4EU+ Educational Framework

Examples of good practices in teaching and learning

Research-based education

is a student-centred form of active education based on the practical approaches, methods, processes, and results of research, particularly recent research: students learn as researchers, with a curriculum largely designed around inquiry-based activities; teachers keep the division of roles between teacher and students to a minimum, and facilitate, supervise, and mentor students as if they were early-career researchers. The expected outcome are a young professionals that can investigate problems with a critical spirit, collect evidence by referring to a variety of sources, make rational decisions based on discussions/interactions with interested parties, fully aware of the consequences that these decisions can have, and are able to simplify and communicate complex content outside academia.

Research-based education

Examples of related learning approaches and techniques

- inquiry-based learning
- problem-based learning
- research-led and research-tutored activities
- experiencing the research-cycle
- team-based learning
- flipped classroom
- peer assessment of students' work
- reading/discussing draft articles
- students' involvement in ongoing research projects
- students' preparation of micro-research
- case studies
- project seminars, workshops, journal clubs or experimental work
- production of research lab procedures and protocols
- classroom discussion in small/big groups
- «what/if» cases
- think-pair-share
- buzz groups

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Transfer-oriented education

Transfer-oriented education is a related and equally important cornerstone of the 4EU+ educational mission: in this student-centred approach, students are encouraged to apply what they have learned in one context (e.g. concepts, procedures,…) to other contexts. Transfer-oriented education is a particularly practical and hands-on form of teaching and learning and further serves the 4EU+ mission by creating a bridge between university and society: students are actively engaged in projects that address challenges within society and thus develop problem-solving, entrepreneurial, and critical thinking skills through their active participation in the challenges of the twenty-first century. Suitable projects can be situated around service-learning (where learning is combined with volunteer activities relevant to society), or projects can be practice-oriented (students learn and develop skills in the context of real-life problems in partnership with external partners from industry). By actively tackling problems identified by society, students immerse themselves in both worlds - university and society -and thus directly contribute to the 4EU+ focus on social engagement.

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Transfer-oriented education

Examples of related learning approaches and techniques
• Integrative think tank (ITT) (industrial partners)
• Challenged based formats (partners from NGOs, society)
• Project oriented teaching (real life projects)
• Service Learning

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Active learning

occurs when the students are actively involved in the learning process and participate beyond passive listening to support their own learning. It is an overarching concept for a range of empirically validated teaching strategies, the teacher assigns encouraging tasks and supports students in performing them and in learning how to learn effectively through meaningful activities. Learning thus becomes active knowledge construction, in which new information is being connected and related to prior knowledge of the student. Active learning has been demonstrated to improve student engagement and outcomes as well as their problem-solving skills.

Active learning

Examples of related learning approaches and techniques

- one-minute paper
- muddiest/clearest point
- problem-based learning
- flipped classroom
- summarizing/paraphrasing
- questions and answers/quiz
- fish bowl
- application cards
- turn-and-talk
- think-aloud pair problem solving (TAPPS)
- concept tests/polling
- concept mapping
- group evaluations and group discussion
- debate/panel discussion
- role playing
- active-review sessions
- brainstorming
- jigsaw
- think-pair-share
- case-based learning
- experiential learning technology-enabled active learning (TEAL)

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Critical thinking

may be defined as careful, goal-directed thinking, i.e. the ability to engage in purposeful, self-regulatory judgment based on rigorous intellectual concepts and principles. It allows students to orchestrate and self-regulate their own learning strategies and it describes the ability to analyse information objectively, evaluate this information, and come to an informed judgment. Critical thinking plays a special role in academic learning by providing an opportunity for students to reflect on the nature of knowledge; inquiring into the process of knowing, making connections between areas of knowledge, becoming aware of their perspectives and those of the various groups whose knowledge they share, and coming to conclusions about issues by directly contributing to knowledge. Beyond being an academic value, critical thinking is crucial in any democratic society to face challenges unbeknownst at present, and against populist usage of distorted news.

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Critical thinking

Examples of related learning approaches and techniques

- problem-solving approach
- course focused on critical interpretation of theories, analysis of literary sources, correct interpretation of research results, critical evaluation of articles.
- introducing elements of academic debate in class
- exposing logical errors, fallacies, invalid and faulty reasoning
- exposing students to real-life cases of scientific or scholarly controversy,
- questioning prior assumptions

- myth-bashing courses
- critical research reading
- teach how to use the critical thinking model
- spider web model
- oxford-style debating
- scaffolding method
- activities that facilitate self-disciplined reasoning, logical thinking abilities for reaching the affective dimension of thinking
- use professional texts that offer multiple perspectives

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Self-directed learning

is a process in which students take responsibility for their learning (student-centered learning). It is first and foremost the external management of the learning process which can lead to high levels of active engagement, as students take initiative in their own learning – they can identify their learning needs, set their learning goals, formulate appropriate learning strategies, monitor and evaluate them, and choose resources and methods for learning in order to perform at their best.

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Self-directed learning

Examples of related learning approaches and techniques

- foster intrinsic motivation of students by providing space for autonomy, opportunities for social-relatedness, and experiencing their own competence (Deci & Ryan)
- surface and deep-level learning (Marton & Saljö)
- making learning objectives transparent to students
- development of flexible learning environments i.e. brainstorming / brainwriting, wall of questions as formative assessment
- flexible forms of assessment to foster autonomy (final exam vs. term paper / oral presentation vs. recorded video presentation)
- constructive feedback (from teacher and peers) to reflect on learning process and outcome
- challenge-based activities
- development of metacognitive competencies such as self-reflection through student portfolios

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Intercultural and inclusive education

refers to a set of educational strategies developed to assist teachers in responding to the many issues created by the rapidly changing demographics of their students. Beyond including different values, beliefs, and perspectives in teaching, inclusive education is predicated on the principle of equity for all students by removing the barriers to educational opportunities and success. It is not just delivering course content about diversity. It involves fostering an inclusive climate in the classroom and a sense of community among students and facilitating student learning with a variety of instructional techniques and assessments. A intercultural teaching approach includes not only knowledge about the histories, cultures, and contributions of diverse groups but also affective competencies such as self-reflexion, change of perspective, flexibility, openness, and tolerance as well as behavioral skills like stress and conflict management, communication skills, and strategies to handle critical incidents and culture shock. In addition, the instructor formulates the course material, the activities, and the modes of delivery in such a way that they reach each member of the class independent of their social, economic, or ethnic background. Intercultural and inclusive education thus empowers all students to attain their maximum potentials as learners and to become socially cognizant and dynamic people in local, national, and international situations.

Intercultural and inclusive education

Examples of related learning approaches and techniques

- critical readings that include various perspectives (diverse readings) – e.g. choosing content that reflects a range of races, ethnicities, gender identities, sexualities, abilities, ages, religions, etc. - and are written by diverse people
- sharing teaching practices, decisions, and rationales with students
- Encouraging students to share experiences and background knowledge in class
- exploratory projects on educational challenges in international classrooms

5 inclusive teaching principles (Columbia University):

1. establishing and supporting a class climate that fosters belonging for all students.
2. setting explicit student expectations.
3. selecting course content that recognizes diversity and acknowledges barriers to inclusion.
4. designing all course elements for accessibility.
5. reflecting on one's beliefs about teaching to maximize self-awareness and commitment to inclusion.

- strategic use of several languages for learning purposes
- supporting open dialogue
- experiential learning component and customized courses
- openly addressing cross-linguistic issues
- learning in intercultural teams
- developing assignments that showcase students' different backgrounds and experiences. (portfolio)
- scaffolding knowledge and addressing cultural gaps
- promoting student-student relationships and student study groups
- assigning projects that foster student autonomy (e.g. by allowing space for individual students' choices and preferences)
- designing assessment rubrics collectively (e.g. guidelines for oral participation, good writing, etc.)
- class contracts, teaching-learning contracts (e.g. for class conduct, as social contracts, etc.)
- creative / reflective journals
- testimonial readings

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