to suit different learning modes
    4. 4. Use Project Based Learning in remote learning

23. **Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):**

The attempt to help teachers, students and parents to work in a hybrid environment goes through several steps. First of all, communication channels must be made agile. Promote an authentic connection that facilitates the relationship between people. Teamwork must be encouraged, making a resource bank truly usable and ensuring that everyone has access to the hybrid environment.

Another fundamental aspect is to support parents by providing them with easily usable resources.

Also not to be overlooked is the need to provide teachers with the tools to navigate even in stressful situations.

an example could be the development of PBL that provides teacher a powerful tool

Climate Change is considered by many researchers the most important challenges of our times.

This project is aiming at increasing the awareness of the student about environmental sustainability, getting to know the fundamentals, the regulatory framework, the science behind and the possible approach to solve it.

Knowing the problem is surely the first step but with this project we aim at creating

a Podcast to share the knowledge that has been developed and increase the awareness around the topic.

The publishing of the podcast is not merely an opportunity to reach a broader audience, it is also a way to boost the student's engagement. Since they are the ones that have to explain the topics, they are pushed to become active promoters.

The final outcome is a Environmental Sustainability Podcast in 4 episodes:

1. Introduction to Climate Change
2. The Paris Agreement
3. Carbon Footprint
4. Carbon Neutrality

24. **Methodology and approaches for the module training presentation:**

1. PBL and problem solving.
2. Preparation of the space and setting by providing the two possibilities at the same time: Physical Presence or On-line/ at distance.
3. According to activities students will work individually, in groups or in plenary sessions through collaboration and communication cloud platforms (GSuite tools)

1. Hybrid learning scenarios

- using a camera to show the presentation
- using the sharing screen to show a slideshow
- onsite students sit in front of their screen and adapt to online students
- using 2 cameras: one showing what the students are doing and reacting and one showing the teacher

2. Make resources, tools, materials, attachments and equipment available

3. Using cloud tools / platforms to implement the L&C plan

4. It involves the primary interest of the learners and includes:

- investigation: to find out about the world
- communication: to enter into social relationships
- construction: to create things and change the world
- reflection: to extract meaning from experience
- What is Environmental Sustainability, and why is it impacting all of us?

25. **Instruments/ Tools/ Supporting Material/ Resources to be used:** (list of files, web links, videos, PPT…. use file names inserting the Module number)

- Tablet, laptops , digital cameras or cell phones will be necessary for students working from home or at a distance , in order to research the topics
- video-conferencing equipment
- Support material
- Instructional videos and lesson plans for various situations

- Cards for activities and evaluation
- Gsuite for education and Miro: apps and collaboration tools
- Video conferencing platforms: Meet, Zoom, Teams
- https://resilienteducator.com/classroom-resources/steam-inquiry-based-learning/#:~:text=When%20a%20topic%20triggers%20curiosity,every%20step%20of%20the%20way
- https://everfi.com/blog/k-12/stem-education-and-entrepreneurship-5-big-skills-that-overlap/
- How to structure an Inquiry Based Lesson – YouTube
- https://www.youtube.com/watch?v=IOWn6DZrQ40
- Observatory Outputs – STEAME
- https://www.pblworks.org/what-is-pbl
- https://www.edutopia.org/blog/pbl-and-steam-natural-fit-andrew-miller
- https://www.schooloutfitters.com/article/entrepreneurship-in-project-based-learning
- https://education.microsoft.com/en-us/learningPath/e9a3beec
- https://books.google.gr/books/about/Learning_Through_Real_World_Problem_Solv.html?id=HlOdAAAAMAAJ&redir_esc=y
- https://books.google.gr/books/about/Learning_Through_Real_World_Problem_Solv.html?id=HlOdAAAAMAAJ&redir_esc=y

26. Pedagogical/Learning Sequencing and Activities Plan:

Introductory activities (creation of interest, reference to real value issues, relation to background experiences etc)

Activity Number and broad Description:	
Development	The first step of the Project is dedicated to introducing the content, the methodology, the targets and to deep dive into the problem.
Materials	PowerPoint Presentation
Resources	Computer, projector, internet connection
Estimated Time	45 min.
Environment/Room Setting	Classroom
Trainees' role	Discussion. Group work.

27. Development activities

Activity Number and broad Description:	
Development	This activity is related to the familiarization with Miro, an online tool useful in group activities. Trainees are invited to watch a short video on using Miro. They are then invited by email to enter the platform and try to familiarize themselves with the tools.
Materials	Cell phones, laptops, computers
Resources	MIRO, Gsuite,Google, https://www.youtube.com/watch?v=7L1-0DOGHDY
Estimated Time	15 minutes
Environment/Room Setting	online
Trainees' role	Watching the video and trying the platform

28. Development activities + Practicing Activities (hands-on activity)

Activity Number and broad Description:	
Development	The aim of this task is simply to familiarize with the tool through some ice-breaking questions through the Miro platform. In this activity the Trainees will start entering into the active phase of the activities, focusing on the Step 3 of the project, which is deep dive into Carbon Neutrality. Why is the climate challenge so important? ● What are the most important effects that end their impact on the economy, health and society? ● Explanation of the working method that will be used across the all steps
Materials	Cell phones, laptops, computers
Resources	MIRO, Gsuite,
Estimated Time	10 minutes.
Environment/Room Setting	Classroom, online
Trainees' role	Discussion.

29. Development activities + Practicing Activities (hands-on activity)

Activity Number and broad Description:	
Development	In this activity Trainees will be divided into 4 groups throughout the platform. They will watch some videos about the LCA (Life Cycle Assessment) and they will answer some questions related to the video. The link to the video is on top of your group box on the right.
Materials	Cell phones, laptops, computers
Resources	MIRO, Gsuite,
Estimated Time	10 minutes
Environment/Room Setting	Classroom/online
Trainees' role	Discussion. Group work. Draft content of the podcast.

30. Development activities + Practicing Activities (hands-on activity)

Activity Number and broad Description:	
Development	It is dedicated to a deep dive into the quantitative measurement of the carbon footprint. The Trainees have to check your Household consumption, fill the carbon calculator (https://www.carbonfootprint.com/calculator.aspx) In the last section the calculator will give them the total CO2 that they generate. They have to report on the spreadsheet (in MIRO) on the right l for each dimension.
Materials	Cell phones, laptops, computers
Resources	MIRO, Gsuite,
Estimated Time	15 minutes
Environment/Room Setting	online
Trainees' role	Discussion. Group work. Draft content of the podcast.

31. Development activities + Practicing Activities (hands-on activity)

Activity Number and broad Description:	
Development	The final task will be Podcast creation. This is the Episode 3. This task is finalized by creating a draft content of the episode using the info they have saved during the activity.
Materials	Cell phones, laptops, computers
Resources	MIRO, Gsuite,
Estimated Time	10 minutes
Environment/Room Setting	online
Trainees' role	Discussion. Group work. Draft content of the podcast.

32. Reflection and Evaluation of Learning Outcomes

Activity Number and broad Description:	
Development	To reflect on the tools and the module
Materials	Discussion
Resources	Computer, projector, internet connection
Estimate Time	10 minutes
Environment/Room Setting	Classroom environment
Trainees' role	Active. To participate and share ideas.

6.4 Module 4: How teachers can work together in a STEAME hybrid environment

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STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Module Number and Area/ Topic*: Module 4 How teachers can work together in a STEAME hybrid environment by* Andreas Skotinos, Cyprus Mathematical Society

33. Introduction and Broad Description of the Context and Goal of the area/ topic addressed:

By definition STEAME education concerns a learning approach involving a variety of realms of meaning i.e. Science, Technology, Engineering, Arts, Mathematics and Entrepreneurship. The whole approach stems from the need to connect education with the real world and not consider it as an isolated luxury that has been devised just to be an added burden to human beings.

This need, that is to interconnect a broad variety of realms of meaning and action, demands that a broad range of human capital should be involved. This idea is in the spirit of the contemporary practice that construction and creation demand a broad range of contributors with diverse cognitive background and competencies.

In the context of traditional education, we had teachers that were experts in a field of study and one of their major roles was to elaborate and provide activities for developing skills and competencies in that particular field. But now, with the immense amount of knowledge and the multidimensional requirements of competencies for the complex world we live, the situation is different. Thus, an answer to respond to this challenge, is to develop teams of collaborating teachers representing or equipped with a variety of backgrounds and competencies.

Furthermore recent developments pressed in the direction of adopting approaches of teaching and learning in a hybrid environment, that is in an environment that has to take into consideration learning in a physical contact (face to face) of the partners in the learning

process as well as an online contact, taking into consideration the digital means and the advantages that the Internet can offer.

The present module aims exactly at identifying methods, culture and disposition for such collaboration. Furthermore, the module aims at identifying the pros and cons of such approaches of collaboration of the facilitators of learning and developing competencies for improving the positive aspects and remedying or even nullifying the negative or risky aspects.

34. **Learning Outcomes:** With the completion of this module the trainees will:

1. Be able to identify the major facilitators that have to be taken into consideration in determining and designing STEAME activities for students at secondary school level. In this quest they should consider approaches that the activities can take place in a face-to-face context or in an online environment, aiming at optimum results, through the consideration of the pros cons and the availability of means.
2. Be able to specify their (the major facilitators) role and responsibilities.
3. Be able to concentrate on the role and responsibilities of the sub-team of teachers that will be involved in the process of designing and implementing the STEAME activities in a hybrid environment
4. Be able to refer, to illustrate and to apply in class or online competencies for collaboration in order to promote actions and arrangements for preparing, formulating and implementing action plans for learning.
5. Such competencies include:
    - Contact, cooperation and reflection with the workers shaping the real world.
    - Provision of incentive and motivation to the learners.
    - Determining and formulating, in cooperation with other facilitators, problems of interest to the real world
    - Support and guide, in cooperation with other facilitators, the students for gathering information
    - Support and guide, in cooperation with other facilitators, the students for handling a problem or project
    - Support and guide, in cooperation with other facilitators, the students for using a variety of topics (in the context of STEAME) in developing and representing models for the promotion of solutions and results to the issues under consideration
    - Support and guide, in cooperation with other facilitators, the students in developing creative and innovative approaches or models for the promotion of solutions and results to the issues under consideration.

6. Be able to discuss and exchange ideas with other learning facilitators on:
    - Constructing learning plans with mutual content, complementing the aspects, concepts and processes that have common interest or value
    - Assessing the various activities so that they have mutual value and
    - Exploiting audiovisual and digital aids
    - Developing and comparing face to face versus online approaches for the learning of various topics

35. **Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):**

The STEAME Hybrid Project: https://steame-hybrid.eu

In particular **O1. Blueprint Guidelines for Hybrid STEAME activities** (online and distance blended project-based learning)

The STEAME Project: https://steame.eu

In Particular its Outputs

O1. Guidelines for dynamic and adaptive STEAME curricula

O2. Guidelines for STEAME Activities in Schools for two age groups

O3. Guidelines for STEAME School Organizational Structure

The STEAME Observatory: https://steame.eu/steame-observatory/

Learn STEM: http://www.learn-STEM.org

Integrated STEM teaching State of Play: (http://steamit.eun.org).

Why Team Collaboration Is Important in Hybrid Work Environments - zipBoard

OECD Teacher collaboration in challenging learning environments Teacher collaboration in challenging learning environments - OECD Education and Skills Today (oecdedutoday.com)

The Golden Ratio/ Section and its Relation to Human Activities

36. **Methodology and approaches for the module training presentation:**

- Collaborative learning: brainstorming, debates, co-design and planning
- Constructionism: inquiry based and project-based learning
- Developing case studies and worksheets
- Investigating-researching using the web
- Maieutic: Socratic method of questioning

37. **Instruments/ Tools/ Supporting Material/ Resources to be used**:(list of files, web links, videos, PPT…. use file names inserting the Module number)

- The STEAME goes Hybrid project open access environment.
- Posters, videos, photos, ppt presentations

38. **Pedagogical/Learning Sequencing and Activities Plan:**

39. **Introductory activities** (creation of interest, reference to real value issues, relation to background experiences, etc.)

Activity 1: Brainstorming on the consideration of the issue of "How teachers can work together" in the context of promoting and implementing STEAME hybrid schools organizational structure	
Development	Brainstorming by considering the need of more than one person in order to achieve better outcomes. Reference to the consideration of the following basic terms: **STEAME environment** **Hybrid environment** **Teachers facilitating learning** Reference to Aristotle: 'the whole is greater than the sum of its parts'. A discussion is enacted of what can be achieved by considering two or more situations or personalities or other concepts that can produce/ create another entity with a number of added value properties Discuss possible combinations of teachers and others that are involved in the development of an appropriate STEAME activity, as well as the roles and responsibilities of each of them, working in a traditional or a digital context.
Materials	The poster on the chaos theory from the STEAME observatory https://steame.eu/wp-content/uploads/2020/12/Have-you-heard-about-CHAOS-Theory-infographic-poster.pdf
Resources	On the web descriptors: donkey, Horse, mule e.g. https://www.luckythreeranch.com/lucky-three-ranch-training/mule-facts/
Estimated Time	15 min
Environment/Room Setting	In the case of a class: Circular arrangement in order to facilitate discussion In the case of online or digital presentation: Provisions for chatting
Trainees' role	Participation in the discussions.

40. **Development activities**

Activity2: Discussion of various combinations of teams working together, taking into consideration the needs that give rise to the STEAME approach. In this context refer to teams that have to work for problem solving project work, construction activity, Game Activity, Cultural activity and so on	
Development	Consideration of the traditional approaches for co-teaching. Refer to what happens in traditional teaching and particularly in Schools of Students with Special needs: Reflection on the extent of the restrictive model arising from these in the context of STEAME. Reflection-Discussion on the following issues **How teachers can work together?**

	What is the range of this question? ● Teachers working with other teachers? ● Teachers working with other entities in the context of the school?(students, heads, parents…) ● Teachers working with experts in various fields? (Universities, Industry, NGOs, ….) ● Teachers working with organisations that are promoting/ introducing to the world of life and work? (Galleries, Museums …) What skills/ competencies do we expect from teachers in order to promote the idea of "working together in a hybrid environment"? How do we develop/ encourage/ cultivate such skills/ competencies? PROVIDE A quiz for the participants Examples: Discussions on some ideas of collaborating teams in developing approaches for STEAME. Such teams can be supported by persons/ experts that are not necessarily teachers. Consideration of examples MATHeatre, MATHFactor The Monopoly game Tunnel of Eupalinos. The Ancient Samos and its water supply https://youtu.be/AJTwxCaOODM Refer to the Monopoly connecting Industry, mathematics and Business Refer to various kinds of STEAME activities. Extent the game to cover other issues as well, for example environmental issues and the need to introduce other dimensions in the game. This discussion supports the need to promote the following activities that are providing material for the achievement of the objectives of this module
Materials	QUIZ 1 in Appendix 1
Resources	MATHeatre, MATHFactor see the webpage of EUROMATH EUROSCIENCE to find a number of examples https://www.youtube.com/watch?v=0BtpDpa55u4&list=PLpPvt2LgHCYfTulPlQkch1y7VW0I4ncje&index=8&t=301s The MATH – GAMES webpage:
Estimated Time	25 min
Environment/Room Setting	In the case of a class: Circular arrangement in order to facilitate discussion In the case of online presentation: Provisions for chatting
Trainees' role	Discussion Answering the Quiz 1 in Appendix 1

Activity3: Concentrating on the cases of collaboration between teachers, identify and refer to the objectives and steps involved for actions of having them working together.	
Development	From the previous discussions it becomes clear that collaboration between teachers is quite a necessity, particularly in the case of STEAME. So the question: How do teachers can work together? LIST 1 What skills and competencies should be developed in promoting this idea? LIST 2

	What are the practical aspects that they should observe in order to achieve this goal? Discussion and suggestion of a series of actions that are helpful in moving in the direction of collaboration in the context of STEAME
Materials	LIST 1 and LIST 2 in APPENDIX 2
Resources	
Estimated Time	30 min
Environment/Room Setting	In the case of a class: Circular arrangement in order to facilitate discussion In the case of online presentation: Provisions for chatting
Trainees' role	Participation in the discussion Study LIST 1 and LIST 2

Activity 4: Discussion of examples using the L&C Plans in the web page of the project	
Development	What are the constituents/ structure of a Learning and Creativity Plan as it is presented in the webpage of the project? Consider the topic "The Golden Ratio and its role in Human Activities", or any other example, and identify, study, discuss and reflect on this, taking into consideration the points presented in the previous parts of this presentation i.e the elements of Stage I and Stage II. Furthermore reflect on the extent/ degree that each trainee feels that he/ she is in a position to develop their own Learning and Creativity Plans
Materials	
Resources	The STEAME goes hybrid webpage
Estimated Time	30 min
Environment/Room Setting	In the case of a class: Circular arrangement in order to facilitate discussion In the case of online presentation: Provisions for chatting
Trainees' role	Study of a case of an L&C plan Participation in the discussion

Activity 5 Identify some tips that have to be taken into consideration or are helpful for effective and fruitful collaboration of teachers	
Development	**Quiz** Write on a piece of papers your suggestions for Tips for supporting/ facilitating/ enabling the collaboration/ working together of teachers in the context of STEAME. Provide a list of such tips and discuss/ exchange of ideas on them. **Worksheet 1** Identify elements that facilitate collaboration in the development of the L&C Plan for the topic "The Golden Ratio and its role in Human Activities" Presentations - Discussion
Materials	Quiz 2 and Worksheet 1 in APPENDIX 3
Resources	The STEAME goes hybrid webpage Consider the examples of L&C Plans in Output 1
Estimated Time	25 min
Environment/Room Setting	

Trainees' role	Answering quiz 2 Working on worksheet 1 Participation in the discussion

41. Practicing Activities (hands-on activity)

Activity6: Develop case studies on a few topics by referring to the possible teams of teachers, their Knowledge background and decide/ describe their role and responsibilities in the development of a Learning and Creativity Plan	
Development	Consider the participating list of trainees in this course taking into consideration there field area. Decide on a two or three topics that you feel that are suitable for developing activities in the context of STEAME with the collaboration of other teachers. Select from the participants' list (preferably) or from the teachers in your school, one or two that you feel that you feel that they have common ground for working together on one of the topics you are thinking of. Exchange ideas with them on the feasibility of collaboration on developing activities in the context of STEAME, proposing topics and initial steps for work. Continue this exchange of ideas and proposals until you reach to a point that you feel that you have enough ground of agreement and common understanding covering a topic, connection with the appropriate curricula etc, taking into consideration the list of tips suggested earlier. After reaching a consensus on the basic points start working for the preparation of a learning plan
Materials	Writing means
Resources	LIST 2 (APPENDIX 2)
Estimated Time	30 min
Environment/Room Setting	In the case of a class: Circular arrangement in order to facilitate discussion In the case of online presentation: Provisions for chatting
Trainees' role	Participation in the discussion Groupings of participants in order to develop collaborating ideas for the STAGES I and II presented in the LIST 2 (APPENDIX 2)

42. Reflection and Closure activities:

Evaluation of Learning Outcomes

Activity 7: Discussion and reflection of the role of the teachers in the process of working together. Consideration of self-evaluation processes of the teachers in this process. Consideration of issues of evaluating the extent of the impact on students' learning through the approach of teachers working together	
Development	**Quiz 3** What are the guiding principles for a successful preparation of a project or similar action requiring the involvement of more than one facilitator in the learning process in the context of STEAME? What are the important steps and actions that a team of teachers should undertake in order to design and process a learning plan in the context of STEAME? Reflection and Discussion
Materials	Writing means
Resources	Quiz 3 in APPENDIX 4
Estimate Time	20 min
Environment/Room Setting	In the case of a class: Circular arrangement in order to facilitate discussion In the case of online presentation: Provisions for chatting
Trainees' role	Answering quiz 3 Participation in the discussion and reflection

APPENDIX 1

Discussion of various combinations of teams working together

Before we move to the main question (of How can teachers work together?) let us reflect and consider some examples where we have issues that are interesting to both the real life and the school curriculum and where we are expecting collaboration of a broad range of expertise. The issues can range from technological needs to games and cultural activities.

QUIZ 1

Write down some of your suggestions

In this process it is useful to identify:

Topic of interest.

Its relation to STEAME goes hybrid.

Composition of Teams of collaboration and expected contribution from each member of the team.

Associated Areas of the school curriculum.

APPENDIX 2

LIST 1

Framework of capabilities of the teachers in the process of working together.

They should:

Be able to identify the major facilitators that have to be taken into consideration in determining and designing STEAME goes hybrid activities for students at secondary school level.

Be able to specify their (the major facilitators) role and responsibilities.

Be able to concentrate on the role and responsibilities of the sub-team of teachers that will be involved in the process of designing and implementing the STEAME hybrid activities.

Be able to refer, to illustrate and to apply in class competencies for collaboration in order to promote actions and arrangements for preparing, formulating and implementing action plans for learning.

Such competencies include:

Contact, cooperation and reflection with the workers shaping the real world.

Provision of incentive and motivation to the learners.

Determining and formulating, in cooperation with other facilitators, problems of interest to the real world

Support and guide, in cooperation with other facilitators, the students for gathering information

Support and guide, in cooperation with other facilitators, the students for handling a problem or project

Support and guide, in cooperation with other facilitators, the students for using a variety of topics (in the context of STEAME goes hybrid) in developing and representing models for the promotion of solutions and results to the issues under consideration

Support and guide, in cooperation with other facilitators, the students in developing creative and innovative approaches or models for the promotion of solutions and results to the issues under consideration.

Assess cooperatively the work of the students and provide comments and suggestions taking into consideration the contribution of the various STEAME constituents.

Review and reflect cooperatively (learners and learning facilitators).

Be able to discuss and exchange ideas with other learning facilitators on:

Constructing learning plans with mutual content, complementing the aspects, concepts and processes that have common interest or value

Assessing the various activities so that they have mutual value and

Exploiting audiovisual and digital aids

LIST 2

Stages and points that are facilitating the process of collaboration of teachers

STAGE I: Preparation by one or more teachers plus experts/ entrepreneurs

Formulating initial thoughts on the thematic sectors/areas to be covered

Engaging the world of the wider environment / work / business / parents / society / environment/ ethics

Target Age Group of Students - Associating with the Official Curriculum - Setting Goals and Objectives

Organization of the tasks of the parties involved - Designation of Coordinator - Workplaces etc.

Some Actions that may be taken for stage I by the persons involved:

	Wider Environment/- Society plus the school staff	School Administration	Teacher 1	Teacher 2	… Teacher n
Step 1 of STAGE I	Identify an issue, idea …	Specify the aspects of the issue as they relate to the learning process, discuss possible thematic areas	Propose ideas in related to his/hers subject area	Propose ideas in related to his/hers subject area	Propose ideas in related to his/hers subject area
Step 2 of STAGE I	Contact/ collaboration between the various actors to specify the various aspects, constituents of the problem…	Contact/ collaboration between the various actors to specify the various aspects, constituents of the problem… Connect this to elements of the official curriculum	Participate and elaborate on the discussions. Investigate on their repercussions on the curriculum of the topic in relation to the real world	Participate and elaborate on the discussions. Investigate on their repercussions on the curriculum of the topic in relation to the real world	Participate and elaborate on the discussions. Investigate on their repercussions on the curriculum of the topic in relation to the real world
Step 3 of STAGE I		As specified in Step 2. Determine general objectives. Discuss	Determine particular objectives and specify initial actions and needs.	Determine particular objectives and specify initial actions and needs.	Determine particular objectives and specify initial actions and needs.

		responsibilities. Prepare initial plan	Exchange ideas with the other teachers	Exchange ideas with the other teachers	Exchange ideas with the other teachers
Step 4 of STAGE I	Collaborate with the school and the teachers, in particular, on further actions ranging from support (economic …) to scientific …	Collaborate on management and organization issues	Determine organizational and management issues and initial plan, through collaboration with the other teachers	Determine organizational and management issues and initial plan, through collaboration with the other teachers	Determine organizational and management issues and initial plan, through collaboration with the other teachers

STAGE IIa: Action Plan Formulation (Steps 1-18)

Preparation (by the teachers involved)

Relation to the Real World – Reflection

Incentive – Motivation

Formulation of a problem (possibly in stages or phases) resulting from the above

Development (by students) – Guidance & Evaluation (in 9-11, by teachers)

Background Creation - Search / Gather Information

Simplify the issue - Configure the problem with a limited number of requirements

Case Making - Designing - identifying materials for building / development / creation

Construction - Workflow - Implementation of projects

Observation-Experimentation - Initial Conclusions

Documentation - Searching Thematic Areas (STEAME fields) related to the subject under study – Explanation based on Existing Theories and / or Empirical Results

Gathering of results / information based on points 7, 8, 9

First group presentation by students

Configuration & Results (by students) – Guidance & Evaluation (by teachers)

Configure mathematics or other STEAME models to describe / represent / illustrate the results

Studying the results in 9 and drawing conclusions, using 12

Applications in Everyday Life - Suggestions for Developing 9 (Entrepreneurship - SIL)

Review (by teachers)

Review the problem and review it under more demanding conditions

Project Completion (by students) – Guidance& Evaluation (by teachers)

Repeat steps 5 through 11 with additional or new requirements as formulated in 15

Investigation - Case Studies - Expansion - New Theories - Testing New Conclusions

Presentation of Conclusions - Communication Tactics.

STAGE IIb: STEAME Actions and Cooperation in developing Creative Projects or other activities for school students

Brief Description/Outline of Organizational Arrangements / Responsibilities for Action

Phase	**Activities/Steps** Teacher 1(T1) Cooperation with T2, Tn, and student guidance	**Activities /Steps** Teacher 2 (T2) Cooperation with T1, Tn and student guidance	**Activities /Steps** Teacher n (Tn) Cooperation with T1, T2 and student guidance	**Activities /Steps** **By Students** Age Group: ____
A	Preparation of steps 1,2,3	Cooperation in step 3	Cooperation in step 3	
B	Guidance in step 9	Support guidance in step 9	Support guidance in step 9	4,5,6,7,8,9,10
C	Creative Evaluation	Creative Evaluation	Creative Evaluation	11
D	Guidance	Guidance	Guidance	12
E	Guidance	Guidance	Guidance	13 (9+12)
F	Organization (SIL) STEAME in life	Organization (SIL) STEAME in life	Organization (SIL) STEAME in life	14 Meeting with Business representatives
G	Preparation of step 15	Cooperation in step 15	Cooperation in step 15	
H	Guidance	Support Guidance	Support Guidance	16 (repetition 5-11)
I	Guidance	Support Guidance	Support Guidance	17
K	Creative Evaluation	Creative Evaluation	Creative Evaluation	18

So the question: What should be the some aspects that collaborating teachers should have as lighthouse in the process of guidance?

STAGE IIc: Remarks and Guiding Lines for Collaborative Guidance

Some Important Points that should be taken into consideration by the teachers collaborating in the process of guiding the students to take productive actions in the development of the project

The official Curriculum. The activities and support should be focused in promoting the goals of the official curriculum as a whole and also as it is reflected in the individual curricula of the topics where the collaborating teachers are experts.

Key Knowledge, Understanding and Success Skills. The project is focused on student learning goals, including standards-based content and skills such as critical thinking/problem solving, collaboration and self-management.

Challenging Problem or Question. The project is framed by a meaningful problem to solve or a question to answer, at the appropriate level of challenge.

Sustained Inquiry. Students engage in a rigorous, extended process of asking questions, finding resources and applying information.

Authenticity. The project features real-world context, tasks and tools, quality standards or impact. Or it speaks to students' personal concerns, interests and issues in their lives.

Student Voice & Choice. Students make some decisions about the project, including how they work and what they create.

Reflection. Students and teachers reflect on learning, the effectiveness of their inquiry and project activities, the quality of student work, obstacles and how to overcome them.

Critique, Revision and Assessment. Students give, receive and use feedback to improve their process and products.

Public Product. Students make their project work public by explaining, displaying and/or presenting it to people beyond the classroom.

APPENDIX 3

Quiz 2

Write on a piece of papers your suggestions for

Tips for supporting/ facilitating/ enabling the collaboration/ working together of teachers in the context of STEAME goes hybrid.

Provide a list of such tips and discuss/ exchange of ideas on them.

Worksheet 1

Identify elements that facilitate collaboration in the development of the L&C Plan for the topic

"The Golden Ratio and its role in Human Activities"

APPENDIX 4

Quiz 3

What are the guiding principles for a successful preparation of a project or similar action requiring the involvement of more than one facilitator in the learning process in the context of STEAME?

What are the important steps and actions that a team of teachers should undertake in order to design and process a learning plan in the context of STEAME?

6.5 Module 5: Project Based Learning Methodology in hybrid environment

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STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Module Number and Area/ Topic: *Module 5: Project Based Learning Methodology in hybrid environment*

43. **Introduction and Broad Description of the Context and Goal of the area/ topic addressed:**

Project Based Learning (PBL) is a student-centred methodology that engages students in developing critical thinking through undertaking authentic, meaningful projects. In PBL, students gain knowledge and skills by working together for a period of time to investigate and respond to an engaging, and complex question, problem, or challenge.

However, in hybrid classrooms, some students never see each other in person, and some students never see their teachers in person. Thus, moving to hybrid classrooms creates a great challenge for implementing PBL methodology. Luckily, project-based education follows a flexible, differentiated model where students have the freedom to work independently or collaborate either in person or virtually.

The goal of the module is to demonstrate how to plan and implement project-based activities in a hybrid classroom environment by presenting digital tools and example activities for this purpose.

44. **Learning Outcomes:** With the completion of this module the trainees will be able to:

1. Define PBL and its basic design elements.
2. Recall the five steps of PBL.
3. Familiarise with inclusive strategies for PBL in a hybrid setting.
4. Organise PBL activities for a hybrid environment with digital tools.

45. **Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):**

Student learning goals for projects include standards-based content as well as skills such as critical thinking, problem solving, communication, self-management, project management, and collaboration. To help teachers do PBL well, we present a comprehensive, research-informed model for PBL (Gold Standard PBL) to help teachers, schools, and organisations improve, calibrate, and assess their practice. In Gold Standard PBL, projects are focused on students' acquiring key knowledge, understanding, and success skills.

Furthermore, we present Krajcik and Blumenfeld's[1] (2006) five key steps to PBL to be a helpful starting point to approach PBL in a constructivist manner. If you do a comparison of any current day PBL models, you will see they are derived from these five key features. They are a great foundation to help you design and build authentic projects to use in your classroom.

Another dimension that this module addresses is how to make a hybrid project-based lesson more inclusive. Moving to hybrid classrooms creates an even greater challenge for building community. In hybrid classrooms, some students never see each other in person, and some students never see their teachers in person. Project-based learning provides a powerful vehicle for creating a shared learning space, one that makes it clear that all students' voices are needed and welcome in the classroom. Being flexible and welcoming about how kids choose to participate builds trust as the kids feel valued, welcomed, and accepted. The more of themselves the students share, the more connections are built. In this module's presentation we present four strategies that will help you build trust using project-based learning in hybrid environments.

Lastly, we focus on tips and digital tools that can be utilised in order to successfully organise and run a project-based lesson in a hybrid environment.

Following the main presentation, trainees will have the chance to take the role of students, participate in a series of project-based activities and try digital tools in a collaborative hybrid mode.

46. **Methodology and approaches for the module training presentation:**

1. Introduction to the subject - motivation activity (online poll).
2. Presentation of the basic design elements and characteristics of PBL focusing on the five steps of PBL (ppt presentation).
3. Presentation of four strategies to make hybrid activities more inclusive as well as tips and digital tools for successful implementation of PBL (ppt presentation).
4. Presentation and analysis of a small-scale L&C hybrid plan for the weather in the island of Rhodes (Maths-Environment-Technology). The scenario will serve as the basis for the hands-on activities (pdf file).

[1] http://daleydoseoflearning.weebly.com/uploads/1/8/7/7/18774020/chapter_19_pbl_kraichik.pdf

5. Hands on activity on the activities of the L&C plan:
    a. data collection (selection and data collection) through an online collaborative google sheet.
    b. data analysis and presentation (google sheet, google slides,
    c. Zoom.)
    d. Evaluation, review and summing up of outcomes (concept map tool-Padlet).
6. Remarks on the process and execution of the L&C plan from participating members
7. Evaluation of learning outcomes (Live online quiz through Quizizz)
8. Closure activity-Final discussion

47. **Instruments/ Tools/ Supporting Material/ Resources to be used:** (list of files, web links, videos, PPT. Use file names inserting the Module number)
    1. 5.Project based methodology in hybrid environments-STEAME goes Hybrid.ppt
    2. Weather in Rhodes (Example PBL lesson plan).pdf
    3. Useful urls for LC implementation: https://weatherspark.com/, https://www.youtube.com/watch?v=WkvPdUtYhX8, https://www.youtube.com/watch?v=N9Aod-pmBNc
    4. https://padlet.com/
    5. https://zoom.us/
    6. https://docs.google.com
    7. Link for introductory online poll: To be announced at the meeting
    8. Link for evaluation quiz in Quizizz: To be announced at the meeting

48. **Pedagogical/Learning Sequencing and Activities Plan:**

49. **Introductory activities** (creation of interest, reference to real value issues, relation to background experiences etc)

Activity Number and broad Description:	
Development	Trainees will be asked to write one word that characterises PBL. The results will form a word cloud.
Materials	Live poll
Resources	Poll everywhere platform, Internet connection, Mobile devices
Estimated Time	5’

Environment/Room Setting	Classroom environment
Trainees' role	Individual answer to the poll question through their mobile devices

50. Development activities

Activity Number and broad Description:	
Development	The activity will be include the main presentation of the module
Materials	ppt presentation file
Resources	laptop, projector, internet connection
Estimated Time	25'
Environment/Room Setting	Classroom environment
Trainees' role	Passive

51. Practising Activities (hands-on activity)

Activity Number and broad Description:	
Development	The activity will include the presentation of an small scale LC which will serve as the basis for the hands-on activities
Materials	LC about the whether in Rhodes, online collaborative tools
Resources	Laptop, projector, internet connection. mobile devices/personal PCs, google sheet, google slides, padlet, zom
Estimated Time	45'
Environment/Room Setting	Classroom environment. Some trainees may be asked to go to another classroom to simulate hybrid settings.
Trainees' role	Trainees will be asked to form teams and work as if they were students. They will follow the presenter's instructions and work collaborative in the LC activities.

52. Evaluation of Learning Outcomes

Activity Number and broad Description:	
Development	To evaluate the learning outcomes of the module, a live online quiz wil be utilized

Materials	Online quiz
Resources	Laptop, projector, internet connection. mobile devices/personal PCs,Quizizz platform
Estimate Time	5’
Environment/Room Setting	Classroom environment
Trainees’ role	To answer individually to the quiz questions

53. Reflection and Closure activity:

Activity Number and broad Description:	
Development	To reflect on the module’s key points
Materials	Discussion
Resources	-
Estimate Time	10’
Environment/Room Setting	Classroom environment
Trainees’ role	To participate and share his/hers ideas on PBL in hybird environments.

6.6 Module 6: How to support students in making oral presentations, communicate online and work in projects together

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Reference number: 2020-1-CY01-KA226-SCH-082675

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Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Template (*for the Methodology and Structure of a Learning Plan for Presenting a Module for the STEAME GOES HYBRID course programme, module of 3 days duration*).

Module Number and Area/ Topic: *How to support students in making oral presentations, communicate online and work in projects together*

54. Introduction and Broad Description of the Context and Goal of the area/ topic addressed:

Supporting students in oral presentations, online communication, and group projects requires a comprehensive approach that incorporates effective instructional strategies and technology. This can include:

- Establishing clear expectations and guidelines for the presentations and projects
- Encouraging collaboration through the use of online tools for organization and communication
- Developing strong communication skills, such as active listening and clear and concise speaking
- Utilizing multimedia resources to enhance presentations
- Encouraging peer feedback and critique
- Providing support and guidance throughout the process
- Using technology to facilitate practice and collaboration.

By implementing these strategies, teachers can help students feel confident and comfortable in their oral presentations, online communication, and group projects, leading to successful outcomes.

55. **Learning Outcomes**: With the completion of this module the trainees will be able to**:**
    1. Understand clear expectations and guidelines for oral presentations and group projects.
    2. Use online tools effectively to facilitate collaboration, communication, and organization among students.
    3. Develope effective communication skills, such as active listening and clear and concise speaking.
    4. Use multimedia resources to enhance oral presentations and make them more engaging and effective.
    5. Apply strategies for providing and receiving constructive feedback, both in groups and individually.
    6. Provide support and guidance to students throughout the presentation and project process.
    7. Increase their familiarity with technology-facilitated practice strategies that can help students build their confidence and improve their skills.

By mastering these learning outcomes, teachers will be better equipped to support their students in making effective oral presentations, communicating effectively online, and working successfully in groups on projects.

56. **Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):**
    1. Improving presentation skills.
    2. Improving communication skills.
    3. Improving collaboration techniques in online projects.

9 Tips for Improving Your Presentation Skills For Your Next Meeting

8 methods for effectively improving student communication skills

How to Improve Project Team Collaboration - 8 Simple Steps

57. **Methodology and approaches for the module training presentation:**
    1. Modeling: Provides examples of effective oral presentations, online communication, and group projects, and discussion of what makes them successful.

2. Technology integration: incorporates technology into the teaching module to help students practice and develop the skills they need to be successful in making oral presentations, communicating online, and working in projects.
3. Peer collaboration: contains suggestions on how to encourage students to work together in groups to complete projects and practice their oral presentation skills.
4. Reflective practices: underlines importance of a reflection on own learning and of providing feedback to one another on presentations and projects

58. **Instruments/ Tools/ Supporting Material/ Resources to be used:**

Module 6 – ppt presentation and links within

59. **Pedagogical/Learning Sequencing and Activities Plan: ……..**

60. **Introductory activities** (creation of interest, reference to real value issues, relation to background experiences etc)

Activity Number and broad Description:	
Development	
Materials	
Resources	
Estimated Time	
Environment/Room Setting	
Trainees' role	

61. **Development activities**

Activity Number and broad Description:	
Development	
Materials	
Resources	
Estimated Time	
Environment/Room Setting	
Trainees' role	

62. **Practicing Activities (hands-on activity)**

Activity Number and broad Description:	
Development	
Materials	
Resources	
Estimated Time	
Environment/Room Setting	
Trainees' role	

63. **Evaluation of Learning Outcomes**

Activity Number and broad Description:

Development	
Materials	
Resources	
Estimate Time	
Environment/Room Setting	
Trainees' role	

64. Reflection and Closure activity:

Helps to internalize learning and reflect on the progress, provides a sense of closure and accomplishment by finalizing the module.

6.7 Module 7: How teachers and students can work together in hybrid environment

Co-funded by the
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STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Template (for the Methodology and Structure of a Learning Plan for Presenting a Module for the STEAME GOES HYBRID course programme, module of 3 days duration).

65. **Module Number and Area/ Topic: 7-8**

66. **Introduction and Broad Description of the Context and Goal of the area/ topic addressed:**

7-8

67. **Learning Outcomes: With the completion of this module the trainees will be able to:**

    1. Perform a New User Registration
    2. Perform User Login (forgot pass)
    3. Navigate to User Dashboard (How to find user courses).
    4. Enrol in the Train the Teachers class (How to become Teachers).
    5. Navigate in a online class (How to become Teachers)
    6. Request for a new class online (How to become Teachers)
    7. Navigate in the platform (Class Management)
    8. Enrol Students by disseminating code (Class Management)
    9. Assign students to groups (Class Management)
    10. Enrol Collaborative Teachers in the Class (Class Management)
    11. Assign Collaborative Teachers in the Class (Class Management)

12. Make use of Virtual Space (BBB) (Class Management)
13. Use Virtual Space (Zoom) (Class Activities)
14. Use Discussion (Class Activities)
15. Upload L&C plans to Groups (Class Activities)
16. Assign L&C plans to Groups (Class Activities)
17. Use Interactive content (H5P) (Class Activities)

68. **Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):**

Online Course containing:

- Textual manual
- Textual/Multimedia in PPT format
- How to videos

Methodology and approaches for the module training presentation: Blended training. Readers will have to:

1. Navigate and complete activities on the online course
2. Participate in a online/physical session
3. Revisit online course to complete activities

69. **Instruments/ Tools/ Supporting Material/ Resources to be used:**

All material is contained in the online course "Training the Teachers" in: https://learning.steame-hybrid.eu/course/view.php?id=2

70. **Material:**

File	Includes	File Format
Guidelines for STEAME School Organizational StructureFile	Text	PDF
How teachers and students can work online	Text/Images	PPT
How teachers can work together	Text/Images	PPT
Project based learning methodology	Text/Images	PPT
How to support students in making oral presentations	Text/Images	PPT
Learning & Creativity Plans: Plastic Soup	Text/Images/Activities	PDF
Learning & Creativity Plans: Can Earth Feed	Text/Images/Activities	PDF

Learning & Creativity Plans: Market Analysis	Text/Images/Activities	PDF
Learning & Creativity Plans: Open Air Museum	Text/Images/Activities	PDF
Learning & Creativity Plans: The Creation of my own E-shop	Text/Images/Activities	PDF
Learning & Creativity Plans: Research - Services Evaluation	Text/Images/Activities	PDF
Learning & Creativity Plans:	Text/Images/Activities	PDF
User Registration	Video	MP4
User Login	Video	MP4
Request to Enroll in the Training the Teachers class	Video	MP4
Request a new class	Video	MP4
Access my class	Video	MP4
Enroll Collaborative Teachers in the class	Video	MP4
Assign Collaborative Teachers to student groups	Video	MP4
Enroll Students in the class using the class code	Video	MP4
Assign Students to groups	Video	MP4
STEAME User Manual	Text/Images	PDF

6.8 Module 8: Experiences from using the 6 proposed L&C Plans with students, illustrating scenarios with pros and cons - "Steame n go"

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

STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

Training program for selected STEAME subject teachers or others interested in the implementation of STEAME – HYBRID L&C Plans in the context of the STEAME GOES HYBRID project

Module Number and Area/ Topic: *8 - Experiences from using the 6 proposed L&C Plans with students, illustrating scenarios with pros and cons - "Steame n go"*

71. Introduction and Broad Description of the Context and Goal of the area/ topic addressed:

The goal is to share the experience of implementing our hybrid project-based learning activity related to cyber-bullying.

In particular, the activity carried out in hybrid mode will be presented, highlighting the positive aspects and critical issues encountered.

A final examination will be devoted to the use of the IT platform.

72. Learning Outcomes: With the completion of this module the trainees will be able to:

1. deepen the potential related to the use of teaching / learning methods in a hybrid environment
2. examine the critical aspects related to the use of the hybrid modality in terms of teaching and learning.
3. receive feedback on the pros and cons that emerged regarding the use of the IT platform

73. Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):

Our PBL hybrd activity is related the participation of our school in a hackathon organized by the Lombardy Region to prevent and combat cyberbullying.

This event called “U(n)perfect Hack” had three phases:

phase 1) online training

phase 2) preparation for the challenge

phase 3) final challenge between schools

For the purpose of our PBL hybrid activity, we focus in particular on the first two phases that involved the entire class group, since the final phase involved only two selected students.

The first phase of online training consisted of attending three webinars in synchronous and asynchronous mode. The three webinars (one of which was in English) covered the definition of cyberbullying, the identity of the cyberbully, the framework between law and psychology and aspects such as body shaming, sexting, ghosting, catfishing.

The second phase involved administering a questionnaire to students throughout the school and making a short film about the phenomenon of cyberbullying.

The class that took part to the PBL hibryd activity was “3I”, made up of 19 students (14 males and 5 females). We chose this class both because of the age of the students (around 16) and the field of study related to Information Technology.

74. **Methodology and approaches for the module training presentation:**

Presentation of a powerpoint document aimed at circulating the results of our experience among the trainees and at stimulating the discussion among the participants

75. **Instruments/ Tools/ Supporting Material/ Resources to be used:**

- Module 8_STEAME & GO.pptx
- ITCElsaMorante_WhatIf.mp4

76. **Pedagogical/Learning Sequencing and Activities Plan:**

77. **Introductory activities** (creation of interest, reference to real value issues, relation to background experiences etc)

Activity Number and broad Description:

Development	Presentation of a powerpoint document
Materials	Ppt.presentation ; video
Resources	Pc, Interactive blackboard
Estimated Time	20 min
Environment/Room Setting	Ordinary layout
Trainees’ role	Listeners

78. Development activities

Activity Number and broad Description:

Development	Suggestions and discussion
Materials	--
Resources	--
Estimated Time	5 min
Environment/Room Setting	Ordinary layout
Trainees' role	active participation through the proposition of questions and observations

79. Evaluation of Learning Outcomes

Activity Number and broad Description:

Development	Listening to feedback
Materials	--
Resources	--
Estimate Time	5 min
Environment/Room Setting	Ordinary layout
Trainees' role	feedback providers

80. **Reflection and Closure activity:** reflection on the feedback received and on possible implementation activities

6.9 Module 9: STEAME Hybrid Blueprint - Policy Recommendation discussion

Co-funded by the
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STEAME GOES HYBRID: Blueprint Guidelines and Policy Recommendations

Reference number: 2020-1-CY01-KA226-SCH-082675

Implementation period: **1 May 2021 – 30 April 2023**

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81. **Module Number and Area/ Topic:** *9 STEAME Hybrid Blueprint - Policy Recommendation discussion*

82. **Introduction and Broad Description of the Context and Goal of the area/ topic addressed:**

The digital transition and its applications in schools and education are at the heart of numerous policy documents implemented at EU level. Nevertheless, early project findings have made it clear that a specific policy framework has not been developed yet at a European level to cover and guide the innovation process represented by hybrid teaching and learning and to monitor the effect that this will have on education systems in Europe.

The lack of dedicated policies is one of the main reasons behind the efforts that STEAME goes HYBRID project has put in developing its policy recommendations. This workshop is part of this development process.

83. **Learning Outcomes:** With the completion of this module the trainees will be able to:

    1. Have an overview of the current EU main policies on Digital Education.
    2. Have an overview of the policy recommendations on Hybrid Education implemented by the project.
    3. Contribute to collecting further recommendations.

84. **Content and Resources (providing information on the various constituents/ dimensions of the topic under consideration):**

Objectives/ Purpose of the policy recommendations

Main objectives

- Provision of a basis for public discourse and a foundation for strategic policy development on how to harness the hybridization in a systematic way towards the full implementation of the EU Education Area (objective of EC)
- Better understanding of EU and country-level policymakers on the challenges and needs of schools, teachers and students, with a specific focus on digital transition and hybrid learning environments.
- Contribution to the identification of priorities and the development of regulations able to support hybrid schools.
- Creation of new strategic visions for modern school institutions in the aftermath of the pandemic and the emergency brought into the educational systems.
- Contribution to the definition of new learning spaces shaped by digital and hybrid formulas, enhancing accessibility and inclusiveness of educational provision.
- Setting of the ground for stronger EU peer learning in the context of digitalization in SE.
- Raised public awareness on the implications of digital readiness for school communities, providing evidence-based input.

Potential Impact on the context

- The School Education authorities (Ministries of Education or Municipalities) in the partner countries and beyond will be able to have access to the blueprint guidelines, access to examples and toolkits, ready to be adapted to their school systems.
- Increased readiness of the EU school sector to implement a hybrid model when it comes to STEAME-related activities
- Increased support to the school's management who will have to decide on the training of teachers so they can develop competencies and be able to adapt easily to hybrid learning processes for their students.
- Increased capability for EU Teachers to work together in monitoring hybrid learning and online project-based learning.

Better opportunities for EU Students to develop the STEAME project-based learning skills and access learning whenever and wherever

85. **Methodology and approaches for the module training presentation:**

    4. Introduction of the workshop and its objectives
    5. EU priorities in the field of Digital Education
    6. Policy recommendations implemented by the STEAME goes HYBRID Project.

7. Groups discussion on the policy recommendation shared
8. Plenary and collection of participants 'input.
9. Evaluation of Training Outcomes (via menti.com)

86. Instruments/ Tools/ Supporting Material/ Resources to be used:

(list of files, web links, videos, PPT…. use file names inserting the Module number)

- 9 STEAME Hybrid Blueprint - Policy.ppt
- SGH Policy Recommendations draft
- Papers and pens for the group discussion
- Whiteboard for the plenary session
- Link for evaluation quiz in Menti.com: To be announced at the meeting

87. Pedagogical/Learning Sequencing and Activities Plan: ……..

88. Development activities

Activity Number and broad Description: 1. Introduction of the workshop and its objectives 2. EU priorities in the field of Digital Education **3.** Policy recommendations implemented by the STEAME goes HYBRID Project.	
Development	Presentation of the EU priorities in the field of Digital Education and Policy recommendations implemented by the STEAME goes HYBRID Project. (by DLEARN)
Materials	Ppt presentation file, Laptop, projector, internet connection
Resources	Presentation by DLEARN
Estimated Time	30'
Environment/Room Setting	Classroom
Trainees' role	Trainees will be the audience during the presentation

89. Practising Activities (hands-on activity)

Activity Number and broad Description: 4. Groups discussion on the policy recommendation shared	
Development	Groups discussion on the policy recommendation shared + plenary and collection of participants 'input.
Materials	Papers and pens
Resources	-
Estimated Time	15'
Environment/Room Setting	Classroom
Trainees' role	Participants are divided into groups and receive 3 questions to answer.

Activity Number and broad Description: 5. Plenary and collection of participants 'input.	
Development	Groups discussion on the policy recommendation shared + plenary and collection of participants 'input.
Materials	Whiteboard
Resources	-
Estimated Time	15'
Environment/Room Setting	Classroom
Trainees' role	Participants go back to plenary and share the answers to the questions discussed in groups

90. Evaluation of Learning Outcomes

Activity Number and broad Description: 6. Evaluation of Training Outcomes (via menti.com)	
Development	To evaluate the learning outcomes of the module, a live online quiz will be used
Materials	Laptop, projector, internet connection. mobile devices/personal PCs, Menti platform
Resources	Online quiz
Estimate Time	5'
Environment/Room Setting	Classroom
Trainees' role	To answer individually to the quiz questions

7 Piloting and evaluation

The piloting phase consisted of two stages, each one of them contributed to the evaluation of the proposed training programme but also the STEAME-Hybrid Platform and the Learning and Creativity (L&C) Plans.

Stage I took place during the Learning Teaching and Training Activity in Athens. Project team had the opportunity to deliver the training programme to STEAME teachers from partners schools and receive their feedback and comments regarding the program's modules, the learning material as well as the functionality of the platform. This initial feedback was useful and led the project's team to make minor improvements to its proposed solution in regards with the main piloting and evaluation that would take place in Stage II.

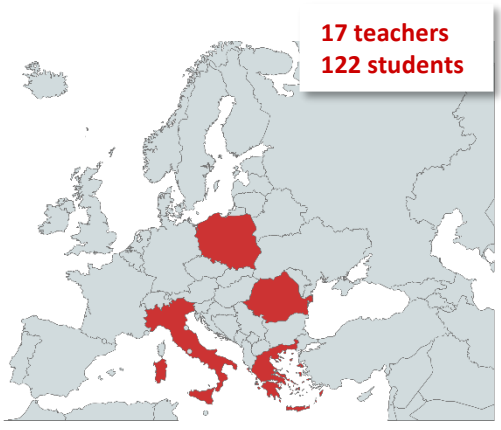
Stage II, results of which are presented in this section, involved the piloting of the STEAME Hybrid learning environment by the teacher trainees and their students. Although, the initial plan involved only three schools in this stage: the two partner schools (one in Italy and one in Greece) plus one collaborating school of the Pedagogical University of Krakow, the consortium-in an attempt to increase evaluation data- decided to involve more schools in the process: i.e. one extra school from Greece (collaborating with Dept. of Primary Education, University of Aegean) more schools from Poland and Italy as well as schools from Romania.

7.1 Evaluation procedure and instruments

The piloting period started in September 2022 and ended in March 2023. Participating schoolteachers were asked to utilize STEAME Hybrid platform and its learning materials in their teaching practice. At the end of the piloting, teachers and their students were given two online questionnaires to record their experience, one for the teachers and one for the students respectively. Both questionnaires consisted of close-ended and open-ended questions so to map as effectively as possible the participants' feedback. The analysis was performed by researchers from the University of the Aegean, and the results were summarized and presented to the project's team.

7.2 Demographics of the participants

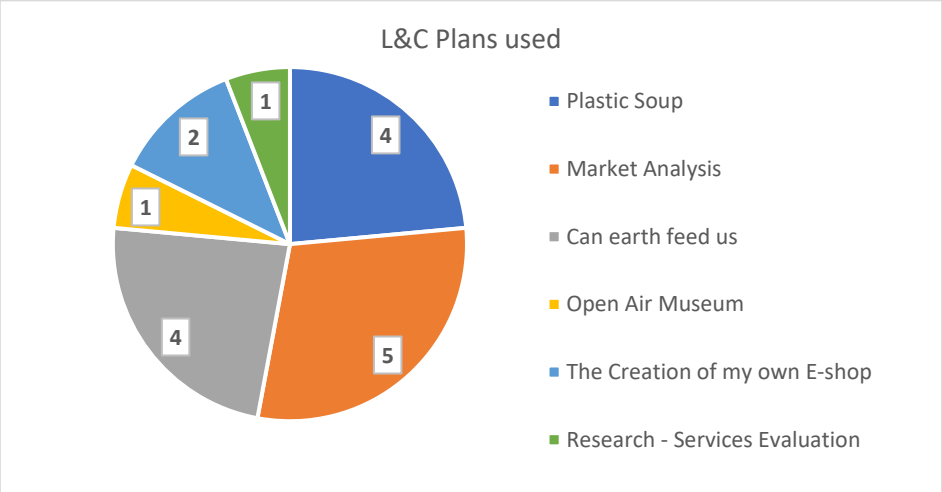
During the Stage II of the piloting and evaluating phase, seventeen teachers from Greece, Italy, Romania and Poland completed the evaluation questionnaire along with 122 students from the same countries.



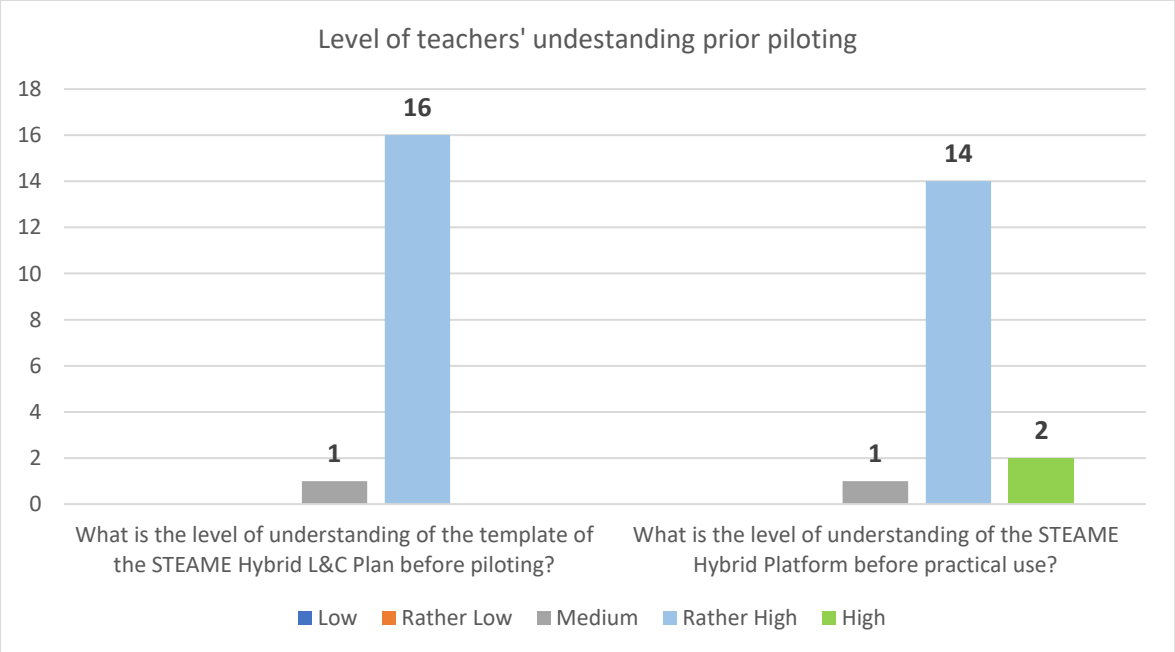
7.3 Results from the teachers

7.3.1 L&C plans utilisation and Level of understanding prior piloting

The first set of questions aimed to record whether the teachers utilized any of the Lesson & Creativity (L&C) Plans templates provided through the STEAME Hybrid platform as well as the level of understanding of the L&C plans and STEAME Hybrid platform before practical use. Based on the collected responses, all of the teachers (N= 17, 100%) utilized at least one of the provided L&C plans as shown below:

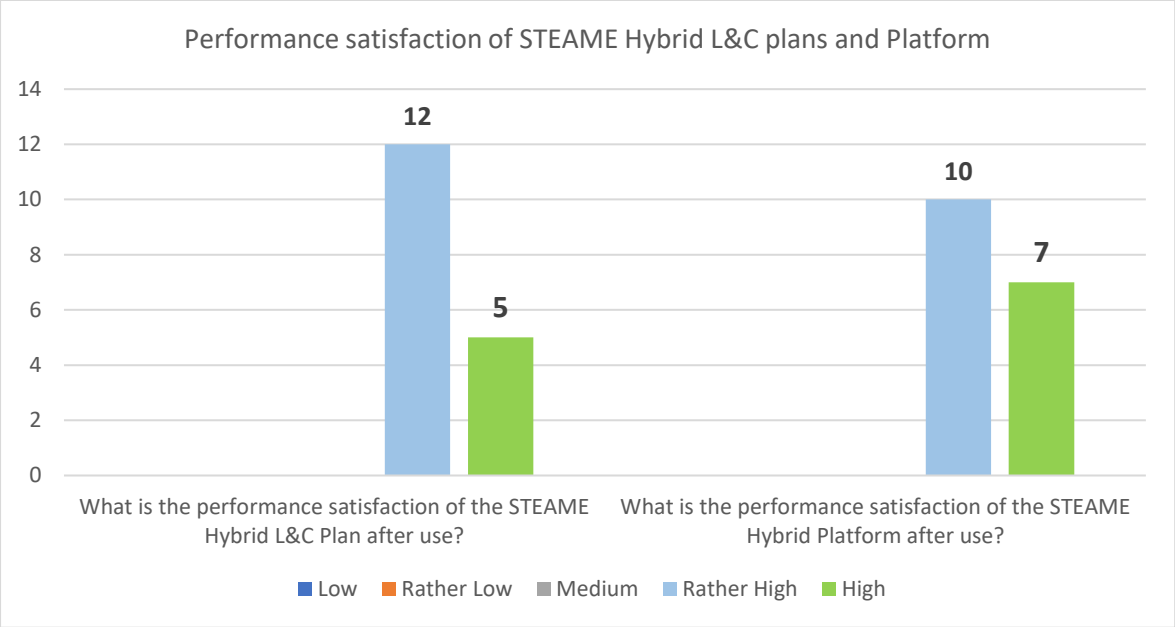


The majority of the teachers were able to understand the purpose of STEAME Hybrid L&C plans as well as how to use the STEAME Hybrid Platform prior to their piloting with their students.



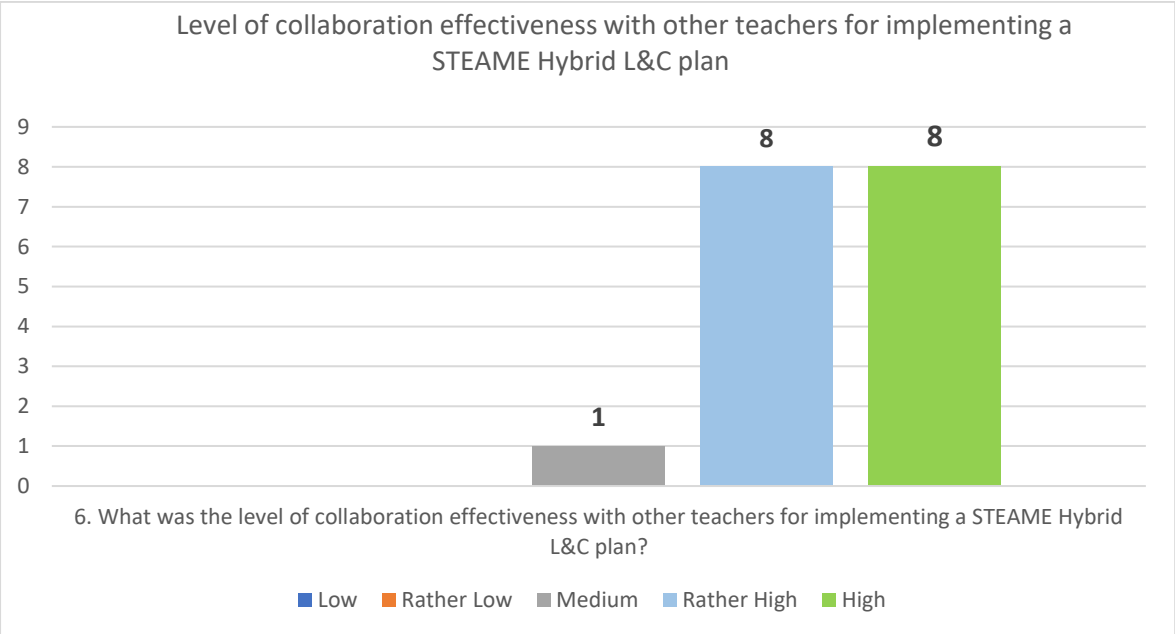
7.3.2 Performance satisfaction of STEAME Hybrid L&C plans and Platform

The analysis of the results showed that levels of teachers' satisfaction regarding the STEAME Hybrid L&C Plans and Platform were Rather High or High.



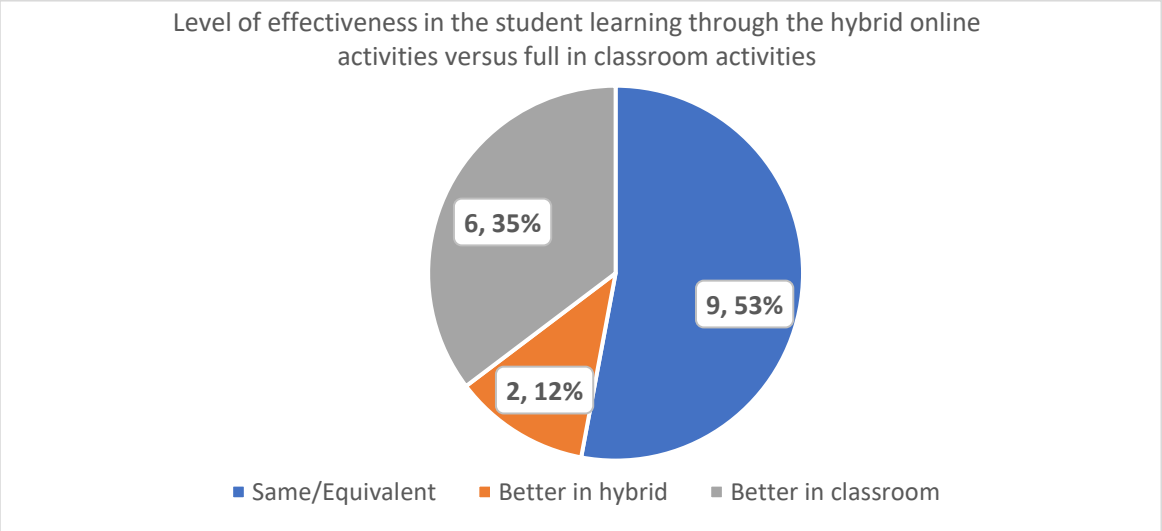
7.3.3 Level of collaboration effectiveness with other teachers for implementing a STEAME Hybrid L&C plan

The majority of the teachers reported that the collaboration with other teachers in implementing a STEAME Hybrid L&C Plan was effective. One teacher however reported difficulty in carrying out the activities and in managing the time to be dedicated to the project



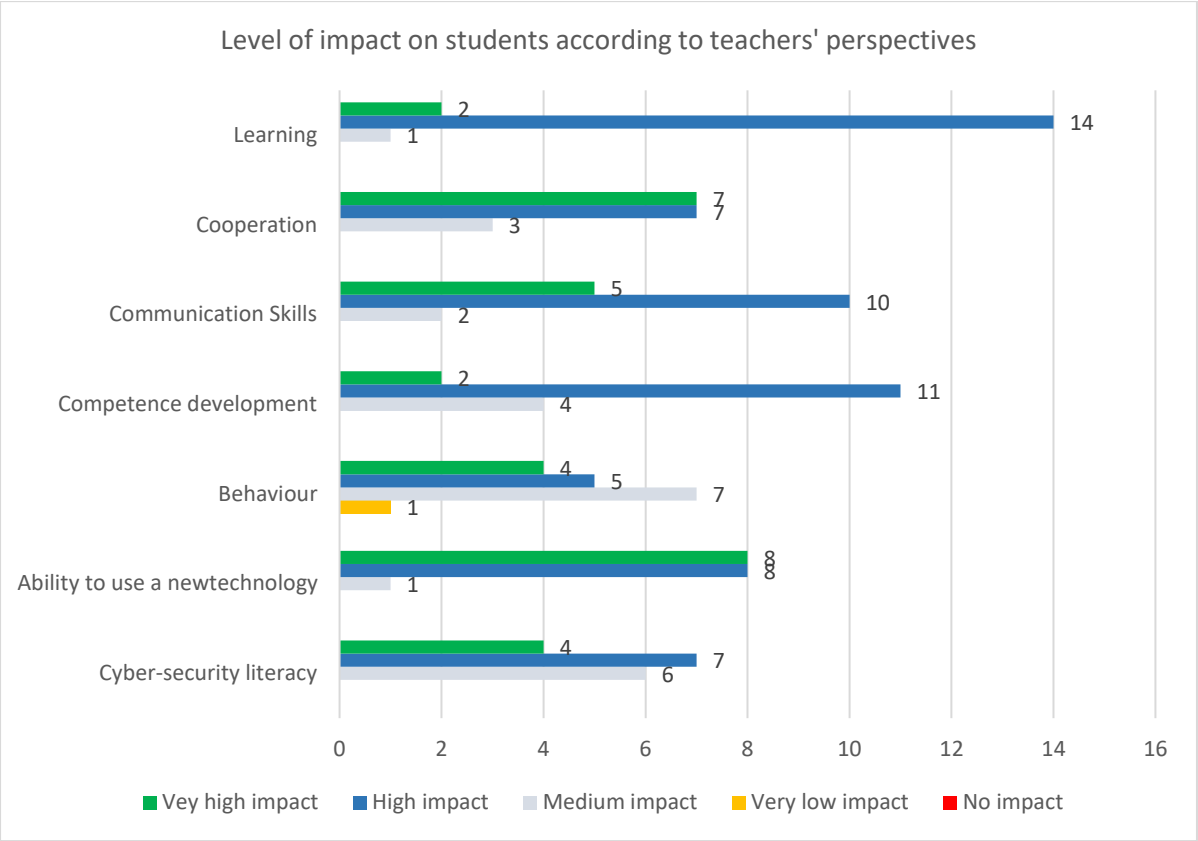
7.3.4 Level of effectiveness in the student learning through the hybrid online activities versus full in classroom activities

Teachers were also asked whether hybrid online activities were more effective in students' learning compared to full in classroom activities. Even though they had practically no previous experience on the use of the platform and the L&C plans, half of them found no significant difference between the two contexts. Moreover, 12% of the respondents reported that learning is more effective in hybrid environments.



7.3.5 Level of impact on students according to teachers perspective

Respondents believe that teaching through STEAME Hybrid Platform impacted positively students' learning, competences development and communication skills. The majority of the teachers also believe that cooperation and ability to use a new technology was promoted through the hybrid activities in high levels. On the other hand, teachers perspective showed that the STEAME Hybrid Platform had medium impact on students' behaviour and cyber security literacy.



7.3.6 Problems experienced during the piloting stage

During the piloting phase, all the teachers reported that they experienced problems. These could be grouped in the following categories:

- **Login problems**: the majority of the teachers experienced difficulties either when creating their students' accounts (mostly in primary education where students have no email of their own), or after the accounts creation process, since many students were losing/forgetting their password. This procedure was considered as time-consuming and frustrating for many of the teachers.
- **Connection problems**: a small number of teachers experienced connection problems while teleconferencing with their students. However, it is not clear whether these connection problems were related to the STEAME Hybrid Platform or their local internet providers.
- **Time management**: a significant number of teachers found difficult to manage time while teaching In hybrid mode. For some, the problems were identified during the transition between presentations and group work.
- **Students' involvement**: a few teachers reported that engaging students that were participating online to the lesson was difficult.
- **Working in teams**: Some teachers reported that their students found hard to collaborate effectively In hybrid mode. However, based on their responses this may

not be related to the STEAME Hybrid Platform, but on the lack of teamworking culture among their students.

7.3.7 Suggestions for improvement for either the L&C Template or the Hybrid Platform.

A fewer number of teachers provided their suggestions in regards with the improvement for either the L&C plan template or the Hybrid Platform. The most common suggestion focused on improving the ease of use of the platform, so that teachers with low digital competences could use it without difficulties. Some other suggestions were more specific like:

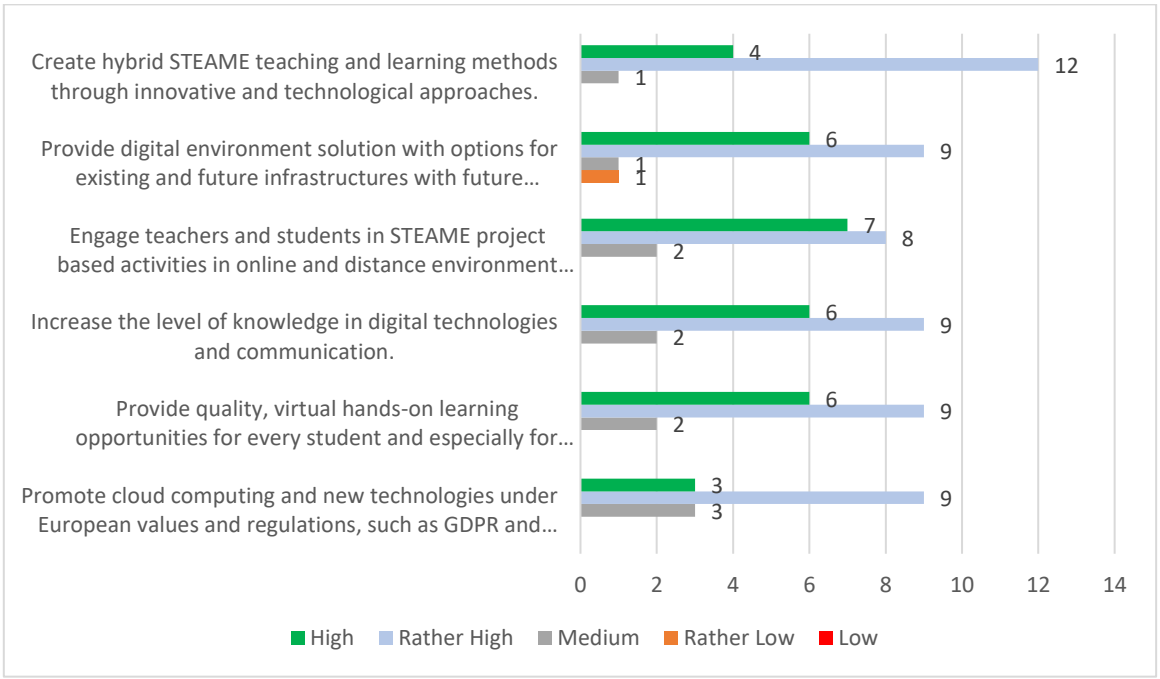
a. "*The template should include links to each section separately and I would suggest a more clear and precise structure of the information provided*."

b. "*The platform doesn't not allow to upload excel files*"

c. " *The platform can be set in a personal way, but this also represents an element of difficulty in managing it*"

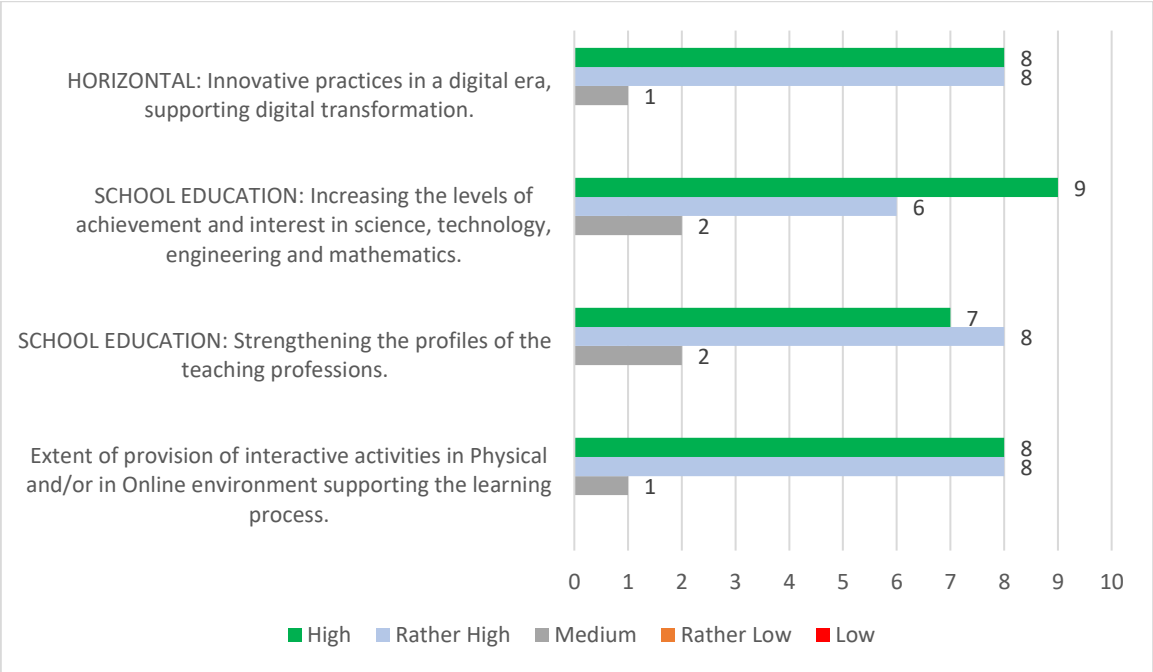
7.3.8 Degree of support of the main objectives of the project through the use of the STEAME Hybrid L&C Plan and through the STEAME Hybrid Platform

The second part of the online questionnaire circulated to the teachers piloting was related with the degree of support of the project's main objectives through the use of the STEAME L&C plan and the STEAME Hybrid Platform.



7.3.9 Contribution of the project to the Erasmus priorities

The vast majority of the teachers considered that the STEAME goes Hybrid project is contributing to the Erasmus+ programme priorities such as HORIZONTAL: Innovative practices in a digital era, supporting digital transformation; SCHOOL EDUCATION: Increasing the levels of achievement and interest in science, technology, engineering and mathematics and SCHOOL EDUCATION: Strengthening the profiles of the teaching professions as well as in regards to the provision of interactive activities in Physical and/or in Online environment supporting the learning process.



7.3.10 Platform features that teachers would like to be added in the future

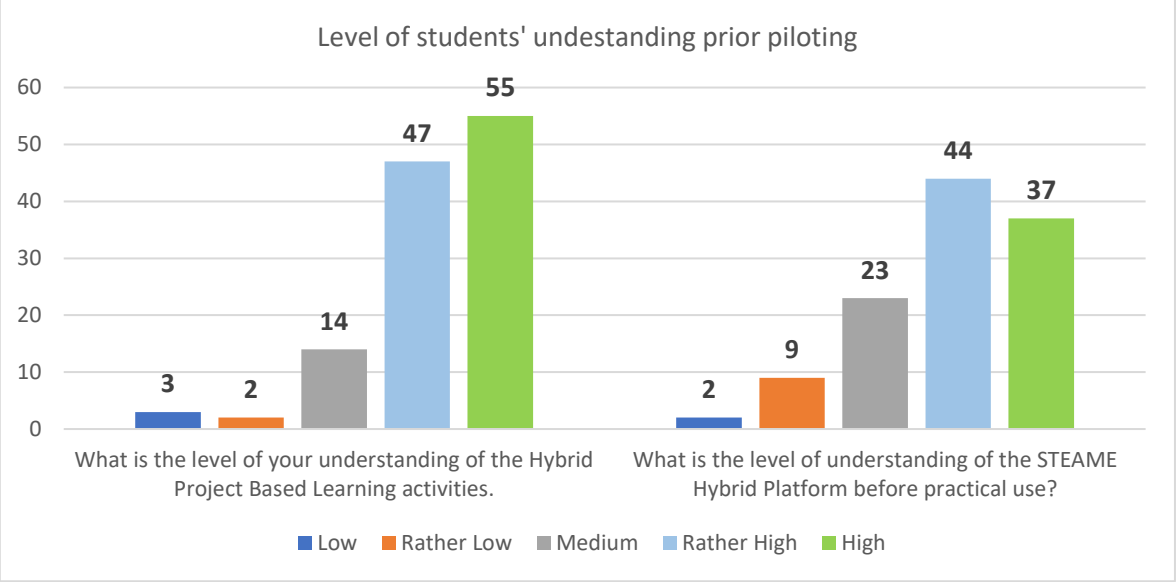
In the last section, teachers were asked to propose any features that would like to be included in future versions of the platform. Their answers included features that would allow to track students' progress and level of accomplishment of allocated tasks, gamification aspects (such as badges assignment by teachers), improved compatibility with all kinds of files (i.e. spreadsheets), and more collaboration options for students and teachers.

7.4 Results from the students

The questionnaire given to the students included similar questions with those of the teachers. Their purpose was to record students' experiences and level of understanding or satisfaction regarding the use of the L&C Plans and the Platform in their learning.

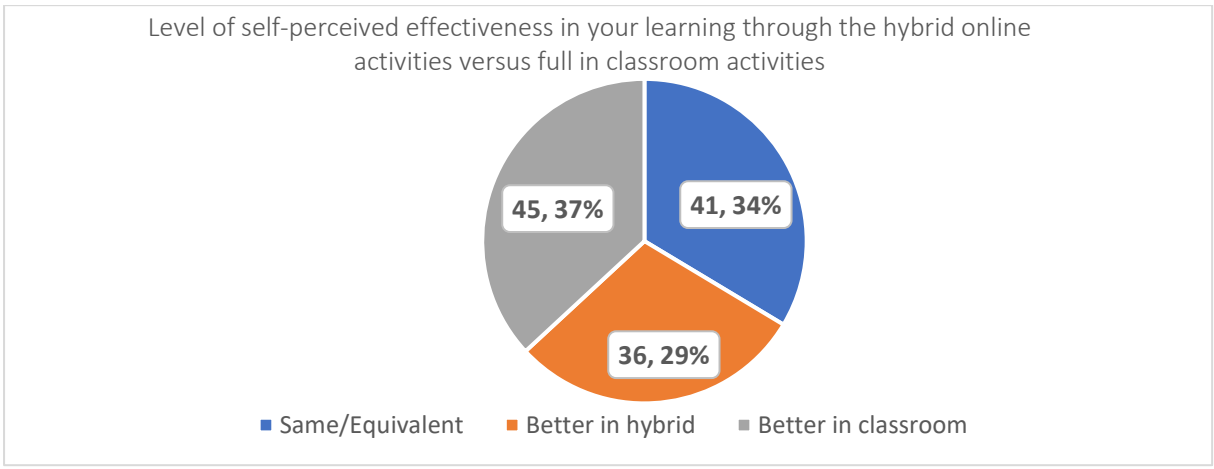
7.4.1 Level of understanding prior to piloting

The first set of questions aimed to map students' level of understanding of the Hybrid Project Based Learning activities as well as of the STEAME Hybrid Platform operation before practical use. Results showed that the majority of the students understood the hybrid project-based activities and the platform. However, the number of students that had medium or low understanding was higher in the case of the STEAME Hybrid Platform.



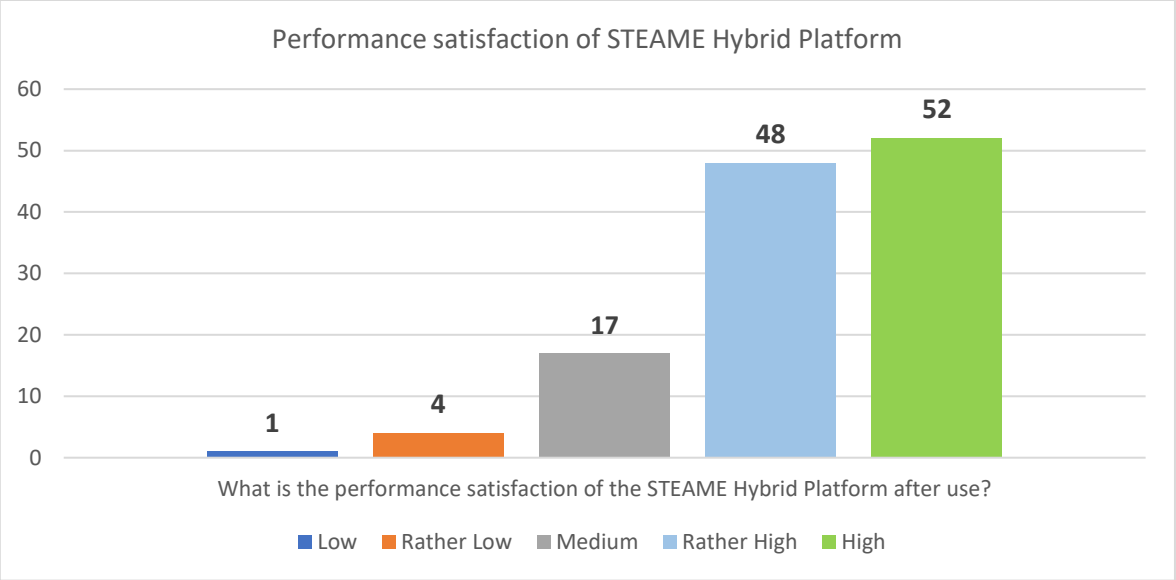
7.4.2 Level of the self-perceived effectiveness in your learning through the hybrid online activities versus full in classroom activities

Students were also asked whether hybrid online activities were more effective in their learning compared to full in classroom activities. The results showed no significant differentiation in the effectiveness in learning between the three contexts of learning. Furthermore, even while being in the piloting stage, almost a third of the students reported better effectiveness in the hybrid context



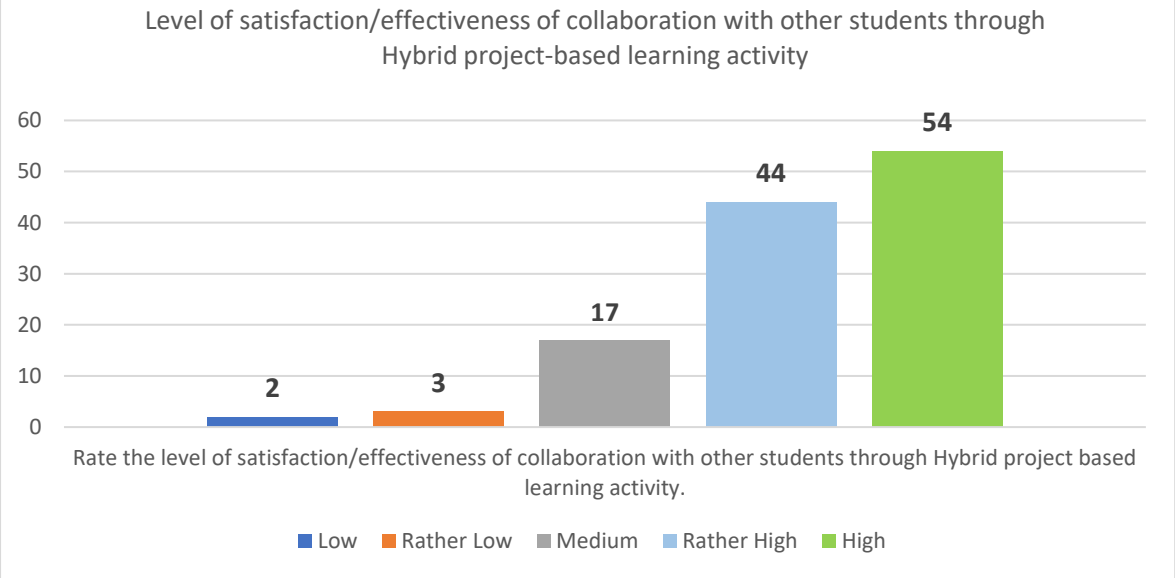
7.4.3 Level of performance satisfaction of the STEAME Hybrid Platform after use.

The analysis of the results showed that levels of students' satisfaction regarding the use of STEAME Hybrid Platform were Rather High or High.



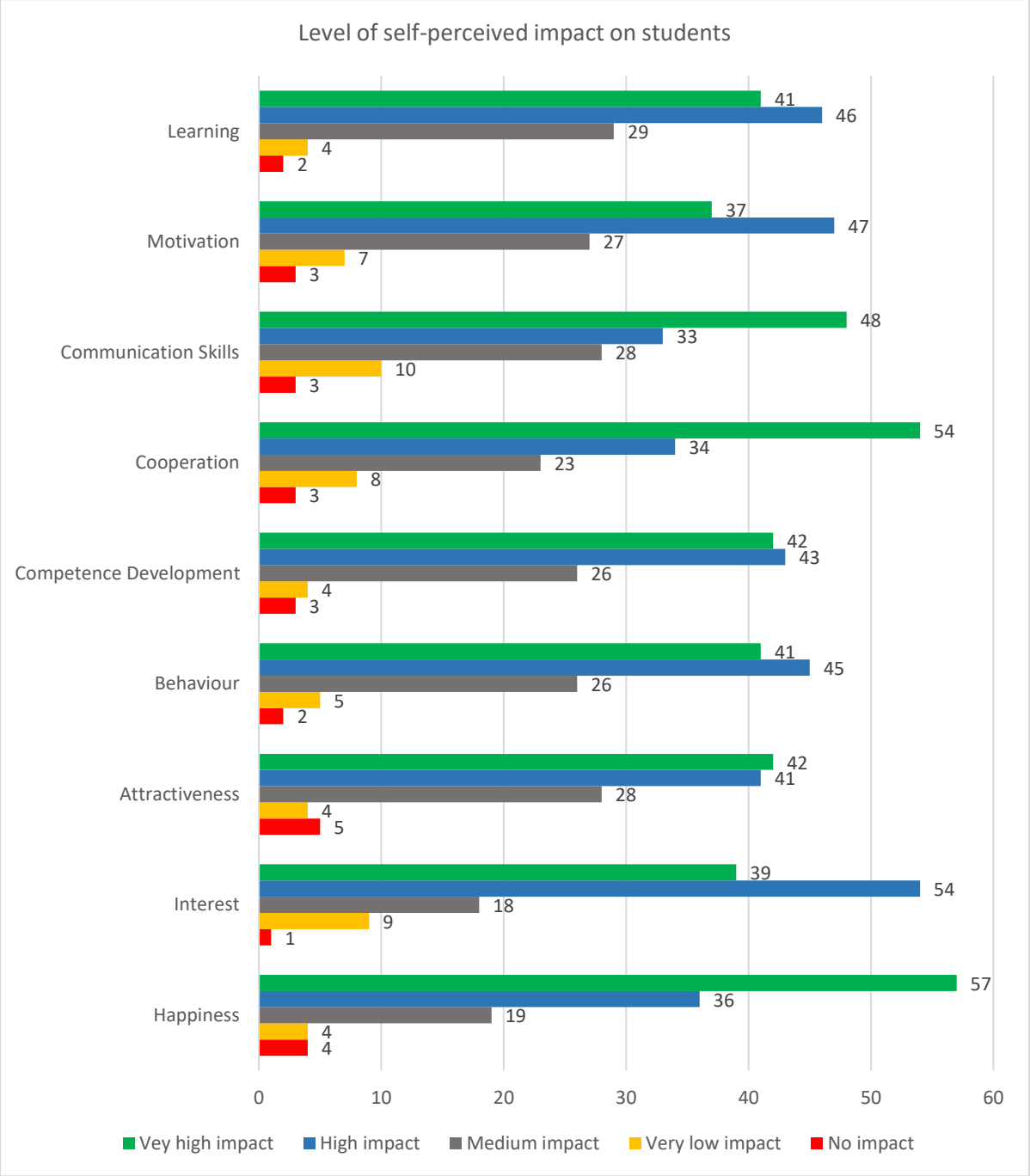
7.4.4 Level of satisfaction/effectiveness of collaboration with other students through Hybrid project-based learning activity.

The analysis of the results showed that levels of students' satisfaction regarding collaboration with other students through Hybrid project-based learning activity were Rather High or High.



7.4.5 Level of impact to you as a student

Students responded that learning through STEAME Hybrid Platform impacted their students' learning, cooperation, competences development, communication skills, behaviour. They majority of the found the use of the Platform attractive and interesting to use and reported that they were happy to use it.



7.4.6 Problems experienced during the process

70 out 122 students (~57%) reported that they experienced at least one kind of a problem while using the piloting stage. These could be grouped in the following categories:

- **Login problems**: Many students reported having trouble registering or logging in the Platform. Some of them reported that they lost their passwords, which made it even difficult to retrieve it.
- **Connection problems**: Several students reported experiencing connection problems (i.e. lagging, stability of the connection) during their online participation
- **Teamworking difficulties**: a significant number of students reported that they experienced difficulties in working with their peers while being in hybrid mode. Some had difficulties dividing the tasks between the team members, other students that were online were unable to communicate with their classmates in classroom due to loud noises, others reported low collaboration level between team members.
- **Technical issues**: these kinds of problems related to the technological infrastructure in each school (i.e. speakers, headphones), problems with uploading, compatibility issues with third-party application (one student mentioned the case of Kahoot)
- **Time management**: several students reported that time was not sufficient so that they finish all the activities with their peers.

7.4.7 Suggestions for improvement

Students' suggestions focused mainly on improving the use-interface of the platform, making registration to it easier, translating it into several languages and adding how-to videos for students users.

7.4.8 Platform features that students would like to be added in the future

In the last section, students were asked to propose any features that would like to be included in future versions of the platform. Their answers included features that would allow them to search content easier such as a search bar, communicate with their peers in more direct ways such as private chats, and features like would include gamification aspects or integrated games and compatibility with virtual labs and simulation software.

STEAME GOES HYBRID

Blueprint Guidelines and
Policy Recommendations

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