LATIN AMERICA PRACTICES AND SOFT SKILLS FOR

LAPASSION

AN INNOVATION ORIENTED NETWORK

585687-EPP-1-2017-1-PT-EPPKA2-CBHE-JP

OA2.1.1 - Teams' Work Planning

Developed by TAMK, IFTM, IFAM, and IPP

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Contents

1. INTRODUCTION

LAPASSION (Latin-America Practices and Soft Skills for an Innovation Oriented Network) is a project from the program Erasmus+ within the line KA2 – Cooperation for innovation and the exchange of good practices – Capacity Building in the field of Higher Education (reference 585687-EPP-1-2017-1-PT-EPPKA2-CBHE-JP). It involves partners from Portugal, Finland, Spain, Brazil, Uruguay and Chile. LAPASSION consortium has as motivation to create a unique solution to address different problems affecting youth in HEI, helping students to obtain a better training in terms of innovation, soft skills, and internationalization. This solution is obtained by LAPASSION MP/I (Multidisciplinary Projects/Internships) for students' teams to help them to co-create, and co-develop projects proposed by enterprises and other organizations, or to accelerate innovative ideas in an international context involving students from several countries.

The aim of LAPASSION is to increase the innovation culture of HEI and the connection with Enterprises/Organizations (E/O) with impact in Employability, and Internationalization. This aim is pursued by implementing multidisciplinary projects/internships(MP/I) for co-creation, co-development and acceleration of innovative ideas, integrated in the educative project of the involved institutions. MP/I will be implemented by means of students' teams involving students with different backgrounds, different graduation levels, and from different countries, and solving challenges posed by E/O.

1.1 Consortium of LAPASSION

LAPASSION is a consortium with 15 partners, including 13 Higher Education Institutions (4 from Europe and 9 from Latin America), 1 Association of Enterprises from Portugal, and 1 Council of the Federal Institutes from Brazil. The list of the partners is the following:

Polytechnic of Porto (IPP, Portugal)
Tampere University of Applied Sciences (TAMK, Finland)
University of Vigo (UVIGO, Spain)
University of Salamanca (USAL, Spain)
Federal Institute Riograndense (IFSUL, Brazil)
Federal Institute of Triângulo Mineiro (IFTM, Brazil)
Federal Institute of Goiás (IFG, Brazil)
Federal Institute of Maranhão (IFMA, Brazil)
Federal Institute of Amazonas (IFAM, Brazil)

University of the Republic of Uruguay (UDELAR, Uruguay)
Technological University of Uruguay (UTEC, Uruguay)
Foundation of Professional Institute (DUOC, Chile)
Catholic University of Chile (PUC, Chile)
Association of Enterprises of Portugal, Commerce and Industry Chamber (AEP, Portugal)
Council of Federal Institutes of Brazil (CONIF, Brazil)

IPP is the coordinator institution of the project.

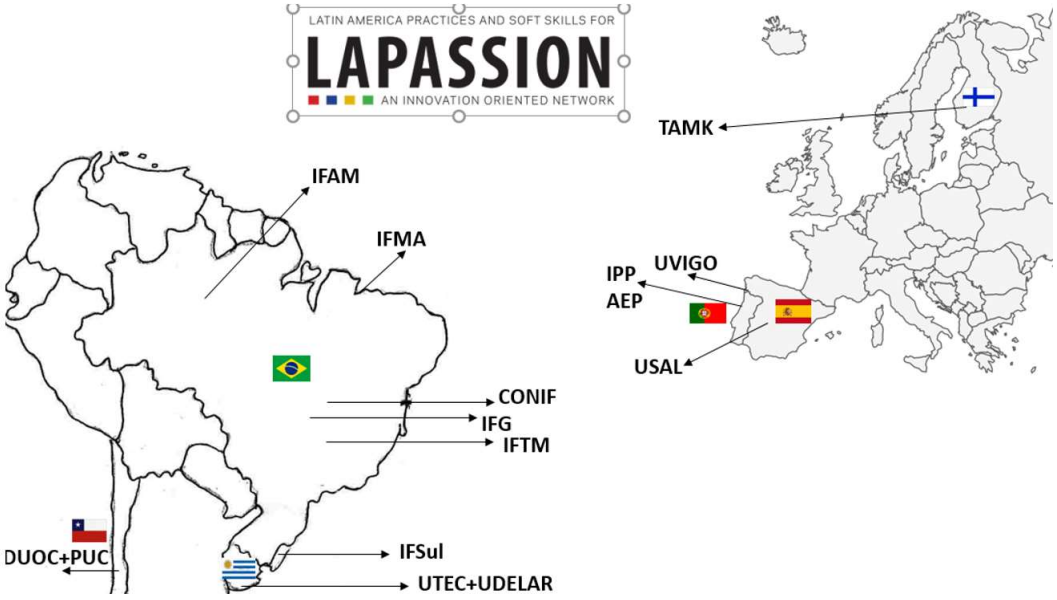

Figure 1 - LAPASSION partners in Latin America and Europe

1.2 Workpackages of LAPASSION

LAPASSION involves the following Workpackages:
WP1 – Preparation and Training for Multidisciplinary Projects/Internships (MP/I)
WP2 – Development of MP/I
WP3 –Quality Planning & Control (QP&C)
WP4 –Communication Plan, Dissemination and Exploitation Strategy
WP5 – Management

The Development of Multidisciplinary Projects/Internships (MP/I) is a very important aspect for the project, and a specific Work package (WP2) has been included for this purpose. One of the important issues is the Teams' Work Planning.

In a period of 10 weeks students need to concentrate in the development of their

projects/internships. Their MP/I will be something completely different (work with students from different countries, different backgrounds, challenges posed by E/O, etc). Thus the Working Planning is essential for the good development of MP/I.

2. THE LAPASSION DEVELOPMENT PROJECTS

LAPASSION involved 7 editions (sets) of projects plus several other additional editions (3 in Porto, 4 in Uruguay, and 1 in Brazil), in a total of 15 sets of projects.

The challenges selected by the 7 original editions of LAPASSION were the following:

- Santiago/Chile (April-June 2018): How to improve conditions for Senior Populations?
- Uruguay (March-May 2019): How to improve conditions for children?
- Uberaba/Brazil (March-May 2019): Food for the Future
- São Luís/Brazil (March-May 2019): How to improve the Human Development Index (HDI) of the State of Maranhão?
- Manaus/Brazil (March-May 2020): Socio-Environmental Technologies for the Sustainability of the Amazon
- Goiania/Brazil (March-May 2019): How to contribute to an Inclusive and Sustainable Society?
- Pelotas/Brazil (September-November 2021): Accessibility and Assistive Technologies

These sets of projects were developed during 10 weeks and each one involved sub-challenges. Each sub-challenge was assigned to one multidisciplinary students' team. The number of teams in each edition varied from 4 to 7. The number of students varied from 4 to 8. The origin of these students (different origin institutions) and the different backgronug (areas of their BSc or MSc programmes) varied from 3 to 5. Different languages (English, Finish, Portuguese, and Spanish, in the last case with different accents). With this diversity and heterogeneous nature, the work organization in each team was essential for the success of the students' projects (figure 2). The good activities' schedule was identified as the main aspect allowing a good evolution in all 10-weeks process for the students.

Figure 2 – LAPASSION@Uberaba students' teams in interaction

3. THE SCHEDULE FOR THE 10 WEEKS

By the beginning 10 weeks seems to be a long time for the development of a multidisciplinary project by a team involving from 4 to 7 members. However, the heterogeneous nature of the team, with students from different countries, with different command of languages, different cultures, from different areas, and different learning approaches creates some expected difficulties. Working practices and organization are very different for a Business&Administration student from Finland, and an Arts student from Brazil, just to give an example. A well-defined schedule, make for the 10 weeks is a good step to put the team on the good direction.

Figure 3 illustrates the general schedule for the 10 weeks made available for the students involved in LAPASSION@Santigo, held in Santiago de Chile from April to June 2018.

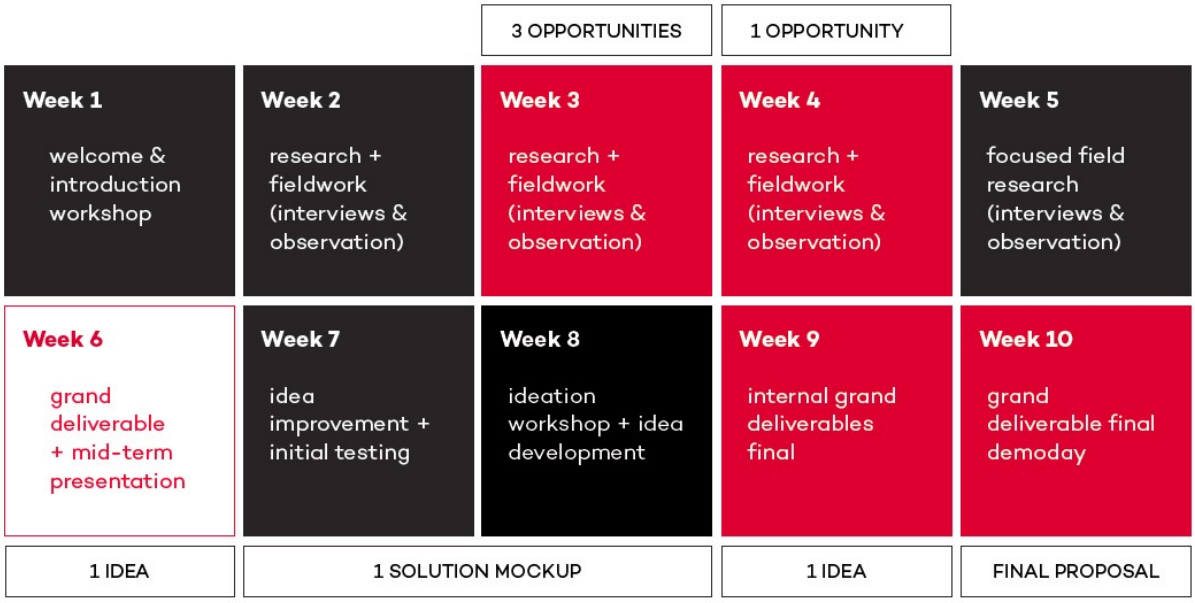

Figure 3 – LAPASSION@Santigo Schedule for students' teams

Notice that figure 3 is very simple and clear. Students know what is expected from the multidisciplinary projects. We can observe that:

- Week 1 is a kind of warming up week, with the welcome to students, the introduction, workshop. This is the week where the teams are created, the main challenge and sub-challenges proposed, the counterparts presented. It is a week for networking for all students
- Weeks 2 to 4 are heavier that Week 1. Students need to make research related with the sub-challenge, observation and interviews are intensive during this week since LAPASSION claims for client or final user orientation. In weeks 3 and 4 there are deliverables, meaning that students will need to present 3 identified opportunities in week 3 and select 1 opportunity in week 4
- From week 5 to 6 students will focus the research in the selected opportunity, going again for observation and interviews, now more oriented to the envisaged opportunity. Week 6 involve the grand deliverable with the mid-term presentation. Usually this is the moment in which students feel that time is missing since just 4 weeks remain to complete the project, it is a stress moment for teams
- Weeks 7 and 8 are very creative moments with ideation and idea development, improvement and test. Mockups are developed in this phase. Some teams can develop a prototype, others a concept idea. Software solutions appear for some teams, other develop hardware, depending on the background of each team member.
- Week 9 is really the big week for heavy work, and there is the internal grand deliverable, that is the preparation for the last week, and namely for the Demo Day
- Finally week 10 comes with the final grand deliverable and the preparation for the Demo Day,

the last day of the project with demonstrations, posters and pitches.

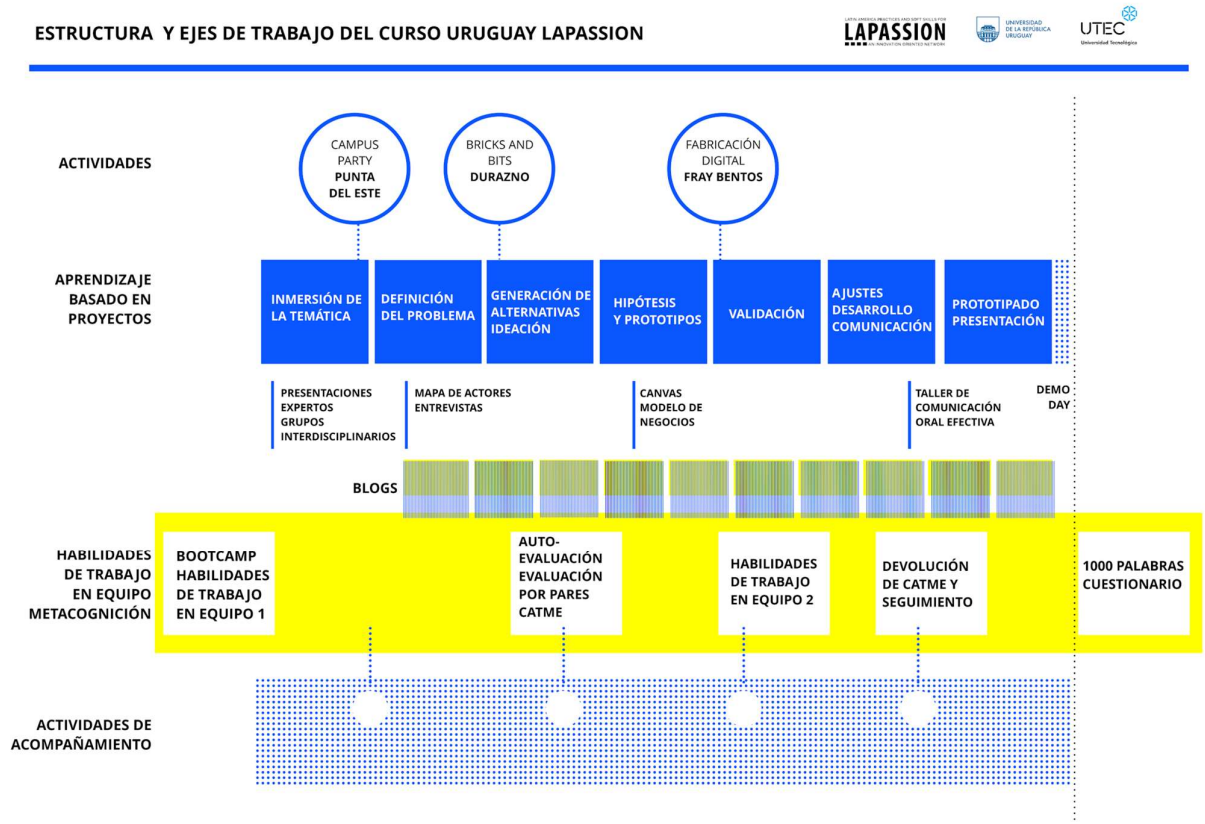

Figure 4 – LAPASSION@Uruguay Schedule for students' teams

Figure 4 illustrates the planning of the students' teams of LAPASSION@Uruguay. Notice that external activities (circles) are planned for three weeks (campus party in Punta del Este, Bricks and Bits in Durazno, and Digital Manufacturing in Fray Bentos). Durazno and Fray Bentos are two cities of Uruguay with campus of UTEC. Project-based Learning (blue squares) are also specified. We have weeks for Immersion, Problem Definition, Ideation and Alternatives' Generation, Hypothesis and Prototypes, Validation, Development, Communication, and Final Presentation. In LAPASSION it was asked to students to report weekly for blogs. In yellow we see the team work skills, with specific weeks for the Bootcamp, self-evaluation and pair-evaluation, team working abilities, and final reporting. CATME is an inquiry made to students for quality control.

Figure 5 illustrates the Students' Teams Work Planning for the 10 week of LAPASSION@Goainia. Notice that this is a replanning due to the suspension of the presential activities at the end of the second week due to the pandemic crisis in March 2020. The division of the work is the following:

Week 1: Opening, Integration of students, Challenge and sub-challenge presentation, meetings with tutors and counterparts, Learning Contract, Design Thinking
Week 2: Team studies, Audio-Visual Training, meetings with tutors and counterparts, Design Thinking, suspension of the presential activities (covid-19 pandemic)
Week 3: Activities' continuation in online mode, meeting with tutors, Design Thinking
Week 4: Work Plan and field work presentation
Week 5: Ideation, Focused field search, Opportunities' identification, Solutions exploration
Week 6: LAPASSION Questionnaires, meetings with counterparts and solutions presentation to counterparts
Week 7: Prototyping
Week 8: Prototype Testing
Week 9: Final Deliverable
Week 10: Questionnaires, Reports, Demo Day with pitches, and Virtual Confraternization

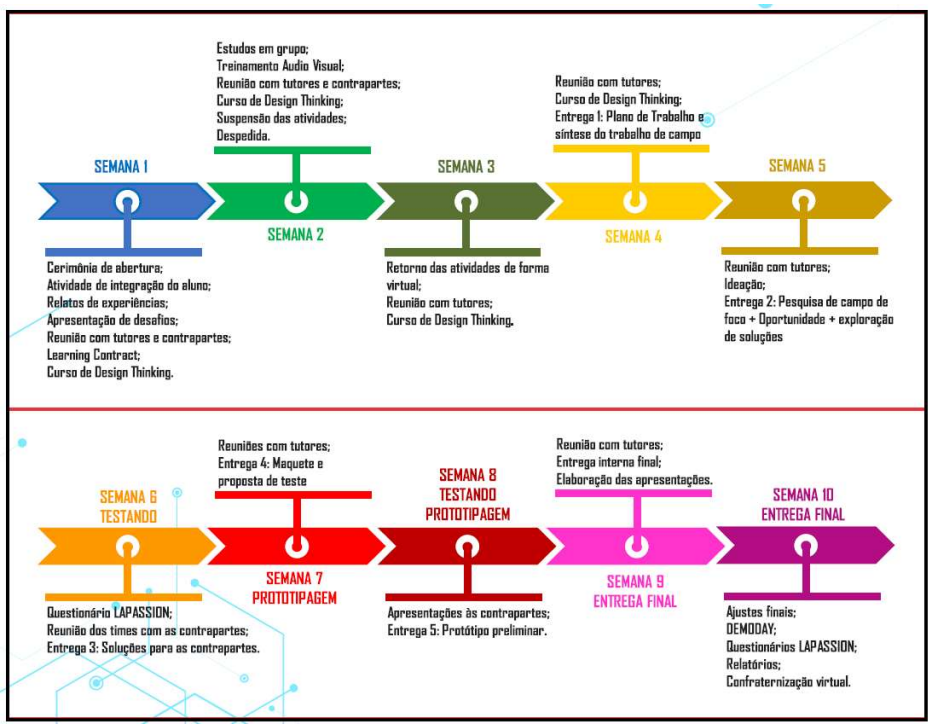

Figure 5 – LAPASSION@Goiania Schedule for students' teams

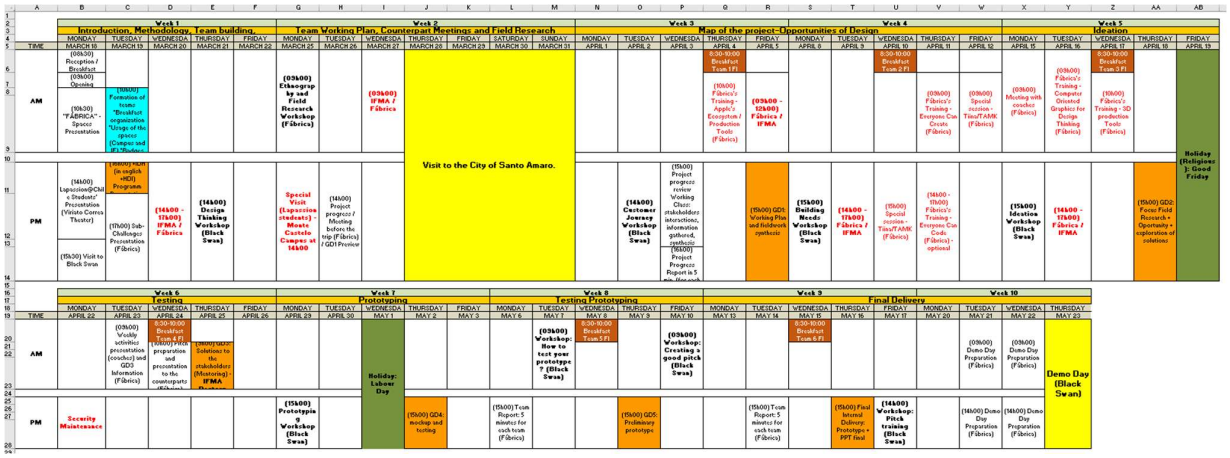

Figure 6 – LAPASSION@Goiania Schedule for students' teams

Figure 6 is a very detailed Teams' Work Planning made for students' teams of LAPASSION@SãoLuís. It is very important for students and teams to have this detailed schedule to know the activities expected for each day (eg a Workshop or visit, a deliverable presentation, etc).

Figure 7 shows the activities for one week, the first week, of LAPASSION@Manaus (the first week of March 2020). In the first day it happens the opening of LAPASSION@Manaus and the main challenge was presented and discussed (Socio-Environmental Technologies for the Sustainability of the Amazon), and subchallenges presented. The second, third and fourth days were dedicated to a workshop on Design Thinking, and activities for the integration of students. The fifth and sixth days involved a travel and immersion in Amazonia Forest Tumbiara's reserve, this activity was very important for the understanding of the problems of Amazonia and the native people, and for the integration and teams cohesion. Fortunately it was organized in the first week, since that in the third week LAPASSION@Manaus the project was converted to completely online due to the pandemic situation of covid-19.

	01 WEEK - IMERSION (march)						
	2	3	4	5	6	7	8
08:00	Reception and Institutes presentation	Design Thinking workshop			Immersion in the Amazon Forest - Tumbira's reserve	Immersion in the Amazon Forest - Tumbira's reserve	free day
09:00							
10:00							
11:00							
12:00							
13:00							
14:00	Schedule , tutors and challenges presentation. Teams division	get-to-know-each-other dynamic	Team time.	Lecture on Manaus, its geography, history and environmental policies.	Immersion in the Amazon Forest - Tumbira's reserve	free time	free day
15:00							
16:00							
17:00	Lecture: overall perspective on the challenges.						
18:00							

Figure 7 – LAPASSION@Manaus Schedule for students' teams for the first week

Another example of week planning is illustrated in figure 8, from LAPASSION@Pelotas. During the weeks 2 and 3 it is planned a set of activities (figure 8), from Talks about topics so diverse like Industry 4.0, Artificial Intelligence, Urban Mobility, Accessibility, and Assistive Technologies. Workshops about other topics, like Soft Skills, or Design and Innovation are also scheduled. There is space for students' projects development and meetings.

	DATE	ACTIVITIES (from 10:00 to 12:00)
Week 2	06/09/2021	Industry 4.0 and Accessibility – Open discussion • Industry 4.0 – Pillars – Prof. Mauro André Barbosa Cunha • Urban mobility and technologies – Prof. Adriana Araujo Portella • Artificial Intelligence for accessibility – Prof. Carlos Fernando da Silva Ramos • Apps and assistive technologies – Liziane Corrêa Gomes Silveira Graphic Designer
	07/09/2021	Project development (discuss the pros and cons of each challenge; decide a priority order for the challenge choice; each team elects a representative)
	08/09/2021	Student representatives and Lapassion Team: meeting - definition of the challenges.
	09/09/2021	Soft Skills and The Future Professional - Prof. Pedro Carlos H. Junior
	10/09/2021	Project development
Week 3	13/09/2021	Design and Innovation - Prof. Vinicius Krüger da Costa
	14/09/2021	Accessibility in educational and open resources - Prof. Raymundo Filho
	15/09/2021	Project Development
	16/09/2021	Accessibility - Prof. Rosane Bom
	17/09/2021	Project Development

UPDATED ON 21/09/2021

Figure 8 – LAPASSION@Pelotas Schedule for weeks 2 and 3

4. CONCLUSIONS

Multidisciplinary Students' Teams working for 10 weeks to propose a solution to a challenge-based problem and involving heterogeneous members (different countries, languages, cultures, institutions, programmes, etc) is really amazing, but difficult to handle. Planning for the 10-weeks period involve activities for putting the students together, for going to groups of students to real teams. It involves time for preparation of the students (workshops, talks, visits), meetings with people (counterparts, possible final users, coaches), moments for work, for preparing deliverables, for demonstrations, and pitches. Just a very good planning of the Students' Teams will allow to achieve the expected results, and the success in proposing a solution for the sub-challenges.