

SMARTEL project:
Pedagogical and learning design proposals



The four dimensions of TEL

- Epistemology – what is knowledge; how do we acquire it? (Objectivist versus Constructivist conceptions of knowledge)
- Pedagogy – ‘The art & science of teaching’ versus ‘Guiding to Learn’.
- Design – creating interactive environments / experiences considering cognitive, affective, social and digital learning outcomes.
- Technology – using digital tools and environments to mediate identified learning outcomes.



Learning conceptions

Associative	Building concepts or competences step by step
Constructive (Individual)	Achieving understanding through active discovery
Constructive (Social)	Achieving understanding through dialogue and collaboration
Situative	Developing practice in a particular community
Connectivist	Building networks of interactions with domain, technology and community.

Modes of learning

- Using digital tools to promote:
- **Acquisition** Learning (learning by **Instruction** – lecture / online tutorials)
 - Learning through **exploration** (Inquiry-based learning)
 - Learning by **Designing / Creating** (Constructionist approaches)
 - Learning through **Collaboration**
 - Learning through **Reflection** (Self-directed / Autonomous learning)



Learning Design Models

Different approaches to design learning experiences:

- **Instructional models** (Eg. ADDIE)
- **Backward Design Model** (Learning outcomes > Assessment > Learning strategy)
- **Universal Design for Learning** - developing flexible learning environments that can accommodate individual learning differences.



Learning Design Principles

Principles that guide the design, development and implementation of Smart Learning considering interactions with:

- The Domain / Subject content
- Digital Technologies
- The Learning Community
- The Physical Hybrid Environment



The Learning Design Process

Involves three stages

- **Profiling:**
 - What does the student already know?
 - Where does the student need / want to be?
 - How does my student learn best?
- **Strategising**
 - What resources do I have at my disposal?
 - What will constitute the learning journey?
 - What learning activities will students do in order to meet the learning objectives of the course?
- **Ascertainment**
 - How will I check to see my learner has achieved the learning outcomes?
 - How will students' comprehension or application of the course materials be assessed?
 - How will I inform my learner and others about the learner's progress?



Designing a Course

Standards

- Learning Outcomes
- Ease of Communication
- Pedagogical and Organisational Design
- Visual Design
- Engaged Learning
- Collaboration and Community
- Assessment
- Feedback
- Evaluation and Grading
- Ease of Access



Designing an Activity

Using the 'Learning activity design template' learning activities are designed considering interactions with:

- Subject content
- Technology
- Group / Community



Evaluating an online course considering

- Course content and Method
- Learning environment
- Usefulness

