Periodic Reporting for period 1 - SlideWiki (Large-scale pilots for collaborative OpenCourseWare authoring, multiplatform delivery and Learning Analytics)

Reporting period: 2016-01-01 to 2017-06-30

Summary of the context and overall objectives of the project

A major obstacle to increase the efficiency, effectiveness and quality of education in Europe is the lack of widely available, accessible, multilingual, timely, engaging and high-quality educational material (i.e. OpenCourseWare). The creation of comprehensive OpenCourseWare (OCW) is tedious, time-consuming and expensive with the effect that often courseware employed by teachers, instructors and professors is incomplete, outdated, and inaccessible to those with disabilities.

With the open-source SlideWiki platform (available at SlideWiki.org) the effort of the creation, translation and evolution of highly-structured remixable OCW can be widely shared (i.e. crowdsourced).

Similarly to Wikipedia for encyclopaedic content, SlideWiki allows to
- collaboratively create comprehensive OCW (curricula, slide presentations, self-assessment tests, illustrations etc.) online in a crowdsourcing manner
- semi-automatically translate this content into more than 50 different languages and improve the translations in a collaborative manner, and
- support engagement and social networking of educators and learners around that content.

Several hundred comprehensive course materials are available in SlideWiki in dozens of languages. In this project, we further mature, advance and validate the SlideWiki technology platform, integrate it with complementary tools, services and solutions, such as Massive Open Online Course (MOOC) platforms and Learning Content Management Systems (LCMS), and perform four large-scale trials in

1. secondary education,
2. vocational and professional training,
3. higher education and
4. community-driven open-education.

A particular focus of the technology development as well as the application and evaluation in the trials is the suitability for academics, teachers and learners with disabilities.

Work performed from the beginning of the project to the end of the period covered by
the report and main results achieved so far

A number of trials have already been conducted within the first reporting period, based on the major release versions of the new SlideWiki platform that have been developed within the project so far. The pilots were conducted with different target groups in different European countries and with learning material in different languages. Detailed reports on these initial trials can be found in the corresponding deliverables of WP6 to WP8 and in the WP summaries.

Numerous editing functionality has already been integrated into the new SlideWiki platform, allowing for the distributed creation of slides and thus the collaborative creation of learning materials. Ubiquitous accessibility is ensured with a modern new technology stack, although the performance of the current platform release needs to be improved. Multilinguality is supported by several modules already.

The implemented technology stack and microservice architecture already allows for a seamless integration of the platform with learning management systems and social media, among others. Decks can be easily shared to social networks, such as Twitter, Facebook, Google+, or LinkedIn. They can be viewed on different devices without special requirements. The bandwidth used by the platform does not yet dynamically scale sufficiently, but this is work in progress (as the platform’s performance). User profiles and a content recommendation module add to the user experience and increase the platform’s accessibility.

Core processes, workflows and content value chains have already been set up in the first reporting period. They are evaluated in the trials with different target groups all over Europe (see reports on WP6-9). Modules and microservices providing core features required to implement these processes and workflows - responsible for content creation, translation or analytics - have already been developed or are under development (see Section 1.2).

Accessibility has been in the focus of the project from the very beginning. It is already considered in many aspects of the platform, although not fully implemented yet. One reason for this are the underlying technology modules that do not provide complete accessibility. This issue has been recognized and is under development. However, profiles of learners with disabilities can already be represented and the platform itself as well as its content can be partly adapted to these profiles.

Basic learning analytics features have been integrated that track the learners’ activities and recommend suitable learning resources or allow for automated self-assessment. Further analytics features are in preparation and will be integrated in the second reporting period.

Progress beyond the state of the art and expected potential impact (including the socio-economic impact and the wider societal implications of the project so far)

The expected impacts have not changed and remain valid based on the project outcomes we achieved so far, i.e. we expect that the following impacts will be achieved by the end of the project or in the upcoming 2-3 years:

• the SlideWiki service scales technically and millions of users use SlideWiki regularly
• thousands of comprehensive lecture series are available in dozens of languages
• similarly as Wikipedia and OpenStreetMaps, SlideWiki will empower large communities to collaboratively create high-quality multilingual educational content
• educational resources are created, translated and maintained by dozens or hundreds of users and widely reused across Europe
• establishment of an Open Educational Content ecosystem with focus on accessibility
• multilinguality facilitates that SlideWiki use also spreads across Europe & Ibero-America, an emerging market for educational content
• open participation to any (high) educational institution while providing a common and shared infrastructure
• viral usage of SlideWiki
• the effort for inclusive and accessible courseware creation is reduced
• create a truly engaging mobile and ubiquitous learning user experience
• learners with disabilities and impairments can easily access educational material
• integration with social networks supports informal learning scenarios
• gamification of the learning experience

The project’s main aim remains to dramatically change how courseware is created, shared, translated and used collaboratively without technology getting in the way. We still envision that SlideWiki can have a similar impact on the educational domain as Wikipedia had on encyclopaedias or OpenStreetMaps on online maps. The currently implemented SlideWiki technology stack and the systems service orchestration allows to use the created content directly within social networks, university LMS systems, MOOC platforms or any web platform. Through the integration of social networking features, we aim at establishing an architecture of participation, where one possibly small contribution by a particular user will trigger a number of other improvements and contributions by others. Content changes in one platform will allow adjusting and modifying possibly wrong material in other usage portals. Thus, we expect SlideWiki to quickly gain active users and to reach millions of users in the upcoming years.

Related information

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