Challenge-Based Learning: Territorial Planning and Sustainability

Challenge-Based Learning (CBL) is an active methodology that engages students in solving real-world problems, fostering their ability to analyze, diagnose, and propose creative solutions. In this context, students will conduct an analysis and diagnosis of a municipality, developing a territorial planning proposal that integrates sustainability and climate change adaptation criteria. This practical approach, inspired by initiatives such as *¡Nosotros Proponemos!* and programs like the School Agenda 21 (recently integrated into frameworks such as the Basque Government's *Ikasgelas Agenda 2030*), aims to connect learning with social reality by involving local stakeholders (municipalities, technicians, society) to ensure student proposals transcend the classroom and can be implemented.

To enrich the experience, final projects will be shared with the municipalities analyzed, promoting their presentation in public sessions or technical conferences (e.g., Local Sustainability Forums). This not only motivates students by validating their work but also contributes to updating tools like General Urban Planning Plans (PGOU), many of which in the Basque Country require revisions to address climate challenges and the Sustainable Development Goals (SDGs). Additionally, participation in events such as Climate Change Week or university project competitions will be explored to amplify the impact and visibility of the proposals.

Challenge

How can territorial planning help society address the challenges of climate change and sustainability?

Topics

Geography, Environmental Sciences, History, Literature, Philosophy, Politics, and Society

Keywords

Territory, territorial planning, values, emotions, climate change, governance

Educational Level

University degree

Timeframe

The course involves specific practices within a larger project requiring a longer duration (one semester).

- 5 weeks of work (2 hours per session)
- 10 hours of facilitated class time
- 20 minutes for pre-lesson assessment
- 20 minutes for post-lesson assessment

Learning Objectives

Objectives

- Recognize the diverse interests and roles in territorial planning (technicians, businesses, politicians, civil society).
- Understand the importance of negotiation and consensus in territorial planning.
- Identify key challenges and capacities of a municipality to advance toward the SDGs.
- Reflect on the territorial dimension of the SDGs and their integration into planning.
- Define a desirable and viable scenario for a territory by 2050.
- Establish planning objectives based on social, ecological, economic, cultural, and governance values.
- Integrate climate change into territorial planning by analyzing climate scenarios and designing adaptation/mitigation measures.
- Foster collaboration and idea exchange among students to generate innovative, applicable proposals.

Knowledge

Theoretical Knowledge:

- **Basic concepts of territorial planning:**
  - Definition and importance of territorial planning.
  - Its relationship with sustainable development, environmental protection, and social well-being.
- **Legal and regulatory framework:**
  - Legislation and norms related to territorial planning at local and European levels (e.g., Territorial Guidelines (DOT), Partial Territorial Plans (PTP), Sectoral Territorial Plans (PTS)).
- **Sustainable Development Goals (SDGs):**
  - Understanding the 17 SDGs of Agenda 2030 and their application in territorial planning.
  - Integrating SDGs into land management for sustainable development.
- **Climate change and its territorial impact:**
  - Key climate change effects (floods, sea-level rise, heatwaves, droughts) and their link to territorial planning.
  - How planning can contribute to climate mitigation and adaptation.

Practical Knowledge:

- **Analysis and evaluation skills:**
  - Ability to analyze territorial plans, identifying objectives, issues, and challenges.
  - Assessing the feasibility and sustainability of planning proposals.
- **Negotiation and consensus-building techniques:**
  - Learning negotiation and conflict-resolution techniques through simulations and role-playing.
  - Building agreements among stakeholders (technicians, businesses, politicians, civil society).
- **Proposal design and future scenarios:**

    - Designing territorial proposals integrating social, ecological, economic, and governance aspects.
    - Defining viable future scenarios for a territory, considering climate impacts and SDGs.
- **Cartography and graphic representation:**
    - Basic thematic cartography and graphical representation of territorial data (e.g., climate vulnerability maps).
    - Interpreting and using maps/charts in planning.

Transversal Knowledge:

- **Teamwork and collaboration:**
    - Developing teamwork skills, task distribution, and project coordination.
    - Exchanging ideas and perspectives for collective learning.
- **Critical and reflective thinking:**
    - Critically analyzing territorial problems and proposing innovative, sustainable solutions.
    - Evaluating planning proposals from multiple perspectives (environmental, social, economic).
- **Effective communication:**
    - Presenting and defending proposals clearly and persuasively (oral/written).
    - Synthesizing complex information for diverse audiences.

Competencies

Technical Competencies

- Analyzing and evaluating territorial plans.
- Integrating SDGs into planning.
- Knowledge of planning tools (thematic cartography, graphical representation, future scenarios).
- Designing sustainable territorial proposals.

Critical Thinking and Problem-Solving

- Analytical and critical thinking.
- Solving complex problems.
- Anticipating and managing risks.

Teamwork and Collaboration

- Teamwork and collaboration.
- Negotiation and consensus-building.

Communication and Presentation

- Effective communication.
- Report and presentation drafting.

Equipment and Materials

- **Internet access:** Essential for research, regulations, maps, and online resources like the **eGela** platform (for auxiliary materials).
- **Computers/Laptops:** For reports, data analysis, mapping, and presentations.
- **Writing/drawing materials:** Notebooks, pens, pencils, markers.

SDGs Addressed

SDG 11 (Sustainable Cities): Inclusive, resilient territorial planning.
SDG 13 (Climate Action): Mitigation and adaptation measures.
SDG 15 (Life on Land): Integration of natural spaces.
SDG 17 (Partnerships): Collaboration with local stakeholders for implementation.

Planning and Organization

Week 1: Introduction and Role-Playing

- **Day 1:** Course introduction, initial survey, and basic concepts.
- **Day 2:** Role-playing activity simulating territorial negotiation.

Week 2: Theory and SDG Practice

- **Day 3:** Theory on territorial planning and SDGs.
- **Day 4:** Practical work linking a municipality's challenges to SDGs.

Week 3: Climate Change and Future Scenarios

- **Day 5:** Identifying climate risks and mitigation measures.
- **Day 6:** Defining a 2040 vision for the municipality.

Week 4: Climate Scenarios

- **Day 7:** Analyzing climate scenarios (RCP2.6, RCP8.5) and adaptation strategies.

Week 5: Finalization and Presentations

- **Day 8:** Finalizing territorial plans.
- **Day 9:** Group presentations and feedback.

Municipalities will be contacted to share results for potential real-world implementation.

Assessment

- Final questionnaire.
- Written reflection on students' "Sense of Place."