Designing and testing ePortfolio learning models for the development and assessment of transversal skills: ATS2020 project

Understanding the essence(s) of portfolio-based learning - A collaborative international seminar (AAEEBL – CRA)
The University of Edinburgh, Scotland
6-8 June 2016

Anastasia Economou
Cyprus Pedagogical Institute
Challenges

• Develop transversal skills necessary for the 21st century through the curriculum

• Assess these skills

• Take advantage of digital technologies to support the learning methodology

→ ePortfolio learning approach
ATS2020 learning and Assessment Model

My Learning (continuous, personal, reflective)

- Setting goals
- Prior knowledge

Teaching and Learning Approaches
- Teacher (coaching, assessment)

Formative and Summative Assessment
- Storage/repository
  - Search/collect/retrieve
  - Information/artefact
- Workspace/process
  - Plan/organise,
  - Collaborate, reflect
- Showcase/assessment
  - Produce, present

Students (active involvement)

Assessment tools
- Self-evaluation
- Evidence

Tools
- Search/collect/retrieve
- Information/artefact

Strategies

- Coaching, assessment
- Active involvement

Assessment tools
- Formative and summative
- Self-assessment, peer-assessment, teacher assessment
ePortfolio  (EUfolio, 2014)

- ePortfolios are **student-owned** dynamic digital **workspaces** wherein students can **capture** their learning and their ideas, **access** their collections of work, **reflect** on their learning, **share** it, **set goals**, **seek feedback** and **showcase** their learning and achievements.
What kind of impact, if any, the ATS2020 learning model might have during the pilot implementation, on transversal skills development and assessment?
Sample size estimation

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of schools</td>
<td>250</td>
<td>On average 25 schools in each one of the 10 piloting countries</td>
</tr>
<tr>
<td>No. of classes</td>
<td>500</td>
<td>250 schools x 2 classes (intervention and control class scenario)</td>
</tr>
<tr>
<td>No. of teachers</td>
<td>1,000</td>
<td>4 teachers per school (intervention and control class)</td>
</tr>
<tr>
<td>No. of students</td>
<td>10,000</td>
<td>500 classes x 20 students per class</td>
</tr>
</tbody>
</table>
ATS2020 facts
Project facts

- European Commission under the framework of the Erasmus+ Programme
  Key Action 3: Support for policy reform - Prospective Initiatives: European policy experimentations
- Agreement number: 2014-3647/001-001
- Duration: 1 March 2015 – 28 February 2018
- Project budget: €2.600.000
- Project coordinator: Cyprus Pedagogical Institute
- Project partners: 17 partners from 11 countries
Project consortium

Coordinator

Partners

Associate Partners
ATS2020 elements
Assessment
Innovative assessment approaches

Assessment of Learning for as Student

- self-assessment
- peer-assessment

Teacher

- formative assessment
- summative assessment
• “summative assessment is intended to summarise student attainment at a particular time, whereas formative assessment is intended to promote further improvement of student attainment” (Crooks, 2001)

• “formative assessment is in fact summative assessment plus feedback which is used by the learner” (Taras, 2005)
• “feedback is an integral part of formative assessment that requires teachers to develop designing skills so as to be specifically effective in designing and providing opportunities for their students to self-monitor and self-regulate their learning” (Dixon, 2011)
“Where am I now?”

“How do I want to go?”

“How to get there?”

Hattie & Timperley, 2007

‘gap closure’

Sadler, 1998
MyLearning journal

**Prior knowledge**
*What do I already know on the subject? What kind of skills do I already have?*

**Setting goals**
*What are my goals? What do I want to succeed?*

**Strategies**
*What can I do to reach my goals?*

**Evidence**
*What kind of evidence do I need to prove my learning achievements?*

**Self-evaluation**
*Did I achieve my goals? What could I do better?*
ATS2020 elements

Transversal skills
ATS2020 skills framework

Ways of thinking
Ways of working
Ways of living

Autonomous learning
Information literacy
Collaboration and Communication
Creativity and innovation

Digital literacy
1. Identify significant needs for learning based on their prior knowledge
2. Define goals to achieve and develop a strategy to achieve them
3. Plan and manage activities to implement strategy
4. Evaluate process and results and provide evidence for achievement
5. Reflect and explore alternative approaches (metacognition of their learning cycle)

1. Interpret situations and construct personal opinion to build an argument
2. Interact, collaborate, and publish with peers, experts, or others employing a variety of tools and environments
3. Communicate information and ideas effectively to multiple audiences using a variety of media and formats
4. Contribute to project teams to produce original works or solve problems
5. Develop cultural understanding and global awareness by engaging with learners of other cultures
<table>
<thead>
<tr>
<th>Competences and skills</th>
<th>Attainment goals</th>
<th>Digital competences and skills</th>
<th>Attainment examples</th>
<th>Levels of &quot;proficiency&quot; 1</th>
<th>Levels of &quot;proficiency&quot; 2</th>
<th>Levels of &quot;proficiency&quot; 3</th>
</tr>
</thead>
</table>
| 4. Process information and construct new knowledge | 4.1 Create new content in different formats | • Create and edit digital content  
• Use software tools to create and edit text, presentations, videos and other formats | • See the potential of technologies and media for self-expression and knowledge creation  
• Know which tool/application fits better the kind of content s/he wants to create  
• Know that digital content can be produced in a variety of forms  
• Understand how meaning is produced through multimedia (text, images, audio, video) | • Create knowledge representations (e.g. mind maps, diagrams) using digital media  
• Create original works as a means of personal or group expression  
• Use basic packages to create content in different forms (text, audio, numeric, images) | • Judge constructively and appreciate the work of others | • Process information to create or edit content in a variety of formats, using different tools. Construct their own (and new) knowledge. | • Process information to create or edit content in a variety of formats, using different tools. Publish new content with respect to others. |

1. Plan strategies to guide inquiry  
2. Evaluate and select information sources and tools based on the appropriateness to specific tasks  
3. Locate, organise, analyse, evaluate, synthesise and ethically use information from a variety of sources and media  
4. Process information and construct new knowledge
## Assessment scaffolding tool (example)

### Competence 1

1. **Identify significant needs for learning based on their prior knowledge**

### Proficiency level 1

- They identify their existing knowledge and skills within the learning context.

### Proficiency level 2

- They identify their existing knowledge and skills within the learning context and describe new learning needs.

### Proficiency level 3

- They identify their existing knowledge and skills within the learning context and describe new learning needs. They are creative and innovative towards new learning paths.

### Attainment examples

<table>
<thead>
<tr>
<th>Attainment examples</th>
<th>no</th>
<th>yes</th>
<th>exceptional</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Document their existing knowledge and skills in a way to help them identify their needs</td>
<td></td>
<td>Write down existing knowledge and skills related to the topic</td>
<td>Use reference (e.g., the teacher goals for the unit) to document learning gaps</td>
<td>My learning</td>
</tr>
<tr>
<td>• Apply self-assessment techniques and/or tools in order to identify their existing learning status</td>
<td></td>
<td>Developed a tool (e.g., a table) where they write what they know and what is related to the topic</td>
<td>Refer to experiences they have that lead them into learning needs and use reference to document learning gaps</td>
<td>My learning (visited unit on Mahara)</td>
</tr>
<tr>
<td>• Question what they already know and review it</td>
<td></td>
<td>Write down questionings on what they already know</td>
<td>Explain their questionings in reference to contradicting information</td>
<td>My learning</td>
</tr>
<tr>
<td>• Explore what is there to learn in the context given and beyond</td>
<td></td>
<td>Describe and document what is there to learn</td>
<td>Refer to relevant possible resources</td>
<td>My learning</td>
</tr>
<tr>
<td>• Are curious and open to new learning paths</td>
<td></td>
<td>Refer to what they already know in correlation with learning expectations other than the teachers’</td>
<td>Can capture ideas of learning experiences outside their immediate context and environment</td>
<td>My learning</td>
</tr>
</tbody>
</table>
## Learning Designs pool

<table>
<thead>
<tr>
<th>CA1</th>
<th>CA2</th>
<th>CA3</th>
<th>CA4</th>
<th>CA5</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Learning Design
Macro-level

- Learning goals - expected learning outcomes
  - Body of knowledge (National curriculum)

- Activities to develop these competences towards the learning outcomes

- Skills and competences necessary to reach the expected outcomes

- Learning outcomes – through all stages (assessment)

- Technology and tools
EUfolio key findings

http://eufolio.eu/docs/PilotEvaluationResults.pdf
• Impact on teaching practice
  • Piloting teachers reported a change on the way they planned and designed their lessons in order to implement ePortfolios in their classrooms.

• Impact on learning
  • The evaluation reports of all EUFolio piloting countries illustrated that the implementing teachers stated that their implementations were successful in terms of achieving the cognitive goals that they had set in their learning designs and helping students developing 21st century skills.

  • Students engagement
    - The pilot evaluation reports of all countries illustrated that there was an increase on their students’ motivation and engagement during the ePortfolio implementations.
    - In particular, most countries reported that students with low participation in the classroom seemed more engaged and participating during their ePortfolio development.

• Impact on assessment
  • Formative assessment was supported during the EUfolio approach giving opportunities to both teachers and students to interact towards improvement of learning.
Successful implementation of ePortfolios is strongly dependent on the teachers’ professional learning

- It is important for implementing teachers to have sufficient pedagogical and technological professional learning before (trainings, workshops), during (coaching, mentoring, peer to peer) and after the implementations (communities, policy)

- Technical support in using the platform needs to be accompanied by pedagogical support and content such as sample learning scenarios
• Promote communities of practice and support an updated portal with resources and good practices
• Ensure supportive school management team
• Develop a plan for implementation that is realistic in terms of what the school can achieve and develop
• ePortfolios to be integrated in and aligned with the country’s Curriculum from early stages
• Provide technological infrastructure in schools and technical support
• Deployment of the ePortfolio integration in more schools and teachers by providing convincing evidence-based arguments for the benefits of using ePortfolios as well as concrete examples.
• Introduce innovative assessment approaches supported by technology and tools
EUfolio example

- https://eufolio-resources.eu/teachers/exemplar-eportfolios/exemplar-eportfolio-1
Thank you

Anastasia Economou
Educational Technology Department
Cyprus Pedagogical Institute
anasta@cyearn.pi.ac.cy