TEAM EXPERIENCES FOR INNOVATIVE TEACHING AND LEARNING AT UNITRENTO

In the framework of the ECIU Team Award 2020 for Innovation in Teaching and Learning

European Consortium of Innovative Universities
The University of Trento is a partner of the European Consortium of Innovative Universities (ECIU), one of the main international networks of high intensity research universities, aimed at fostering collaboration in innovative teaching, research and knowledge exchange.

In this context, the University of Trento took part in the initiative promoted by the ECIU for the awarding of a prize for the design and implementation of innovative teaching practices enacted through cooperation involving teachers, students and external experts; based on the assumption that innovation in teaching and learning can lead to better results if implemented through shared projects, the award is called “Team Award” (www.eciu.org/the-eciu-team-award).

The initiative was created to identify and reward forms of teaching based on “creative” approaches aimed at researching innovative methodologies focused on student’s effective learning and awareness, approaches that are change-oriented and ready to “challenge the conventional thinking”, thus leading to effective forms of improvement of the learning processes in the university environment. “Challenging conventional thinking” is the fundamental element characterizing the agreement among the Consortium’s partners.

The University of Trento has been part of this initiative since 2019.

Participation in the ECIU Team Award has been an opportunity to learn about some of the many experiences of innovative and participatory teaching already started at the University of Trento for several years and to discuss about future developments. With this purpose the candidates for the Award have agreed to share their experiences in the form of short presentations.

The FormID, a competence center established for teacher training and educational innovation within the framework of the University Strategic Project 2017-2021, is willing to involve the entire university community for continuing this dialogue and developing proposals and initiatives in the field of university teaching and learning and their innovation.

Prorector for teaching and learning
Paola Iamiceli
UniTrento Projects
ECIU Team Award 2020
Collaborative and constructive learning to become psychologist

Arianna Bentenuto, Simona de Falco, Paola Venuti

The project aims at reinforcing the common learning objectives in the area of Clinical Psychology within different courses encompassing the first and second cycle Degrees of the Department of Psychology and Cognitive Science, with a specific focus on the psychologist’s main professional skills. The landmark of this project is that university teaching must support the development of critical thinking (Garrison 2007, Garrison et al. 2001).

Specifically, the courses involved are 4: Psychodynamics at the Undergraduate Degree in “Science and Techniques in Cognitive Psychology”; Clinical Psychopathology, Clinical interview and testing, and Laboratory of Psychological Assessment at the Master Degree in “Psychology, Neuroscience curriculum”.

Didactic strategies emphasize the role of collaborative work in small groups for constructive and active learning of the different psychological disciplines. In particular, undergraduate students are expected to learn through group work the basic skills of researching and selecting study materials, as well as present and defend their results. Master students are expected to acquire through group practical exercises theoretical and technical knowledge about clinical methodology and psychopathology, and apply it to realistic clinical cases.

Part of the innovative strategies are carried out in a dedicated Collaborative Didactic Room that enables students to work together sharing multimedia materials.

La città del dibattito

Alvise Schiavon, Paolo Sommaggio

The project “La città del dibattito” will create a synergy among academic and civic educational institutions and will try to develop students’ skills in collaborative working and critical thinking while still advancing their knowledge on debate and public speaking. University of Trento students (coming from different areas) will be encouraged to train their critical thinking through debates with Trentino citizens. They will also have the opportunity to work with the local community on both public debate meetings and other initiatives in high schools. Students will be trained as tutors and invited to participate in internships in institutions or projects related to debate in the Trento area. We will propose a blended program of training, composed by both online classes where innovative digital tools for distance learning are delivered, and traditional seminars where students can physically interact with them. Finally, at the end of training and tutoring activities, students will be required to submit original project initiatives with an annotated bibliography to carry out the project’s goals.
further and to show their critical appraisal by disseminating public debate among both the University of Trento and the City of Trento.

Further information:
https://webmagazine.unitn.it/evento/ateneo/76192/seminario-permanente-sul-dibattito

School of Innovation

Sandro Trento
The School of Innovation (SOI) is an interdepartmental structure of the University of Trento providing a multidisciplinary extracurricular programme focused on innovation and entrepreneurship to selected MA and PhD students from all University departments. It offers both up-to-date knowledge on innovation in different disciplines and skills necessary for the creation of innovative solutions. In addition to interdisciplinary technical knowledge, students acquire a set of highly appreciated economic and managerial competencies that can be used for developing of business ideas in any domain.

The courses differ from regular frontal teaching and are based on a hands-on approach. After a short introduction into the main concepts, students get involved in “learning by doing” activities such as flipped classrooms, theatre play creation, role play or case studies. In addition to the main programme, the School also organises a set of innovation-focused activities such as guest lectures, webinars, short workshops and summer/winter schools.

Students create their personalised study programmes by combining a wide range of courses that are taught by both academics and practitioners and divided into three categories (Essentials, Domain, and Innovation and entrepreneurship tools). Throughout the academic year, students need to collect at least 12 extra-curricular ECTS in order to complete the programme and obtain the Innovation Certificate.

http://www.soi.unitn.it/

Utown - “you take ownership”

Zeno Gaburro
This project aims at building scientific thinking for a large fraction of society. We see a need for a shift from a traditional view as a hard skill for experts into a contemporary approach for all individuals, to enable conscious democratic participation in society and technological change.

With this vision, we have fully designed, deployed, used, and measured 2 web-based platforms: https://zenogaburro.com/ for a university class, and https://classeinfinita.com/ for an elementary school and a middle school.
Key strengths of our system are:

- full control of participants’ privacy;
- platforms fully built, customized and maintained by teachers and students only;
- students play a central role in both software and content building, and in assessment;
- open-source software only, no external service;
- costs reduced to server hosting, 74 €/month for 537 total users, 24/7 access, 3.8 Tb storage, 3 Gbit/s bandwidth, 40-core CPUs, 144 Gb RAM, over 6 Linux Ubuntu servers;
- full-rounded system, asynchronous and synchronous;
- complete scalability guaranteed by
  » the central role of students
  » brand new load-balancing technology Scalelite, fully operational on our servers;
- 10,000 measured daily page openings.
UniTrento Projects
ECIU Team Award 2019
The Applied Interdisciplinary Labs (AILs)

Mariangela Franch, Roberta Raffaelli
AILs is an interdisciplinary problem-based learning activity. A couple of professors identifies a research question and, in the last three weeks of semester, the students work together on the topic by applying knowledge and tools acquired in the courses. The output of the project is finally presented to an extended audience.

BioLaw Project (BLP)

Lucia Busatta, Carlo Casonato, Simone Penasa, Cinzia Piciocchi, Elisabetta Pulice, Marta Tomasi
The BioLaw Project aims to build solid and widespread knowledge about the relationship between law and life sciences, as well as artificial intelligence and bioethics, through academic and professional education, research and dissemination. Law students can improve their legal skills and critical analysis capacities through direct contact with legal sources.
https://www.biodiritto.org/

CLab Trento (Contamination Lab)

Alessandro Rossi
CLab Trento is an innovative learning environment focused on experiential, interdisciplinary and highly diverse educational experience. Students from different backgrounds are challenged to get out of their comfort zone and engage with teammates, instructors, mentors and corporate and institutional third parties. Alumni of the programme report life and career changing effects.
https://clabtrento.it/it

Conflict Managers of Tomorrow Project (CTM)

Silvana Dalla Bontà
Conflict is a multi-faceted, ever present process in human relations. The CTM has two aims: in the short-term, it will train young professionals to participate in national and international negotiation and mediation competitions; in the long-term, it will contribute to spreading the use of alternative dispute resolution to court litigation.
https://conflict-managers.com/
EUREGIO Challenge on Image Forensics (*Turning the classroom into a virtual crime scene*)

**Giulia Boato**

We explored a new teaching modality for a signal processing course with an interdisciplinary cohort of students. The topic of digital image forensics was examined by students in the role of experts and police investigators. Our educational approach was focused on: experience with real problems, teamwork, elements of gamification.

FinLab - Financial Planning Lab

**Graziano Coller, Davide Panizzolo**

FinLab main goal is to enhance interaction among students, teachers and firms to develop correct financial management and planning abilities. Students work in teams using financial models to analyze firms and give them feedbacks in terms of results of the analysis. Firms provide data and learn tools to improve their financial management.

GREAT! Get Ready for Exams Advanced Training

**Paolo Sommaggio**

The initiative is a coaching program aimed at training students to take the best university exams from an argumentative, rhetorical, and psychological point of view. During a cycle of conferences-laboratories the following topics are explored: argumentative techniques, stress and performance anxiety, use of body and space during public speaking.

Innovation and Entrepreneurship at University of Trento

**Lorenzo Angeli, Andrea Capaccioli, Andrea Guarise, Massimiliano Luca, Milena Stoycheva**

The course empowers ICT students to critically assess technology. It was designed with an expanded teaching team and a focus on team-based learning, student-teacher co-creation, and “Technology Battles”. Students take co-ownership of the class in an entrepreneurial spirit, making this one a course about creating knowledge by combining disciplines, practices and people.
JPT Jet Propulsion Theatre

Andrea Brunello, Stefano Oss

JPT is a multi-disciplinary project that lies at the interface between science and art. It involves professional performing artists, researchers and science educators to promote science engagement with students, teachers, and general audiences. JPT challenges conventional ideas about education generating curiosity among the students and creating a fertile environment for learning.

https://www.jetpropulsiontheatre.org/

Master Course on Circular Economy for Materials Processing (MC CEMP)

Andrea Dorigato, Michele Fedel, Cinzia Menapace, Massimo Pellizzari, Vincenzo Sglavo

Circular economy and resource efficiency are important aspects of sustainable development within industry and modern society. A wide knowledge is required in different phases, from the handling of raw materials, to manufacturing and recycling. The MC-CEMP provides future graduate engineers with the skills to develop sustainable processes in raw materials value chains.

https://eitrawmaterials.eu/course/mc-cemp/

PeIS - Teaming up in Social Innovation

Letizia Caporusso, Francesca Sartori, Domenico Tosini

The PeIS project (Social Innovation and Project Management) is designed to motivate students who are at risk of dropping out. In the third year of the BA in Sociology, lectures are taught by a team of professionals who adopt project work techniques, and students are supported in the process of finding an internship.

Psychologists’ professions

Lorenzo Avanzi, Michela Vignoli

The project is designed for students enrolled in the bachelor psychology program; it provides the involvement of expert practitioners psychologists in order to reinforce students’ knowledge about the technical and non-technical skills needed to perform the job effectively, and to guide them towards their future academic and professional choices.
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