LEARNOVATE CENTRE

Call for Partner Interest
Learnovate Y3
Core Funded Projects

Assessment 2020

K12

Assessment 2020

Motivation (General Problem Addressed)

The focus on K-12 students to acquire '21st Century Skills' is increasingly impacting on teaching practice, curriculum design and delivery. However, such higher order skills have traditionally been very difficult to assess.

At the same time, new technologies offer new and innovative learning opportunities for students which can help promote hgher order skills e.g. Social, Informal, Non-Formal, Adaptive and Gamification.

This project will address the problem of 'assessment' for 21st Century Skills where technology can be/is being used to promote learning innovation.

Project Overview

This project will first comprise a research phase (3 months) to understand the state of the art in terms of 'assessment' for 21st Century Skills. The research phase will focus on core questions such as:

- What are 21st Century Skills?[1]

- What learning innovations are being employed to promote them?

- What techniques/methodologies are being employed to assess them?

- What technologies are being used to promote and assess 21st Century Skills?

For the development phase (9 months), the project will identify a small number of 'technology-based' approaches that are being used to generate and promote these skills. These may include:

- collaborative assessment tools (Ref CAA Ireland)

- immersive learning

- games-based learning

- social media

- e-Portfolios

The development phase will focus on the need to both capture and assess evidence to support the develpoment and acquisition of higher order skills using these approaches.

It will attempt to create a common framework to interpret, visualise and assess evidence of learning which comes from multiple sources of implicit and continuous assessment.

In particular, the project will focus on techniques that move away from explicit, traditional methods of assessment towards real-time, continuous assessment models incorporating multiple evidence sources.

The 'real-time' nature of this implicit, continuous assessment will be explored in terms of its impact on adaptive, personalised learning.

Business Challenges

To date, 'technology-supported' assessment of 21st Century Skills has tended to evolve around proprietary approaches that are either based on 'closed' task design and/or platforms that support a singular approach. The business challenge is to evolve an approach which is more 'open' and scalable – and that can therefore be applied in multiple scenarios.

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(1) These can be broadly grouped into four areas:
    1) Ways of thinking: Creativity, critical thinking, problem-solving, decision-making and learning;
    2) Ways of working: Communication and collaboration
    3) Tools for working: Information and communications technology (ICT) and information literacy
    4) Skills for living in the world: Citizenship, life and career, and personal and social responsibility

Specific Project Objectives

• To create a common framework for how 21st Century Skills can be assessed (Maybe limited to the 'approaches' under review)

• To be able to assess (and capture) informal learning and social activity from learners; In particular to research new methods of assessment which can interpret, visualise and comparatively assess implicitly and continuous learning activity.

• To create a demonstrator in which multiple methods and approaches to assessment can take place.

• To provide teachers with the tools to visualise and assess actions, behaviours and skills of learners in relation to 21st Century Skills.

Key Innovations

Defining and collating data and activity from multiple sources.

Aligning outputs from these activities to predefined pedagogic criteria (Higher Order 21c Skills) to produce assessment metrics.

Aggregation and triangulation of processes and outcomes.

It is expected the project would also output several Learnovate white papers on Next Generation Assessment methods as well as two research papers (for approved publications)

Potential Commercial Opportunities

Commercialisation of 'platform' to support assessment of 21st Century Skills.

Enabling industry partners to expand their offerings to include new forms of assessment.

This technology has application in Irish and Global markets.

Links to previous projects

This project will leverage technologies, outputs and trial data from two Learnovate Y2 Core Funded Projects

• I-LEARN – Immersive, pedagogically scaffolded, task-based environment

• ALAMANC – Personalised, non-formal content analysis and delivery mobile application

The project will also be able to build on the work of ATC21S from Microsoft and Intel.

Technical Approach

TBC

Project Structure and Duration

12 months
3 months Desk Study followed by 9 months Project Execution.

Desk study aspect of this project involves investigation of assessment methods/technology as well as the definition of a concrete, focused research project involving industry trial partner(s).

Resources (People, Data Business Partners, Trial Partners)

TBC

Note: The project will also link closely with the NCCA-coordinated Collaborative Assessment Alliance for Ireland. CAA Ireland is a collaboration between NCCA, Microsoft, Collaborative Impact, Janison and Learnovate. It also includes major stakeholders in an Irish context, incorporating a network of teachers and schools, along with policy makers and teacher education organisations.

In 2014, CAA Ireland will be running a project to generate a number of specific 'collaborative assessment' tasks designed to align with Junior Cycle reform. As part of the alliance, Learnovate has an opportunity to input to the task design process and incorporate these into the Assessment 2020 project.

Risks

Dependent on hire of K-12 Pedagogy Researcher (?)

Note: a potential risk in this project is the availability of appropriate learner/learning tracked information or the availability of learners & trial setting within which to capture the necessary learner/learning data (See also final section on linkkage to Collaborative Assessment Alliance project.