DESCI

1st DESCI TESTING PHASE REPORT

1st Experimental middle school of Athens

This document has the goal to report the main aspects emerged during the 1st testing phase (academic course 2016-2017). Each school must to fill in a report for each alternating training scenario realized. Your information will be valuable both for the reporting to the National Agency and to better know the experiences realized in each school.

Overall section

Indicate the course of studies and the curricula involved in the alternating training experience (School itinerary, grades and age of student involved in the alternating training project)

"Virtual Enterprises", Project, Class B (Ages 13-14), no of Students 26
Gastronomy Club, After school club, Classes B,C (Ages 13-15), no of students 21
"Logical Games", Math After school club, Classes A,B,C (Ages 12-15), no of students 20
ICT Club, After school club, Classes A,B,C (Ages 12-15), no of students 12

Indicate the partner/s formally involved in the alternating training experience (enterprises, social actors etc)

1. Vicky Malisioti, Finance Professional- Credit control and Treasury Manager (Public Company)
2. I. X. Kampouris, Olive ELAWON E.E.
3. K Matzourelis, Greek Gastronomy Museum
4. T Sosari, ''Magereio'' (local restaurant)
5. M Skaltsa, Creta Farm Company

Describe the scenario and target competences

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The educational scenario that has been implemented in the framework of the DESCI project in our school involved the development of virtual enterprises which enhanced business plans to put on the market realistic products produced at school during after school Clubs of Interest and Excellence.
The after school Clubs of Interest and Excellence that have been involved in the DESCI project this year were the following:

A) Gastronomy Business Club
B) Math Club (Logical games)
C) ICT Club (development of applications for Android)

These clubs operate in our school after the regular classes, with the participation of students who are interested in the topic of each club.

"Virtual enterprises"

"Virtual Enterprises" is a group activity, which gives the students the opportunity to create their own business and understand the operation steps. The "Virtual Enterprise" program is implemented in cooperation with volunteers / Counselors of Junior Achievement - Young Enterprise who advise and guide the student group through their own professional experience and knowledge.
At the same time, students contact business executives in order to become partakers of the executives' professional experience. Company executives present their personal experiences from the world of business and also make reference to their studies in order to help students in their career choices. The program therefore help students explore career opportunities while assessing skills and competencies needed to meet the labor market. Visits to firms are organized. During the visits, members of the company staff analyze to the students the company structure and the different sections in it, how they work and the role of each one in the products or services business provision. A short tour of the premises follows and the visit concludes with discussion where students formulate any questions or concerns.

The primary aim is the implementation of "Economy - Entrepreneurship" in practice, aiming at students coming in contact with the professional field and the production - business process.

The expected **knowledge** for students is summarized as follows:

➢ To understand the important role of business in society (increase in employment, self-employment).
➢ To understand the distinction of enterprises according to their legal status, their ownership, type of activity and size.
➢ To discover and develop their latent entrepreneurial skills which can help to expand their professional development options.
➢ To understand what a business plan is.
➢ To become aware of the fact that programming and design of an enterprise's operations is a prerequisite for achieving goals.

The expected **soft skills** for students are summarized as follows:

➢ Ownership: Students take responsibility for their own learning.
➢ Experiential learning: Students' learning is based on hands - on experience.
➢ Cooperation: Students learn with and from others and understand the dynamics of working as part

of a team.

➢ Reflection: Students experience the consequences of their decisions and apply that learning to future challenges.

The expected **technical skills** for students are summarized as follows:

➢ To conduct market research.

➢ To implement a business plan of an enterprise

➢ To advertise and launch a product or service.

➢ To successfully manage the finances of the company (sales & marketing, market analysis, financial analysis, evaluation of investment plans, etc.), using spreadsheet software.

➢ To implement a commercial web site.

Gastronomy Business Club

The "Gastronomy Business Club" is implemented as an after school program at our school. The primary aim is the implementation of "Gastronomy Business" in practice, aiming at students coming in contact with the professional field and the production - business process.

In particular, the club involves experiential contact of students with the gastronomic culture of peoples. Students, through gastronomy, travel to various countries of the world, and discover the magic of gastronomic creativity, while highlighting the beneficial impact of the Mediterranean food culture but also the pleasure of tasting. Through gastronomic culture, students learn to treat food not only as a biological necessity, but also as a means for creation and development of their personality. They prepare and trade products based solely on fresh, high quality ingredients and invest in the presentation as well as the food styling of the dishes they create.

The expected **knowledge** for students is summarized as follows:

➢ To understand the important role of business in society (increase in employment, self-employment).

➢ To learn basic and classic cooking techniques.

➢ To get acquainted with the use of cooking utensils.

➢ To learn the criteria and standards for the selection of the finest fresh ingredients.

➢ To make measurement procedures and the appropriate combination of ingredients in a standard procedure to obtain the desired results.

➢ To experiment with different ingredients and flavors.

➢ To effectively design a food product or a menu.

➢ To calculate food costs and price a menu.

➢ To design the nutrition label for a product.

➢ To make evaluations of the biological value of a product.

➢ To promote and advertise the product in order to sell it.

The expected **soft skills** for students are summarized as follows:

➢ Ownership: Students take responsibility for their own learning.

➢ Experiential learning: Students' learning is based on hands - on experience.

➢ Cooperation: Students learn with and from others and understand the dynamics of working as part

of a team.
➢ Reflection: Students experience the consequences of their decisions and apply that learning to future challenges.

The expected **technical skills** for students are summarized as follows:
➢ To get acquainted with the use of cooking utensils - cook's knife, paring knife, palette knife, serrated knife, vegetable peeler, wooden spoon, tablespoon, teaspoon, dessertspoon, balloon rotary whisk, fork, spatula, rolling pin, pastry brush.
➢ To get acquainted with the use of kitchen equipment - cooker, food mixer and liquidizer, pressure cooker, microwave oven, fridge, freezer, baking tray, grater, mixing bowls, measuring jug, chopping cutting, cooling rack, sieve, colander, frying pan, saucepan.
➢ To learn how food ingredients weigh and get measured using scales and measuring jugs.
➢ To obtain knowledge about kitchen hygiene.
➢ To learn how the food can spoil by micro-organisms such as Yeasts, Mould and Bacteria.
➢ To learn about food preservation.
➢ To produce their own product or service.
➢ To advertise and launch the product or service.

"Logical Games", Math After school club

The program Logical games is implemented in the after school program "Mathematical Thinking Club". The students create real products (mathematics educational games) for one of the virtual enterprises
The primary aims of the program are:
a) to learn mathematics through real life situations, such as by creating an educational game
b) to creatively use the history of mathematics, mathematics itself and computer programming in designing and creating video games.

The expected **knowledge** for students is summarized as follows:
➢ To put school mathematics in practice, in real life situations.
➢ To denaturize theoretical knowledge (mathematics, history of mathematics) to a product for commercial exploitation (video games).
➢ To create video games.

The expected **soft skills** for students are summarized as follows:
➢ Ownership: Students take responsibility for their own learning.
➢ Experiential learning: Students' learning is based on hands - on experience.
➢ Cooperation: Students learn with and from others and understand the dynamics of working as part of a team.
➢ Reflection: Students experience the consequences of their decisions and apply that learning to future challenges.

The expected **technical skills** for students are summarized as follows:
➢ To learn how to make an educational video game.
➢ To process graphics and sounds in order to use them in their video game.

- To implement their video game using a programming language.
- To produce the documentation for their game (the user manual).

ICT Club

In the ICT Club students engage in an authentic software development activity aiming at learning the basic concepts of programming in android environment and creatively using these concepts so as to create, android products for the enterprises.

The expected **knowledge** for the students are summarized as follows:

- To understand the important role of software houses in modern society.
- To implement android software products for mobile use.
- To make their android products available to the end user (upload the android products to the appropriate web structures with the right form .apk –executable form of their product).
- To distinguish between different forms of the android programs (aia source code files, .apk executable files).

The expected **soft skills** for students are summarized as follows:

- Teamwork.
- Ability to make decisions.
- Ability to apply theoretical knowledge to real situations and problems.

The expected **technical skills** for students are summarized as follows:

- To learn how to make an android software product.
- To be able to upload their android product to the appropriate web structures with the appropriate program form.

Describe thekind of Living Lab activated (dates, functions, objectives and targets, results?)

Teacher Living Lab
May 2016-June 2017
The main objective of this living lab was to organize and realize the implementation of the Alternating training in our school. In May 2016 the teachers' living lab developed the DESCI educational scenario for the first experimental middle school of Athens. In September 2016 the scenario was refined. In addition to that, meetings with the tutors were arranged. In October 2016 the presentation of the students' living labs were presented to students and enrollments took place. In November 2016 the student toolkit was enhanced with the scenario of our school. In December 2016 preparations were made for the DESCI world café and participation in it took place in Athens. The evaluation phase took place from March 2017 until June 2017. The results of this living lab were the educational scenario, the implementation and the evaluation of this scenario. The target group of this living lab are the students of the school.

"Virtual Enterprises" Student Living Lab

October 2016- May 2017
The aim of this living lab was to foster the students' acquaintance with the business world and the idea of entrepreneurship. Students learned about the work cycle of enterprises and their organization and were involved in a role playing of creating their own virtual enterprises. The results/products of this living lab were the business plans and the web sites of two virtual enterprises. The target group of this living lab are people who would like to set up their own business.

Gastronomy Club Student Living Lab
October 2016- May 2017
The aim of this living lab was to take a culinary trip to various countries. On the one hand the aim was to study theoretically these cuisines by placing them in their geographical and cultural framework. On the other hand the aim was to have authentic experiences of these cuisines by getting involved in cooking and tasting activities. The results/products of this living lab was the implementation of products for an international gastronomy business. The target group of these products were members of the school community that got involved as taste testers in order to help the students of the Club to define the final variety of products.

"Logical Games", Math After school club Student Living Lab
October 2016- May 2017
The main aim of this living lab was to find out how mathematics is applied to real world settings through the construction of educational logical games. Students studied various logical games and recognized the mathematics used in their implementation. The results/products of this living lab were two educational logical games: a board game and a video game.The school students are potential end-users (target group) of the games produced. Students of the club tested the games as end users and provided feedback for improvements.

ICTClub, Student Living Lab
October 2016- May 2017
The aim of this living lab was to engage students in a real software design activity. The students learned to design, implement and make their software products available to the final users through application web stores. The results/products of this living lab were android applications. The school students are potential end-users (target group) of the applications produced. Students in the club got involved in peer reviewing the applications of their classmates and provided feedback for improvements.

Describe the connections with the local community

In the last years, the unemployment rates in Greece are very high. At the same time, whereas in the past decades young people, upon completing their education, aimed at entering the labor market usually as employees in a private or public institution, it is now clear that these two prospects are becoming more difficult and that more and more young people will seek professional alternatives by setting up their own businesses, either by themselves or in collaboration with others.In this framework a school aiming at

providing students with adequate preparation to successfully enter the labor market should introduce to the curriculum courses that foster the idea of enterpreneurship.
Furthermore, sectors such as food and catering,educational services andsoftware development could be leading in the next years for the economic recovery of Greece.

Indicate the participatory practices activated

Brainstrorming, metaplan, flipped classroom

Design Phase

Describe the activities developed in the Design phase (stakeholders involved, number of meetings, positive and critical aspects etc)

The design phase began with a meeting of the Teacher Living Lab in May 2016, in which all school teachers involved in the DESCI project participated, and in which the framework of the school's scenario has been set. In September 2016 two meetings took place in order to make the necessary amendments to the scenario due to changes in the middle school curriculum announced by the Greek government during summer 2016. In parallel, meetings with the tutors took place. One to two meetings with each tutor and the teachers responsible for the corresponding living lab were arranged. In each living lab, students participated in the design phase during the implementation of the living lab. For example, three sessions of the "virtual enterprise" living lab were dedicated to the determination of the virtual enterprises to be created and students participated actively with their ideas in this procedure.
The positive aspects that emerged during the design phase were the collaborations among the living labs that had been organized.
The critical aspect in our case was the absence of an institutional framework for Alternating Training in middle schools in Greece. This means that all tutors participated in a volunteer basis without any form of direct or indirect recompensation. Moreover, it was impossible to organize individual Alternating Training programs because individual student mobility outside the school is not allowed by the existing legislation. As a result, the alternating programs implemented were mainly tutor visits to school and group visits to workplaces.

Who defines the alternating training program of the student?If possible, give further information about the role of each part in defining the alternating training program of each student

As mentioned above, there is no institutional framework for Alternating Training in middle schools in

Greece. For the needs of the DESCI project the alternating training program of the students has been defined by the school.

Implementation phase

Please, describe the activities developed in the Implementation phase (specify how much time in the school andhow much time in the enterprise/ describe the role of teachers and enterprises in the development of students' alternating training)

"Virtual Enterprises" Student Living Lab
October 2016- May 2017
The project's duration was one academic year, for one hour per week. Two school teachers were responsible for the project. The basic business organization topics were presented by the teachers. Then the flipped classroom model was used: the students studied themselves at home the educational material available in the electronic class of the project, prepared a presentation of their proposal for the virtual enterprise and the role they wished to embody in it, accompanied by a virtual CV. Then, in plenary sessions the presentations were made and the teachers collected information about the students' preferences on a) the business sector of the virtual company and b) theirposition in the organization chart. Subsequently, the students got involved in a Business simulation web game, individually and then in groups. Following that, the students were divided into two groups, according to their preferences, and formed the two virtual enterprises. Two external tutors visited the school in order to teach basic business topics such as business economics (3 sessions), marketing and entrepreneurship (1 session). The metaplan method has been used to prepare the interview of executives during the visit to the Creta farm company. Finally, students collaborativelly createdthe business plans and the web sites (one for each enterprise). The alternating training took place mainly in school with tutor visitors. A one-day visit to a company (Creta farm) took place in order to interview executives and get to know the workplace of a food industry. Responsible for the Alternating program were the teachers.

Gastronomy Club Student Living Lab
October 2016- May 2017
The students involved in the Gastronomy Business Club made a culinary tour to various cuisines of the world at Global, European but also national and local level. They studied the culinary habits of each place of their virtual tour, found local traditional menus and created themselves recipes based on the culinary culture of each place. Two school teachers were responsible for the Club. The sessions of the Club took place twice a week. One of the sessions weekly took place at school (2 hours per week), and the other one in one of the collaborating gastronomy enterprises (3 hours per week). In the school sessions the students often used the school lab in order to collect further information on the geography, history and traditions of the cuisines under study. They also designed food products and its nutrition labels, calculated food costs, designed menus and made evaluations on the biological value. The students presented their menus to the student of the virtual enterprise project that undetook the role of the R&D manager in the catering virtual enterprise.Also, they obtained knowledge about the kitchen hygiene and food preservation and

about the role of micro-organisms such as Yeasts, Mould and Bacteria in spoiling food.
In the out-of-school sessions the students had the opportunity to cook some of the recipes they had collected or designed and taste them. They got acquainted with the basic and classic cooking techniques, the use of cooking utensils. They learned the criteria and standards for the selection of the finest fresh ingredients and made measurements and combination of ingredients to obtain the desired results.
The students implemented two bazaars during this year: one at Christmas period and another before Easter. The students themselves prepared the food products of the bazaar, did the packaging, the pricing and the promotion of the products.
The alternating training took place at school (1 session per week) and in workplaces, mainly the Greek Gastronomy Museum or the local restaurant “Magereio” (1 session per week).
Responsible for the Alternating program were the teachers.

“Logical Games”, Math After school club, Student Living Lab
October 2016- May 2017
The students involved in the Math Club studied various logical games from all over the world. They analysed the mathematics used for their implementation and explored applied mathematics in real world situations. Then, by using the brainstorming method to come up with ideas in order to create their own logical games. From the ideas collected they decided to implement two logical games: a board game and a video game. Students have been divided into groups according to their interests and collaboratively created the two games. Both groups visited web sites of commercial board and video games to find out the standards that a marketable product should meet. The also met with the student of the virtual enterprise project that undetook the role of the R&D manager in the video game virtual enterprise in order to present their products.
The alternating training took place in school.
Responsible for the Alternating program were the teachers.

ICT club
October 2016- May 2017
The students of the ICT Cub were engaged in a software development activity, following the procedures that take place in software houses. One teacher was responsible for this Club. The sessions took place once a week (2 hours each), in the school ICT lab. The students got acquainted with the work cycle of software houses and reflected on their important role in modern society. They visited the “play store” in order to check already made android products and use them for inspiration. Then, the learned to implement their own Android applications. The flipped classroom method was used for the teaching of android programming concepts and techninques. The educational material was availiable in the club’s electronic classroom, students studied on their own and class discussions about particular issues were made. The peer review method was used in the design and implementation phases. In the design phase, students presented their ideas to peers who reviewed them as possible end-users and provided useful feedback. In the implementation phase students asked help from peers on difficulties they encountered. If peers were not able to provide help, the students used programming technical forums, a practice used by professional programmers worldwide. Finally, the students learned to make their android application products available to end users using the appropriate web structures (e.g. appstore). One student application is currently available in play store (https://play.google.com/store/apps/details?id=appinventor.ai_dimsar2002.Calculator)
They also met with the student of the virtual enterprise project who had undetaken the role of the R&D

manager in the video game virtual enterprise in order to present their products.
The alternating training took place at school.
Responsible for the Alternating program were the teachers.

Evaluation phase

Please, describe activities developed in the Evaluation phase and specify who is responsible for student evaluation during alternating training?

A. **The teachers**
B. School entities (please specify):_____
C. The government
D. The enterprise
E. Both school entities and enterprises
F. A mixed system that also includes other stakeholders

Evaluation Toolkit

For the needs of the evaluation phase some of the questionnaires of the evaluation toolkit have been implemented in google forms (students' ongoing & ex-post questionnaire, Students' final report, Teachers' Questionnaire). The Teachers/Tutors rubrics have been fulfilled by the school teachers for a sample of students of each living lab and kept in school in hard copy. The tutors ex-ante and ex-post questionnaires have been slightly modified to meet the particular issues of the DESCI implementation in our school (alternating training mainly in school and in group of students). The questionnaires have been sent by email to all four tutors (except from the Creta farm company) but only two tutors filled them in. Hereon follows a list with all the collected material.

Students
Students Ongoing Questionnaire (Responses spreadsheet, The questionnaire)
Students Ex-Post Questionnaire (Responses spreadsheet, The questionnaire)
Students Final Report (Responses spreadsheet, The questionnaire)

Teachers
Teachers Questionnaire (Responses spreadsheet, The questionnaire)
Teachers/Tutors rubrics (Evaluation Toolkit A) Available in hard copy

Tutors
Tutors Ex-Ante (Tutor1, Tutor2)

Tutors Ex-Post (Tutor1,Tutor2)

Evaluation Framework

For the evaluation framework all questionnaires in LimeSurvey have been filled in by teachers, students, tutors and the school administration. Two focus groups have been implemented (one for teachers/tutors and one for students). Here follows the list of the collected material.

Teachers/Tutors
Teacher/Tutor focus group (audio file, Frame for Teacher/Tutor)
Teachers questionnaires (filled in inLimeSurvey)
Tutors questionnaires (filled in inLimeSurvey)
Students
Student focus group (audio file, Frame for Student)
Students questionnaires (filled in inLimeSurvey)
Tutors
Tutors questionnaire (tutor1)
School
Ex ante questionnaire (filled in inLimeSurvey)
Ex post questionnaire (filled in inLimeSurvey)

Evaluation Framework

Results of the Focus groups of the Evaluation Framework (to be filled in for each focus group realized)

Date: 15/5/2017

Venue: Student Focus Group

Participants: 7

NAME OF TUTORS /TEACHERS /MODERATORS	ORGANISATION	EMAIL
Teachers AristeidisFalagkaras TzouveliParaskevi DimitrisPalaiogiannidis	 1st experimental middle school of Athens 1st experimental middle school of Athens 1st experimental middle school of Athens	marina.baka@gmail.com

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MarianthiBaka MariaBoumpouka **Tutor** Vicky Malissioti	1st experimental middle school of Athens 1st experimental middle school of Athens Public Company	

Please describe, in a synthetic way, background and issues addressed during the Focus Groups and include the input provided by the participants.

Experience in general	• The experience in general was positive, because it allowed teachers and students to work in a way different than the conventional model.
	• Implementing the Desci Methodology :
	  • The students had the opportunity to live the experience of a real situation within the school course.
	  • The students had the opportunity to cooperate , share ideas, communicate their ideas , materialize their ideas, to make use of their content area knowledge and test it in practice.

Skills	• **technicalandprofessionalskills**
	  • Students put the theoretical knowledge that was provided in the school environment into practical knowledge that could be useful in working environments.
	• **linguistic skills**,
	  • The linguistic skills of the student of our school are already at a good level. However, during the implementation of our scenario, children enriched their means of expression as well as technical and specialized vocabulary depending on the club and its content.
	• **ICT skills**
	  • Students developed various ICT skills , such as creating a website, computer programming in STEAM environment for the RPG etc
	• **Socialandcivicskills**
	  • In general our scenario did not involve contact with public services, but in certain after school clubs and projects the students had to come in contact with professionals and sponsors.
	• **Creativity and innovation skills**
	  • as in technical and professional skills.

Strengths	• Flexibilty of the Desci methodology since it has allowed a Junior High School to use it in alternating education, not entirely real but in a virtual enterprises environment. • Motivate students to work on something that was of interest to them. • The template for the development of the scenario was very useful, as was the example given with the Italian students' idea of automation.

	Such examples would be useful as guidelines for teachers who would like to work with the DESCI methodology.
Points of weakness	• At the three main sections of the toolkit there are many repetitions and overlaps of the same thing and some linguistic ambiguities. For example, question 1 on p.39 of the ex post evaluation for teachers states that it addresses the assessment of one student while the questions imply the assessment of more than one student. • The questionnaires were not perfectly appropriate for the evaluation of Desci methodology applied by our scenario because they didn't take into account the peculiarities of our case, which was due to the age and the legal educational framework that does not allow apprenticeship at this age.
Suggestion	• Some exemplary scenarios would be very useful. • Adjustment of the evaluation toolkit and evaluation framework in order to be more applicable for situations of "virtual apprenticeships" like the one that took place in our school.

Date: 17/5/2017

Venue:Student Focus Group

Participants:9

NAME OF TUTORS /TEACHERS /MODERATORS	ORGANISATION	EMAIL
Teachers MarianthiBaka Maria Lountzi	1st experimental middle school of Athens	marina.baka@gmail.com maroula78@yahoo.gr
Students Sofia Markousi LygeriDelivoria AntuanettaPavlou MarkosTheocharisKremidas ElinaKapetanaki	 student of the 3nd grade (Gastronomy club) student of the 3nd grade (Gastronomy club) student of the 2nd grade(Virtual enterprises) student of the 2nd grade(Logical games) student of the 2nd grade(Virtual enterprises)	

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Helen Maragou Spyros Gianni	student of the 2nd grade(ICT Club) student of the 3nd grade(Logical games)	

Please describe, in a synthetic way, background and issues addressed during the Focus Groups and include the input provided by the participants.

Experience in general	Students were motivated with the help of their teachers to work in accordance with their interests, to explore their talents and career opportunities, while they were evaluating skills and accomplishments needed to meet the employment market. Students had the opportunity to apply theoretical knowledge to real situations and problems while they had to collaborate with their peers in order to produce an outcome. The experience, in general, amused them in a way that they learned new things and acquired skills in a different educational frame than the ordinary one.
Skills	Students took responsibility for their own learning, which was based on experience. Students with the help of their teachers and professionals/tutors, developed basic skills and technical skills that were required. They learned with and from others (shared duties, tasks and responsibilities) and understood the dynamics of working aspart of a team. They all enriched their means of expression as well as technical and specialised vocabulary and also learned to use software tools, depending on the club and its content.
Strengths	Students had continuous and intense collaboration with teachers and in some cases with professionals/tutors, who advised and guided them through their own professional experience and knowledge. They also had the ability to take initiatives and innovative actions while every one of the above, contributed to achieving their goal.
Points of weakness	Students did not have an apprenticeship in real businesses, because of their age and legal framework, although some of them had the opportunity to meet some professionals of the real market. The toolkitwasrepetitive and had overlaps of the same thing and some linguistic ambiguities.
Suggestion	Students should have more opportunities to meet professionals/tutors, in order to develop the interactional dimension in the real word of business. As for the toolkit it would be very useful if more exemplary scenarios were provided.

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Suggestions for the Toolkits improvement

Please indicate, for each toolkit (teacher toolkit, student toolkit and evaluation toolkit) the critical issues emerged during the testing phase and give a specific input to overcoming it.

Teacher toolkit
p. 25, 26 more documentation should be provided on active learning and participatory methodologies.
p. 5 The phases of designing and implementation in our school overlapped in the first year of testing phase as the students involved in designing the content of the living labs within the framework provided by the Teachers Living Lab
p. 30 Scenario template. In is rather complicated to complete and present in a comprehensive way a four layer scenario (scenario, phase, module, activity). The layers should be decreased.
p. 36 In the implementation phase, the Activity A8 refers to evaluation. It is no clear what is the difference with the activities described in p. 39 section 4 Evaluation.

Student toolkit
The student toolkit should be as short as possible in order to be used by the students.

Evaluation toolkit
The table of the question "Which of the following skills identified by students as strengths and weaknesses?" which appears in questionnaires A.5 (p. 31), A5.1 (p.35), A6 (p.39) refers to a group of students, though the questionnaires A.5, A5.1. A6 should be completed for every student individually. In our case, that the students had the alternating training in groups, these questionnaires have been filled in for a group of students and not for every student individually.

In page 48, the score scale should be from 8 to 56 not from 7 to 49.

Evaluation framework
The living lab term is being used in DESCI for a continuous learning itinerary. In the evaluation framework questionnaires though has been used to describe working tables and this was rather confusing. Furthermore, in our case, the design and implementation phase overlapped. Therefore it was very difficult and rather useless to fill in the questionnaires implemented in LimeSurvey more than one time (one for living labs, one for activation phase, one for regimen phase and one for focus groups). Maybe a checklist should be added just to check in which phases the student/teacher participated.

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