Erasmus+ Strategic Partnership proposal

This project proposal is written to clarify the partners' intentions for a Erasmus+ Strategic Partnership project proposal. However, it is in no case a project/funding proposal (yet).

TITLE OF THE PROJECT

The missing link in the digitalization of education:

The Online Exam

CONTACT DETAILS

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PROJECT

Estimated start date	01/09/2016
Estimated end date	30/09/2019
Estimated project costs and types of costs eligible for funding	The total costs are estimated at 450.000 euros for a total project time of three years. The share of Erasmus+ funding for this can reach up to 100%.

PROJECT DETAILS

Need and potential for the project

Online education has grown significantly in recent years due to new interactive and pedagogical learning methods. Higher education institutions increasingly use platforms such as Coursera and edX to offer massive online open courses (MOOC's) and small(er) private online courses (SPOC's). Even full-fledged Masters programs are increasingly offered online: in the Netherlands alone 26 of such programs exist[1]. Expressed in economic value, the e-learning industry is one of the fastest growing markets with 15% compound annual growth rate and €56.2 billion generated revenue in 2014 and it is going to double in 2015.

As the online education sector continues to undergo explosive growth, gaps are emerging in the experience that prevent students from reaping the full benefits of online offered education. **An important stumbling block is the inexistence of reliable and safe virtual ways of examination.** When students finish a course or a programme, they still physically need to present themselves at the hosting educational institute in order to pass the exam and get credit/certified for it. This is often a costly, time consuming and inefficient handling for both students and hosting institutes and limits the full potential of online and digital education.

Each higher education institute organizes more than 150.000 exams each year and each professional in the private sector takes on average 2-4 test a year. In order to organize all these exams, companies and higher education institutions have to rent testing centres, use their own facilities or build their own examination locations. When using a digital examination tool, these organisations could potentially cut their examination costs by about 75% and make the whole examination process more flexible and time saving for the students and/or professionals.

Currently higher education institutes spend more than €15 million each year just to organize these physical exams. With the increasing prices of real estate, they need new, more cost-efficient solutions that will offer a similar "exam room" experience. Students and employees, at the same time, spend hundreds of hours and thousands of euros every year to travel to the exam locations. Not even mentioning people who cannot afford to travel and thus miss the chance to have a high quality, certified education.

In the past, technology did not permit us to create exam-like conditions in people's homes. Today, ways of online examination are being developed which potentially offer a similar exam room environment that is secure and fraud resistant. **With this project, 3 leading higher education institutes, a highly innovative SME, two multinational companies and a major international certification institute from 3 different European countries will organise large-scale pilots with one of Europe's highly promising virtual examination solutions: online proctoring by ProctorExam. By doing so, they will explore all the ins and outs of digital examination and show the rest of Europe the potential and benefits of online education, examination and certification.**

[1] http://www.distancelearningportal.com/study-options-a/masters/1/netherlands.html

Project set-up and activities

The following project outlook is a suggestion from our side and still subject to change. All feedback is more than welcome.

In this strategic partnership, the partners will develop, test, adapt and implement innovative practices relating to digital examination. More specifically, the partnership will:

1. **Develop and test** the ProctorExam way of digital examination so that it meets both HEI's demands as well as large multinational and certification institutes' needs in terms of offering the right digital examination solution for their online courses.
2. **Adapt and implement** the ProctorExam way of digital examination in 6 large-scale pilots across three countries in order to fine-tune the methodology and use in different settings. Special attention will be paid to privacy issues and ways of communication between students and hosting institutes on the exact procedure and rules of digital examination.
3. **Disseminate the innovative practice of digital examination** to peer HEI's, companies and certification institutes to showcase the proposed solution and remove the final hurdle to real online education across Europe.

Novelty of the project

Currently, thousands of (corporate) educational institutes all over the world offer a wide range of online courses. Nevertheless, the exam cannot be taken online due to fraud concerns. As a result, the advantage of reaching thousands of students with online courses is limited. Higher education institutes and other testing organisations have to organize exams in physical locations at specific time, which costs them a lot of money and human resources. The solution proposed by ProctorExam is the first online proctoring service that can create a virtual exam room with a 360° audio and visual of the exam taker. The platform is built on top of Ruby on Rails, and utilizes bleeding edge technology such as ActionController::Live, WebRTC, and React.js. ProctorExam has managed to build audio, visual and data streams trough the web-browser so that no application needs to be downloaded on the computer for its service.

Also, ProctorExam is the first online proctoring service that is orientated in Europe. Companies that offer a different solution to the same problem of online examination are located in the United States and due to the Patriot Act many legal barriers form a blockade to entry to the European market. Therefore the data that they store concerning the exams also fall under the Patriot Act. We see that a lot of European governments and institutions are looking for a European solution that does fall under European regulation. Therefore, we believe that the time is right to organise large-scale pilots across Europe to test and explore the ProctorExam way of digital examination to learn more about the full potential and benefits for online education, examination and certification.

Impact

We hope that by removing this final barrier to online education we can make education accessible for everyone. Currently, only privileged people within developing countries can provide their children with good education by sending them across the country. With our solution, people will be able to get their full degree without having to fly over to the university itself. We can help to educate people all across the world. Also, we would like to make a difference for people that are physically not able to come to class to follow education. Children or people with a disability or with a chronic disease do not always have the opportunity and possibility to go to universities/ educational institutions to follow courses. With the ProctorExam solution we offer the possibility for those students to follow their courses online and get the accreditation for these courses by doing a virtual exam through ProctorExam.
The main benefits for both the hosting institutions and exam takers include:

- Ability to offer courses and certify students worldwide
- Cost efficient and flexible examination
- No need for examination facilities
- Efficient organisation of exams
- Accredited education accessible
- Regardless of geographical, financial or social situation of a student
- Cost efficient examination
- Time efficient examination

Higher Educational Institutes
The investments in the academic e-learning market have grown dramatically since 2004, which signals a fast growth in the higher education market. The number of universities offering online degrees will continue to increase. There are 4.000 higher education institutes in Europe and 20 million students. In this section we will describe in more detail the higher education market in Netherlands, Germany and UK as these are the countries from which the partnership consists.

Netherlands – The higher education industry in Netherlands includes 158 institutes, hosting 871.000 students. Netherlands is one of the early adopter countries in e-learning. Almost all the higher education institutes offer at least one online course.
Germany – There are 268 higher education institutes in Germany with 2.4 million students. Almost all the universities offer distance learning courses. Currently, there are 360 courses offered online by German universities.
UK - There are 282 higher education institutes in UK, out of which, 138 offer online degree courses. Thus, almost 50% of all the degrees offered are online. According to data from 2013, there are 2.5 million students studying in the UK.

Currently, in order to organise an exam, the higher education institutes have to rent out a space or build their own testing centre, which is extremely costly taking into consideration the seasonal nature of exams. Another alternative that is used by the University of Amsterdam is taking a distance exam via Skype, which is far from being a secure and fraud-free solution.

Private sector
Large companies such as the Global 5000 are the primary buyers of eLearning products and services. They account for more than 40% of the eLearning market clientele globally. Projecting this number on the eLearning market of Europe, €2.4 billion was generated by corporate eLearning in 2013. Company employees must take a number of different tests throughout their working time. These include from pre-employment qualification tests all the way to accreditation exams to certify their expertise. The number of tests an employee takes depends on the sector they are working in and their position. According to our market research an average employee takes 2-4 tests a year. Nowadays, all these employees must take tests in certain locations, which means that they have to be absent from work and spend a lot of their own time just to take a test. At the same time, the companies have to rent the space for the tests.

Certification Institutes
Many professionals like lawyers, accountants and doctors need licenses to be able to work. These licenses are given by certification institutes. There are different types of certification institutes in each industry. For example, CFA and CEFA for financial industry, NIMA in marketing, etc. Currently, these certification institutes collaborate with different testing centres to organize the tests or create their own testing locations. Both solutions are costly and are not flexible, as they can rent the place for only a certain day.