Core Research Area: **Interoperability**

Research project proposals produced by the experts of the 4th STELLAR Delphi round

262. **Interoperability**  
Group: Researcher

**Project title**  
Integration of Learning Environments

**Project description**  
Today, from the learner point of view, TEL requires use of multiple different technical platforms together. Thus, for example, authentication is a problem in which the user needs to remember multiple accounts and their passwords. The research question is, how to integrate all the different environments in order to make the user experience as smooth as possible.

**Project partners**  
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**Project justification**  
This is more like a technical issue, but after solved, can open up new insight to develop future learning environments that go beyond current standards.

263. **Interoperability**  
Group: Researcher

**Project title**  
Integration external tools in e-learning systems

**Project description**  
Interoperability, tool integration, dynamic adaptation of content, interactive content, and automated learning assistance through student behaviour analysis, will configure the major research topics in this project.

**Project partners**  
Several research groups in EUROPE

**Project justification**  
As LMSs try to move beyond simple "content delivery" and adopt other educational approaches (e.g. practice-based learning approaches) the current standards and technologies do not provide enough support. To solve this limitation, some platforms can extend their functionality by a mechanism called "extensions". However, the complexity of these extensions is severely limited by the possibilities of the LMS. These limitations can be described as tailiorability and extensibility deficiencies, which have been identified as the main drawbacks in current LMSs. The current trend to solve these limitations is to take advantage of the Software as a Service (SaaS) and Cloud Computing software deployment models. The main idea behind these solutions is to develop a learning tool separately from the LMS, and provide it with some interfaces to allow their integration.

264. **Interoperability**  
Group: Educator

**Project title**  
Open data - Removing organisational boundaries

**Project description**  
To look at what happens when you open up information and data sources within an institution and allow users to access these and use them freely with any device (phone, laptop, etc.). The TWOLER
A project at the University of Westminster tried this and it was a great success but funding and job losses has stopped any further research.

**Project partners**

A range of institutions (universities, colleges, schools, public sector bodies, private enterprise) to expose a range of data sources, across several countries to explore the different cultural attitudes to open data.

**Project justification**

To show how it is technically possible, to demonstrate the benefits to society of open data, and identify any barriers.

The education system is still based on outdated institutional models, we need to open up the institutions and empower the learners.