

YESict

Project co-funded by the European Union



Erasmus+

Guide – Output 8a

Pre-experimentation guide

Protocol, evaluation, conditions, steps and resources for the first experimentation



GOI ESKOLA
POLITEKNIKOA
ESCUELA
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SUPERIOR



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1. INTRODUCTION

In order to prove the methodology and the tools' efficiency and suitability, the YESict project foresees an experimentation in real conditions, with directly concerned publics: students and teachers.

The present report (O8a) aims to help the execution of the first campaign of experimentation and is more dedicated to the YESict project partners. A more general experimentation guide (O8b) will be designed in a similar but also quite different way, addressed to any public who would like to apply the YESict project pack (methodology and tools).

This experimentation guide aims to provide step-by-step instructions for leading the partners in the experimentation process of the YESict project, point out the indicators that have to be measured before and after the testing and explain the data to be compiled by the teachers and/or students in order to test:

- the learning methodology and the implemented pedagogical method,
- the ICT and non-ICT tools, and
- the teaching materials proposed in the project's framework.

Thus, firstly, the document will provide general information about the experimentation (aims, concept) and will describe the reflexion led to define the chosen concept of protocol. In a second part, we will dwell on the description of the experimentation (steps and aims of each phase). Then, we will deal with the evaluation question, to finally insist on the resources (available or to gather) and give some recommendations to the partners.

2. DESIGN OF THE EXPERIMENTATION

This section helps to understand the scope and the context of this experiment; more precisely, its purpose. In fact, there are explained the main objectives of the experiment, and the method that is going to be applied.

2. 1. Principles and Concept

According to the conclusions of the different outputs (O1, O2 and O3) of the “first” phase of YESict project (study and analysis), three principles were settled:

- To work not on competencies but on **entrepreneurial skills**
- To treat more specifically **4 skills**: creativity, solving-problem, collaboration and self-awareness
- To carry out the experimentation based on “**the agile design of skills by immersion**” concept. Indeed, the four chosen skills are both cognitive and non-cognitive skills. Even if the latter ones are more related to “personality”, they can evolve giving efficient tools to people. In the two cases, the best way to develop this kind of skills has been defined as to be the “learning-by-doing” methodology (cf. O3). Also, different studies have already demonstrated that “immersion” is one of the most effective ways to develop a well-known cognitive skill: language.

2. 2. Objectives

The mission of the experimentation is to prove that the YESict methodology is useful for developing entrepreneurial skills among young students and for replacing teachers’ pedagogical approaches by the use of digital tools.

It is true that the last objectives of the experimentation are to assess the effect of the methodology on the four chosen skills and to identify the effect of using ICT tools in the training as the learning experience. Nevertheless, **this first campaign will be focused on getting feedback from both children and teachers in order to improve the suitability and the ease of use of the tools and the method for them.**

Lastly, the observations have to allow the partners of the consortium together with the selected educational institutions the creation of new skills for encouraging the entrepreneurial attitude within the youth and the teaching staff.

2. 3. Characteristics of the experimentation

Given the short time available to create the tools, carry out the experimentation and fulfil all the objectives, some restrictions have been applied during the definition of the conditions of the experimentation.

Thus, according to the conclusions of the second transnational meeting in Cyprus, it was decided:

- to focus on 11-years-old children, at least for the first campaign of experimentation
- to carry out the experimentation during consecutive days, as most as possible.

Nevertheless, once the pedagogical material and the tools have been designed, the partners involved in the creation of the methodology and the toolkit of the YESict project have indicated that the material can be used by 11-14-year-old-children. Consequently, the partners should take this into account when selecting the classrooms that are going to participate in the experimentation.

On the other hand, as in the case of France, the schools may have problems for adapting the lessons for the experimentation; that is to say, that it may be really difficult to carry out all the phases in two consecutive days. In this sense, it has been accorded to conduct the experimentation during the briefest and closest period as possible so that the programme would fit with the schools' restrictions.

3. THE EXPERIMENTS' DESCRIPTION

A general diagram (see Figure 1) can represent the protocol of experimentation.

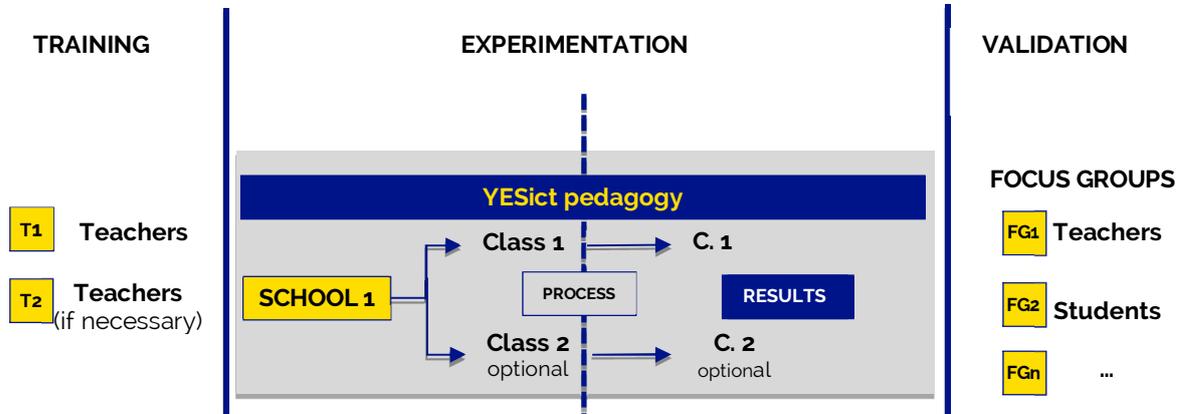


Figure 1: Diagram of the protocol of experimentation of YESict

The first step consists on training the teachers on the methodology and the toolkit used during the experimentation and the evaluating system. In the first campaign the evaluation model won't be very tough because it is not intended to assess the effect of the methodology and the tools.

The second phase encompasses the whole process of creating a solution to a given problem/subject. This is where the students will really test the material created for the YESict project.

Lastly, in order to obtain feedback about the tools and the methodology for improving them, some interviews and focus groups will be held both with teachers and students.

The complete process of the experimentation is precisely detailed in the storyboard created by MGEP and EHI partners (MGEP & EHI, 2016). It explains each step of the process and also the different tools or material to provide to apply the YESict methodology.

To make an idea, the process of the experimentation will last 28 hours, staggered on 7 days, not only consecutive (see Table 1). Depending on the conditions and restrictions of the schools, the partners involved in the experimentation may need to make some changes on the process proposed. In this case, we suggest contacting the partners responsible of the methodology and the toolkit (MGEP and EHI) to verify the modifications aren't counter-productive.

Table 1: Steps of the process of the experimentation

DAY	Sequence	No. of hours	What?	Who?	YESict resources
1	T01	4h00	Training on the methodology and the toolkit	Teachers	EHI will provide the pedagogical content
1	00	1h30	Qualitative interview about students' perception of entrepreneurship	Children	Antic explains the process p.13
2	01	2h00	Introduction	Children	O7 Pedagogical material report
	02	0h45	Challenge identification		Toolkit provided by MGEP, EHI and FHJ
3	T02	5h00	Familiarize with the toolkit	Teachers	EHI will provide the pedagogical content Toolkit provided by MGEP, EHI and FHJ
4	03	1h15	Team creation	Children	O7 Pedagogical material report
	04	3h00	Exploration	Children	Toolkit provided by MGEP, EHI and FHJ
5	05	2h00	Ideation	Children	O7 Pedagogical material report
	06	3h00	Prototyping	Children	Toolkit provided by MGEP, EHI and FHJ
6	07	3h00	Communication preparation	Children	O7 Pedagogical material report
	08	2h00	Communication	Children	Toolkit provided by MGEP, EHI and FHJ
7	09	2h00	<i>Learning from others</i>	<i>Children</i>	<i>Optional</i>
8	T03	1h	Interview with the teachers	Teachers	O4 Evaluation Model report (SYNTHESIS)
	10	1h/group	Focus Group with students	Children	

In the next sections it is explained the role of the partners in each phase, including some suggestions and recommendations for them.

3.1. Training of the teachers

****If any question, please address the partner in charge of defining the training; in this case, EHI.***

The training on the experimentation intended for the teachers is recommended to have a minimum duration of 4 hours. Each partner in charge of carrying out the

experimentations in their country will have to modify it depending on the restrictions and conditions of the teachers participating on the training.

In this case, considering it lasts 4 hours, the whole sessions is divided as follows:

- 1. The YESict project (10'):** What the project is about, its origin, the context, the partners... The aim is to introduce the project to them, at least, to highlight the most important characteristics.
- 2. The perception and knowledge about entrepreneurship and its evaluation (15'):** It is necessary to carry out a quick interview based on the teachers' appreciation of "entrepreneurship". Indeed, this "ex-ante" information will be required for the writing of the O11 report. To do so, you can find in the Annexes (see 5. 1 Guide of the interview ex-ante of the teachers), the guide of this interview, which will be conducted by the partner before the proper training,
- 3. The YESict methodology (10'):** Briefly explain the pedagogical approach and the methodology that is behind the project (cf. O3_Report_Entrepreneurship Curricula): Challenge-based learning + Design Thinking, the skills that will be encouraged...
- 4. General perspective of the experimentation (10'):** In order to make an idea of the whole experimentation, it should be great to show the teachers its "big picture". The most basic one is the Figure 1 in this report, but it is recommended to use the Storyboard created by MGEP and EHI (cf. O5&O6 Children and teachers storyboard_VF). It is also suggested to have the YESict platform open because it helps to visualize the stages of the experimentation.
- 5. How to use the teacher's guide (15'):** Take as an example an activity and help them to go through the instructions. For example, 1.2. Jigsaw is a good option for those that never have carry out such an activity. Read the table with the specifications, the steps, the necessary material, etc. (cf. O7_Report_Teacher's Guide).
- 6. Introduction to the tools (5'):** Before starting the next explanations, it may be great to show some examples of projects. Show them what can be done following the YESict methodology, and then explain them how to do it (in the points 6 and 7).
- 7. The use of the platform and Drive (30'):** Explain how the students are supposed to fill in the templates, look for information/videos, create and use Google Drive templates... In the end, the teacher has to understand how the students are going to use the platform and the Drive (cf. O7_Report_Teacher's Guide)
- 8. The tools (2h):** The idea is to answer to all the questions the teachers may have about the ICT and non-ICT tools. It is recommended to have sent the teacher's guide to the teachers before the training; in that way, they will have time to identify the problems/doubts they may have. In those 2 hours they also can test some of them, proceeding with the process that the students are supposed to follow. (cf. O7_Report_Teacher's Guide)
- 9. The evaluation of the students' work (20'):** Give them some indications about how to assess what the students have done.

The partner in charge of carrying out the experimentation in his/her country will be responsible for setting the training day together with the teachers, for finding a comfortable and appropriate place for the training and for answering all the doubts they may have. It is suggested to use a presentation, but it depends on the person giving the training.

3. 2. Experimentation

We have supposed that by following the methodology proposed by the YESict project; both the students and teachers are going to perceive entrepreneurship and the fact of being an entrepreneur in another way. In order to measure this perception and to identify their wishes, we propose in the next section to have interviews with some students and all the teachers.

During the experimentation the role of **the partners is not more than an observer**. Indeed, each partner will have to complete an observation during the sessions of the experimentation in order to collect the data necessary for the writing of O9 and O11 reports (cf. observation guide provided below).

To avoid any conflict, the partners will have to obtain the teachers' consent to stay in the classroom while the students are creating their projects. If the teacher agrees, the partners will participate as observers, meaning **they will not interact with the students and the teacher**.

In order to make easier the work of redesign, it is highly recommended to observe all the sessions. If the partner in charge of the experimentation cannot complete this requirement, there are two options available:

- One is to record the sessions with a camera. In this case, some steps should be followed in order to assure the quality of the video. All the information concerning the process of recording the lessons is available in the Annexes (see 5. 2 How to record the lessons).
- Other one is to ask the teacher or a lecturer to describe precisely the session, according to the observation guide provided below.

The aim of the observations is to verify the development of the experimentation, to take notes about the questions/doubts students/teachers may have; to observe how they perform the proposed activities. There are, as well, some indicators that have to be compiled, so the observer might be the right person to gather them.

Finally, during the Third Transnational Meeting the YESict project consortium agreed that the experimentations will serve to **take photos, record videos/audios...** that then will be used to disseminate the project and to illustrate the teacher's guide as well as the platform. In regard with that, **the partners in charge of the experimentation in each country will have this responsibility**.

In the following sections there are provided the guidelines for interviewing the students, some instructions for carrying out the observation, the list of indicators to be compiled and some advices for taking photos/recording videos.

3. 2. 1. Interviews with students

As the experimentation intends to analyse the students' positioning towards entrepreneurship, their desire to create their own business and if the YESict process/kit has an impact on these perceptions, it has been suggested to make a quick interview to some students participating in the experimentation.

For avoiding any kind of bias, it is recommended to choose by random draw 2 or 3 students per class. This interview must be held before the 1st session of the experimentation, so each partner will have to define the precise moment with the school/staff/persons involved in the experimentation.

As said, the individual interview would contain the following key questions:

- ***Do you know what is entrepreneurship or to be an entrepreneur?***
- ***How would you define it?***
- ***Would you like to create your own business in the future?***
- ***If not, why?***
- ***Do you already have an idea of what you want to do later?***

When the experimentation is finished, the idea is to meet again the interviewed students for verifying if the YESict project has changed their mind about entrepreneurship. What we propose is to join the interviewed students in the same focus group in order to avoid doing more than one interview.

In that way, after the focus group those students may individually answer to the following questions:

- ***Have you changed your mind about what is entrepreneurship or what being an entrepreneur means?***
- ***Do you think you can become an entrepreneur?***
- ***Why? / Why not?***
- ***Are you going to think more about creating your own activity from now on?***

We have said that the experimentation also intends to observe how the teachers perceive entrepreneurship. Those questions are already integrated in the corresponding place: the ex-ante interview will be held during the training of the teachers on the YESict methodology and the toolkit and the ex-post one together with the interview proposed in the O4 Skills Evaluation Model report.

*Please, gather the answers in a copy of the document named as "**Px_1 Perception of Entrepreneurship**" (cf. **YESict 2015-2018/Og Experimentation Report/MODEL_Folder Structure/3 Experimentation results**) and save it in your corresponding experimentation folder.*

3. 2. 2. Observation guide

The observation is a tool that enables getting a lot and diverse information about the interaction between a person and the object (technology, activity, template...) that is being analysed.

It must be considered that the observer is an “estranged” external element in this interaction, that’s why it is important to let the person being observed know the dynamics and conditions of the observation:

- The objectives
- The duration of the interaction
- The dynamics (if he/she is going to be “free” or if someone is going to ask him/her to carry out specific tasks with the object, etc.)
- If some photos/videos are going to be taken
- Etc.

It is compulsory to have the consent of the person before initiating the observation.

The observation starts the moment the teacher enters the classroom until he/she leaves, in other words, during the whole session.

Important aspects to consider in regard with the students:

- If the task is intuitively and easily understood/done
- If he/she has doubts and what kind of doubts
- If he/she has problems or not
- If he/she has problems, how he/she has solved them (asking to a member of the group, asking to another group, asking to the teacher, looking for the answer alone, ...)
- If the person “seems” comfortable with the tools provided
- If he/she has difficulties to use the tools, which they are, why, how they cope with them (asking to a member of the group, asking to another group, asking to the teacher, looking for the answer alone, ...)
- If he/she can complete the different tasks in the time previewed
- If he/she cannot complete the tasks, which task, why, how much more time does he/she need, ...
- ...

It must be noted down everything that he/she says (impressions, critiques, contributions, etc.). It is also interesting to observe how he/she interacts with the platform and the Google Drive.

- The interaction with the platform in general
- The use of Google Drive
- ...

Important aspects to consider in regard with the teacher:

- If the teacher is comfortable with the subject
- If the teacher easily explains the tasks to be done
- If he/she has doubts and what kind of doubts
- If he/she has problems or not
- If he/she has problems, how he/she has solved them
- If the teacher “seems” comfortable with the tools provided
- If he/she has difficulties to use the tools, which they are, why, how the teacher copes with them
- ...

It must be noted down everything that he/she says (impressions, critiques, contributions, etc.). It is also interesting to observe how he/she interacts with the platform and the Google Drive.

- The interaction with the platform in general
- The use of Google Drive...

Finally, the partners will obtain the consent of the school to take pictures or record videos to bring additional relevant content to the evaluation of the experimentation but also for the needs of the dissemination of the project and its results (web, paper supports, platform, teachers' guide...)

Regarding the pictures, it will be important to catch the different steps of the YESict process, as well as the students using the tools, etc.

Once that the observations are finished, we suggest you to collect your notes in a copy of the document named as "Px_4 Experimentation Feedback for Redesign" (cf. YESict 2015-2018/Og Experimentation Report/MODEL_Folder Structure/3 Experimentation results) and save it in your corresponding experimentation folder.

3. 2. 3.Indicators

As it has been mentioned before, once that the experimentations are finished, the partners involved will be **in charge of describing each experimentation**. In order to follow the same structure, the partners involved in the experimentation are asked to compile the following indicators (see Table 2):

Table 2. Indicators to be compiled during the experimentation

Ref.	INDICATOR	DESCRIPTION
Exp1_1	No. of classrooms	
Exp1_2	No. of students	Amount of students participating in the experimentation in each class
Exp1_3	No. of teachers	
Exp1_4	Level of each classroom	Grade and age of the students of the classroom taking part in the experimentation
Exp1_5	Type of school	Private, public, other
Exp1_6	Characteristics of the education model of each classroom	For instance: bilingual education, special schedule due to sport, music...
Exp1_7	Teachers' field of study	The subject he/she normally teaches
Exp1_8	Relation between teachers and students	Precise if the teacher is one of the current education team for the students or not
Exp1_9	Characteristics of the place of the experimentation	Describe the room for the experimentation: inside/outside, distribution of the tables, material used (computers/laptops/tablets/...), internet connection, etc.

Exp1_10	Schedule of the experimentation	Real organization of the sessions (how many days, how many hours per session, dates of the sessions, content and subjects of each session if modified, etc.)
Exp1_11	Any other relevant information	<i>Left to the appraisal of the partner</i>

Antic will be in charge of receiving all this data and asking further information if necessary. *For doing so, please gather all the information in a copy of the document named as "Px_2 Indicators" (cf. YESict 2015-2018/O9 Experimentation Report/MODEL_Folder Structure/3 Experimentation results) and save it in your corresponding experimentation folder.*

3. 2. 4. Taking photos/recording videos

Technical requirements

- A camera with required battery
- Replacement battery and/or charging system
- Cable or device to download the information
- Tripod (if necessary)
- Camera's storage media (SD card, compact flash or the corresponding one)

Other conditions

- Parents' written consent for recording or taking photos of their children and then to use this material for dissemination activities. In some cases, it may be enough with the consent of the school; so each partner should discuss this point with the Head Master of each school that is participating in his/her country.

Before filming/taking photos

- The camera must be prepared and verified before the presentation session, in order to avoid problems or interruptions.
- It should be ensured a free of external noises atmosphere: shut down computers, phones or any other device that can interfere with the recording, if possible. Check out that the windows are closed for avoiding external noises.
- Verify the parents' consent documents. The teacher will inform the person in charge of taking photos/recording videos if there is any student that hasn't this consent. In this case, the person using the camera should avoid taking photos/recording the student, and then verify he/she doesn't appear in any photo/video.

Content of the videos/photos

The photos and videos produced will serve as communication objects, so they should capture the process the students have followed until the closure. That is to say, try to take photos that show each phase/sequence, students using the tools, the final product/production of each group, the prototypes...

In general, the photos/videos mustn't have the following content:

- **Nudity or sexual content:** pornography or sexually explicit content

- **Harmful or dangerous content:** videos that encourage others to do things that might cause them to get badly hurt
- **Violent or graphic content:** violent or gory content that is primarily intended to be shocking, sensational or disrespectful and that encourage others to commit specific acts of violence
- **Hateful content:** Content that promotes or condones violence against individuals or groups based on race or ethnic origin, religion, disability, gender, age, nationality, veteran status or sexual orientation/gender identity, or whose primary purpose is inciting hatred on the basis of these core characteristics.
- **Copyright:** respect copyright. Don't use content in your videos that someone else owns the copyright to, such as music tracks, snippets of copyrighted programmes or videos made by other users, without the necessary authorisations.
- **Threats:** Things like predatory behaviour, stalking, threats, harassment, intimidation, invading privacy, revealing other people's personal information and inciting others to commit violent acts.

Screening and selection of videos/photos

When the experimentation is finished, the partner involved in it will screen the photos that are in good conditions and may be interesting for the dissemination process. The use of this material and the final selection of the photos/videos will be decided during the fourth transnational meeting.

*Please upload your videos and photos in your corresponding experimentation folder following the structure suggested in the **YESict 2015-2018/Og Experimentation Report/MODEL_Folder Structure** folder.*

3.3. Feedback

****If any question, please address the partner in charge of defining the evaluation; in this case, SYNTHESIS.***

In the context of the YESict project and according to the previous delivered reports, a global system of evaluation has been designed. Indeed, two types of results will be assessed:

- the evaluation of the children's skills, led by teachers before and after applying the process
- the analysis of suitability and impact of the methodology and the tools thanks to focus groups (as well as observations and interviews) led by YESict partners with teachers and students, according to the evaluation guide provided by Synthesis (O4) and the present report (O8a).

In the case of the first campaign, and due to the delays, it has been decided not to evaluate the level of skills of the children before and after the experimentation. In fact, the third phase of the experimentation will focus on gathering suggestions and recommendations for improving the methodology and the tools during the redesign.

SYNTHESIS described the process the partners have to follow for compiling all this data via interviews with teachers and focus groups with students (cf. O4_Report_Skills Evaluating Model).

Consequently, the partners in charge of the experimentations in their country will have to carry out both the interviews and the focus groups with the teaching staff and students involved in the experimentation.

In the following sections, there are collected the instructions for carrying out correctly the interviews and the focus groups. In the last section is explained what the partners have to do with the information they have gathered.

3. 3. 1. Interviews with teachers

Partners' organisation staff should conduct the interviews right after the completion of the experimentation. The interview is expected to last about 1 ½ hour. Interviews will be semi-structured and a recording device should be used. Transcript of the recorded content should be submitted for further analysis.

Below is a list of questions the interviewer should ask the teachers. Other questions may be added but they should be reported when recording.

A. PEDAGOGICAL METHODOLOGY

In this section feedback about the different stages of the pedagogical process is expected to be collected. The pedagogical stages are **1)** Introduction/Motivation, **2)** Challenge Identification, **3)** Team Creation, **4)** Exploration, **5)** Ideation, **6)** Prototyping and **7)** Communication. In case the teacher doesn't make any reference to one of these stages, please make a specific question about that stage.

- ***Which aspects did/didn't you like and why?***
- ***What was easy/difficult?***
- ***What new knowledge did you gain?***
- ***How this knowledge can be used in other subjects?***
- ***What suggestions do you have for improving the methodology?***

B. ICT/non ICT TOOLS

In this section, it is expected to collect feedback about the tools used in the experimentation.

The **ICT tools** are:

- 1) The Google Drive or the collaborative space the students use during the experimentation: creating/sharing files, creating Google Docs, uploading/sharing documents, etc.
- 2) The YESict platform: the students will go through the following activities that will be filled in using ICT tools:
 - a. Introduction/Motivation phase: 1.1 Short introductory video, 1.2 Jigsaw, 1.4 What is necessary?
 - b. Challenge Identification phase: 2.2 What's the problem?

- c. Team creation phase: 3.1 Target Diagram strategy, 3.2 Team Progress Folder, 3.3 Student's role
- d. Communication phase: 7.1 Poster of the proposed solution, 7.2 Poster of the process followed

The **non ICT tools/activities** per phase are:

- a. Introduction/Motivation phase: 1.3 Let's ask them!
- b. Challenge Identification phase: 2.1 Brainstorming plenary
- c. Exploration phase: 4.1 Association, 4.2 5W + 1H, 4.3 Stakeholders, 4.4 Briefing
- d. Ideation phase: 5.1 Brainstorming in group, 5.2 5 Senses, 5.3 Superheroes, 5.4 Scenarios, 5.5 Selection
- e. Prototyping phase: Prototyping
- f. Communication phase: 7.3 Preparing the presentation, Presentation day

In case the teacher doesn't make any reference in one of the above mentioned tools, please make a specific question about that one.

- ***Which aspects did/didn't you like and why?***
- ***What was easy/difficult?***
- ***In what way the tools were/weren't useful?***
- ***What suggestions do you have for improving the ICT/non ICT tools?***

C. ASSESSMENT TOOL (Entrepreneurial Skills Rubric, Google Form)

In this section, information about the assessment tools the teachers used is expected to be collected.

- ***Which aspects did/didn't you like and why?***
- ***What was easy/difficult?***
- ***What suggestions do you have for improving the Skills Rubric?***

D. PERCEPTION OF ENTREPRENEURSHIP

The following questions are proposed in order to verify if the teacher has changed his/her mind about entrepreneurship thanks to the YESict project and to identify if he/she is interested in continuing teaching concepts related to it. (*Gather the answers in the document named as Px_1 Perception of Entrepreneurship*).

- ***After following the YESict process, have you changed your mind about what entrepreneurship/entrepreneurial mind-set is?***
- ***Do you think that it can be taught? How?***
- ***Are you going to include some of these concepts in your lessons? Which ones?***
- ***If it were the case, what kind of help would you ask for? (How to teach the concepts, definition of the lesson, evaluation...)***
- ***Anything to add?***

Please, gather the answers of the interview in a copy of the document named as "**Px_3 Interviews with teachers**" (cf. **YESict 2015-2018/O9 Experimentation Report/MODEL_Folder Structure/3 Experimentation results**) and save it in your corresponding experimentation folder.

3. 3. 2. Focus Groups with students

The number of students participating in the focus groups should be minimum 4 and maximum 8 students. The focus groups are expected to last 1-1 ½ hour depending on the number of the participants.

It is highly recommended to involve one of the partners' organisations staff member and not the teacher delivering the workshop as the focus groups' facilitator. It is also suggested to use a recording device and to transcribe the recorded content for further analysis.

- **What did/didn't you like from the workshop and why?**
- **What was difficult/easy?**
- **What new knowledge did you gain?**
- **How are you going to use this knowledge in your everyday life situations?**
- **What would you improve/change?**
- **Anything else to add**

Please, gather the answers of the interview in a copy of the document named as "**Px_3 Focus Groups with students**" (cf. **YESict 2015-2018/O9 Experimentation Report/MODEL_Folder Structure/3 Experimentation results**) and save it in your corresponding experimentation folder.

3. 3. 3. Summarising the gathered information

After gathering the notes collected in the observations and all the suggestions and remarks made by the teachers and students, the partners involved in the experimentation have to make a summary of everything.

In order to facilitate this work, ANTIC and MGEP have created two documents **(please, address to them if you have any question)**:

- Experimentation Feedback for the Redesign: summarise the main conclusions for the redesign. *The Excel document's name is "**Px_4 Experimentation Feedback for Redesign**" (cf. **YESict 2015-2018/O9 Experimentation Report/MODEL_Folder Structure/3 Experimentation results**)*
- Summary of the experimentations: follow the structure proposed in "**Px_5 Summary**" (cf. **YESict 2015-2018/O9 Experimentation Report/MODEL_Folder Structure/3 Experimentation results**)

4. RESOURCES AND RECOMMENDATIONS

4.1. Resources

In order to carry out the experimentation, the partners involved in this task can refer to different resources:

- O4 Skill Evaluation Model
- O5 and O6 teachers' Storyboard
- O7 Teachers' Guide: all the steps and the necessary information to apply the methodology
- The WordPress platform that can be found here: <http://yesict.fh-joanneum.at/wordpress/>

4.2. Recommendations

We highly recommend all the partners involved in the experimentation to take time to read carefully all the documents in order to organize their campaign in the best possible conditions.

We also want to warn you and make you pay attention on the following specific points (Table 3):

Table 3: Specific points for the experimentation

Step	What?	Warnings
Sequence 00 - Preparation	In order to evaluate the students' knowledge about entrepreneurship and ask about their desire to build their own business, 2 or 3 students per group will answer to some questions.	 Those students will be chosen by random draw , so make sure that before the experimentation begins, the students have been "selected".
Sequence 01 - Introduction	For this first step, an entrepreneur is supposed to go to the classroom and share his/her experience.	 Be sure to help schools which will participate to find this person or to contact the entrepreneur yourself

Step	What?	Warnings
January-February of 2017	The execution of the experimentation	 Be sure to take into account the real duration of the experimentation (far longer than 2 days) which includes: <ul style="list-style-type: none"> - Training of teachers to the methodology and the tools but also to the evaluation of skills - The experimentation evaluation by focus groups
October-November of 2016	The selection of school: they must have the required equipment to carry out the experimentation in good conditions	 Be sure to verify that the chosen schools answer to the prerequisites (hardware, internet connection...)

The whole duration of the experimentation and the requirement of the training of the teachers (methodology, tools and evaluation) are really constraining for schools and participants. They may be very interested in the project but find it difficult to adapt their schedule to the demands of the project.

5. ANNEXES

5. 1. Guide of the interview ex-ante of the teachers

As it has been previously explained, the different experimentations that are held in all the partner countries will be useful to assess the “progress” on the subject of entrepreneurship of both students and teachers.

It is recommended to ask those questions face to face to the teacher before explaining to him/her the methodology and the tools.

In this case, the questions addressed to the teachers are the following ones.

- ***For you, what is entrepreneurship?***
- ***Do you think there is a difference between being an entrepreneur and having an entrepreneurial mind-set?***
- ***Can entrepreneurship be taught? Which skills does it include?***
- ***Do you include some of these concepts in your lessons? How? (Give examples)***
- ***Can entrepreneurial mind-set/skills be measured?***
- ***Do you know how? And are you used to do it?***
- ***Anything to add?***

The questions that will be asked after the whole experimentation phase are included in the interview that the partners will carry out with them (cf. O4 Skill Evaluation Model).

Please, gather the answers in a copy of the document named as “Px_Perception of Entrepreneurship” (cf. YESict 2015-2018/O9 Experimentation Report/MODEL_Folder Structure/3 Experimentation results) and save it in your corresponding experimentation folder.

5. 2. How to record the lessons

5. 2. 1. Before the lessons

In this section there are explained some technical requirements and important steps to take into account before recording the lessons of the teachers. These steps must be followed before the recording day.

Technical requirements

- A camera with required battery that serves for recording the lessons
- Replacement battery and/or charging system
- Cable or device to download the information
- Tripod
- Camera's storage media (SD card, compact flash or the corresponding one)

Other conditions

- The written consent of the institution/teacher allowing to record the lesson

5. 2. 2. During the lessons

In the recording day, there are some steps to follow before and during the lessons. As the teacher involved in the experimentation will be giving the lessons, the partner in charge of carrying out the experimentation or another teacher/teaching staff of the school will have to perform the following tasks:

Before starting filming

- The recording material must be prepared and verified before the session, in order to avoid problems or interruptions.
- Ensure a free of external noises atmosphere: shut down phones or any other device that can interfere with the recording. Check out that the windows are closed for avoiding external noises.
- Verify that the teaching institution has authorised to record the lessons.

Where to place the camera:

- As the students are going to work in groups and all around the classroom, the best location to place the camera is in one side of the class, recording more or less all the students.
- Make sure that the camera is well placed in the tripod.
- Once that the equipment is placed, and before starting to record, make an inspection of everything. Record a short video and verify the quality of the image and the sound.

Development of the recording:

- Before the lesson starts, the person in charge of recording the lesson has to indicate aloud the reference of the classroom; that is to say, the name of the school and the level of the classroom.
- Make sure that the camera isn't shut down during the recording due to an empty battery. That is, change the batteries (if necessary).
- Try not to interfere or attract the students' attention, the person in charge of recording the presentations is there just to verify the filming is being well done.

Closure of the recording

- Before removing the storage media of the camera (SD card, compact flash or the corresponding one), verify the first and last recording 2 minutes. Take into account the quality and clarity of the sound and the image.

5. 2. 3. After the lessons

Once that everything is recorded, the partner responsible of carrying out the experimentation will have to follow the observation guide provided in this document. In that way, the partner has more time to observe the use of the tools and the development of the work during the experimentation, and in that way, describe it.