STEAM BOSS

boosting soft skills

Break barriers, build bridges

Spanish Pilot Project

Co-funded by the European Union

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1. Title

"Break barriers, build bridges"

2. Topic

Raise awareness about the big number of barriers people with some kind of impairment have to face daily.

Novodecor (https://www.novodecorsl.com/) is a refurbishment company with over 30 years of experience, dedicated especially to the world of integral decoration of commercial premises. Novodecor assumes responsibility for the entire process, from planning to final delivery, ready for immediate use, without the client having to take any additional steps.

It has a wide range of clients, some of whom are well known in Spain and internationally.

Its slogan is 'If it's in your imagination, we can make it happen'.

The company is trying to make its activity as inclusive as possible. In this sense, and especially in relation to people with functional diversity (both physical and intellectual) its aim is that the premises the company designs and refurbishes guarantee a complete and satisfactory experience to all their customers, trying to go beyond the current regulations.

To achieve this, the company will have to carry out different actions. Among them, it has contacted our College, CIPFP Misericordia, with the aim of getting advice from the second-year students doing a course in Social Integration who will share with the company their expertise and knowledge on the subject and will act as consultants.

The **main objectives** of the project between our school and Novodecor are:

- Detection of physical barriers in commercial premises many of which go completely unnoticed or are considered unimportant.
- Raise awareness of the importance of creating accessible and functional spaces for all types of users.
- Propose simple and realistic solutions to achieve maximum accessibility.
- Dissemination of the results to achieve greater awareness of this problem.

The **final products** to be presented at the end of the training sessions are (each group chooses one):

- Development of plans, models (physically or digitally).
- Creation of a marketing campaign (awareness-raising, denunciation, inclusive proposals) through social networks.

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- Creation of a podcast in which the different groups will make visible issues related to inclusion in commercial spaces.

To achieve the objectives, the following **soft skills** must be considered and promoted among the students taking part in the project:

- Creativity
- Proactivity
- Teamwork
- Problem solving
- Adaptability/flexibility
- Commitment
- Effective communication
- Empathy

3. Age range

The group's students range in age from 19 to 30 years old, although the majority are in their 20s.

4. Number of participants:

27 students in the second year of Social Integration at CIPFP Misericordia.

5. Description of the project:

Methodology: **Challenge-Based Learning**

ORGANISATION OF ACTIVITIES: 15th to 26th September.

Nº of hours	Date	Activity
2	September 15th	presentation of the project and activities/challenges.
2	September 16th	visit of the company manager.
3	September 17th	analysis of real spaces and introduction to STEAM approach.
2/day	September 18th, 19th, 22nd, 23rd, 24th	group work on final projects.
4	September 25th	review and collaboration with the company.
4	September 26th	exhibition of final products.

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Day 1 - 15 September: 2 hours

Presentation of the project to the students, the characteristics of STEAM projects, and the company with which we are going to collaborate. The aim is for them to understand the concept of inclusion and its importance in the design of spaces.

- **Activity 1:** Presentation of the project and a mini challenge in groups of 5: How can we design inclusive spaces for everyone?
- **Activity 2:** Empathy games or dynamics where will be used.
  - glasses simulating visual disorders
  - wheelchairs/clutches
  - sign language.
- **Final task:** research examples of inclusive spaces in your environment and bring a picture or drawing the next day.

Day 2- 16 September: 2 hours

- **Activity 1:** Visit of the company manager (online if physically impossible) to explain how they work in the spaces and what they would like to achieve.
- **Activity 2:** Participatory talk/workshop with experts from a disability association or videos on inclusion, accessibility and universal design.

Day 3- 17 September: 3 hours

- **Activity 1:** Work in teams to analyse real spaces in shops. What barriers do they find?
- **Activity 2:** Introduction to STEAM concepts applied to the project: STEAM APPROACH.
- **Activity 3:** Brainstorming: What elements should an inclusive space have?
- **Final task:** Initial sketch of a real inclusive shop space.

Day 4 to 8 (18, 19, 22, 23 and 24 September): 2 hours/day

Divide the class in working groups (with different roles: architects, designers...etc)

- **Activity 1:** Development of plans, mock-ups, prototypes (physical or digital).
- **Activity 2:** Creation of a podcast on issues related to the work and research carried out.
- **Activity 3:** Campaign on social networks.
- **Final task:** Rehearsal of a short presentation of the proposal.

Day 9: Review and collaboration with the company (25 September) 4 hours

In order to present preliminary proposals and receive feedback from the refurbishment company:

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- **Activity 1:** Oral presentation by each group to the company.
- **Activity 2:** Round of questions and constructive feedback.
- **Activity 3:** Improvement and adjustment of designs based on comments received.
- **Final task:** Prepare final materials for the last day's presentation (podcast, network campaign, etc.).

Day 10: Final presentation and reflection (26 September): 4 hours

Aiming to share learning and celebrate the process

- **Activity 1:** Set-up of a small exhibition with the work done.
- **Activity 2:** Final presentation of each group with visual materials or prototype and explanation of the process.
- **Activity 3:** Final collective reflection: What have we learned about inclusion and design?
- **Activity 4:** Evaluation of the project: self-evaluation, evaluation rubric.
- **Closing:** Diplomas of Achievement for participants.

6. Didactic hours

(estimated duration of the training)

35 hours: 25 classroom hours + 10 hours of work outside the classroom.

7. STEAM approach

Science and Technology:

- Conduct data analysis on physical barriers in commercial premises, using digital tools to collect, organise and visualise information.
- Research on innovative technologies and solutions that can improve accessibility, such as sensors, applications or adapted devices. How can lighting be improved in an efficient way?

Engineering:

- Design proposals for physical alterations or adaptations to remove barriers, considering technical and structural aspects (ramps, lifts)
- Create models or mock-ups showing what accessible spaces would look like, using diverse materials to enhance creativity.

Art:

- Develop impactful visual campaigns on social networks, using graphic design, photography and visual elements that raise awareness and call for action.

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- In podcasting, incorporate creative elements such as music, emotive storytelling and sound effects to capture attention and convey the message effectively.

Mathematics:

- Analyse statistical data on the presence and type of barriers in different venues to identify patterns and prioritise actions.
- Measure and evaluate the accessibility of spaces through quantitative indicators, promoting a data-driven vision. Measurements, proportions, distribution of space.

8. Soft skills developed through the project:

Developing soft skills through a challenge-based learning project—like identifying and raising awareness about barriers faced by people with physical diversity—offers a real-world, collaborative, and human-centred context. Here's how each soft skill can be cultivated in this setting:

Creativity

- **How it's developed:** Students will need to think innovatively to design engaging awareness campaigns, develop inclusive solutions (like accessibility tools, videos, or events), or represent physical diversity issues in compelling ways.
- **Example:** Designing a simulation experience that allows others to feel the challenges faced by someone in a wheelchair.

Proactivity

- **How it's developed:** The project demands initiative—students must go out, research, talk to affected individuals, and actively seek to understand and respond to real-world issues.
- **Example:** Proactively contacting local organizations or interviewing people with physical disabilities rather than waiting for information to come to them.

Teamwork

- **How it's developed:** Group collaboration is central students will have to divide tasks, make decisions collectively, and resolve internal conflicts to progress as a unit.
- **Example:** Organizing roles based on individual strengths (e.g., one student research, another handles community outreach).

Problem Solving

- **How it's developed:** Students will encounter various challenges—logistical, technical, social—and must brainstorm and test possible solutions.
- **Example:** Identifying a local building with poor accessibility and proposing actionable improvements.

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Adaptability/Flexibility

- **How it's developed:** Real-world projects rarely go as planned. Students will need to adjust strategies, pivot ideas, and remain open to feedback.
- **Example:** Changing the format of an awareness event due to unforeseen weather or accessibility constraints.

Commitment

- **How it's developed:** Sustaining effort over time, especially for a cause with a social impact, helps students internalize responsibility and purpose.
- **Example:** Continuing outreach or campaign activities even when participation or results are initially low.

Effective Communication

- **How it's developed:** Students must express ideas clearly—to their team, to stakeholders, and to the broader community—whether verbally, visually, or in writing.
- **Example:** Preparing presentations, creating accessible digital content, or speaking at community meetings.

Empathy

- **How it's developed:** Direct engagement with people who experience physical barriers encourages perspective-taking and emotional connection.
- **Example:** Conducting interviews or shadowing individuals with physical disabilities to understand their daily experiences firsthand.

9. Assessment:

Pre and post self-assessment questionnaire for students

- Pre-questionnaire
- Post-questionnaire

10. List of materials

- Computers with internet access
- Design software (e.g. Canva, Adobe) or physical materials to create the packaging (if you want to physically create the prototype)
- Spreadsheet software (e.g. Excel or Google Sheets) for financial calculations
- Markers, pens, paper
- Research material (internet access for market research, business books, etc.)
- Overhead projector or presentation software (e.g. PowerPoint)

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11.Venue

Aula Emprén: Classroom with computers, projector, tables and chairs specially designed to foster creativity, collaborative work and entrepreneurial skills.

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