

Continuous learning with OER

Satoshi Yamawaki (Castalia Co. Ltd.)

Short description

Mobile learning is part of the future of digital education. We provide a platform with unique features to sustain the continuous learning.

Extended narrative

Open education is easy to drop out, because it only rely on self-motivation and achievements goals. That is why it should be based on "how to trigger a learning experience" and "how to make a learning experience a continuing habit". Some years went by since the creation and promotion of MOOCs and the new possibilities they revealed, the new opportunities to learn and to spread the knowledge. But the first results appeared, and shown that the huge quantity of knowledge offered was not enough for users to make them achieve the learning. The content was not the only motivator. People that want to access MOOCs undergo a lot of constraints which set themselves up as many barriers to continue to learn.

In the digital era, the degree of sophistication defines the differentiation of education, and this differentiation has to understand those constraints.

We, Castalia, contribute to the momentum of open educational resources by providing a platform that "encourage the continuous learning, stimulate the learning experiences and re-creates social link among users".

"goocus pro", our iOS/Android mobile learning platform aim directly to solve the issue of the mobile era concerning the education. On this platform, we have developed several features around a social idea. Indeed, social influence has a significant impact on an individual's intention to adopt a new technology and it is vital to spread m-learning to consider the **ease of use, perceived usefulness, facilitating conditions, social influence and perceived playfulness. That is why we developed those characteristics:**

Ease of use, perceived usefulness, perceived playfulness

Small learning units; on "goocus pro", the smallest content unit is a "module", the content that we assume be possible to understand and retained in one minute. This small learning unit allows busy people to use their in-between time to accumulate learning experiences and focus on very specific topics at a time. Those modules can contain a wide variety of content, from text to illustrations, diagram, audio and video to provide the best enhanced content to the user and ensure the understanding. Castalia has accumulated knowledge about the best framework of learning, most traditional learning contents require the users to gain knowledge using textbooks or visuals materials first and then confirm the retention by way of quizzes and tests. Castalia realized that the frame of "Flipped Learning" makes it

easier for the user to learn if he takes the introductory quiz first, read and view the explanation on the question and its peripheral information, and then finally tackle questions to confirm and apply the newly gained knowledge. Following this diagram, the application includes quizzes, multiple-choices tests and questionnaires that want to improve the "gamification" and the perceived playfulness of the learning. Thus, the size and the framework of the application and its content are designed to maximize the retention of information and let the user "keep on learning".

Another useful feature is the "push notification", which serves as the main conductor to sustainability of learning. This feature is unique on mobile devices, and is not available on the computer version of "gocus pro", aim to develop the learning behavior of the user and has a great potential of effectiveness. Indeed it is a real "nudge" to the users of the same courses about something interesting to focus on. However, through our experimental studies with Ferris University in Japan as well as with a mobile communication carrier, we found out that there are two important factors that would make the push notification effective to lead the user to the learning. First, the timing of the push notification should be tailored to each user; when a user receives a push notification encouraging him or her to learn at a moment when the learning is impossible, it is difficult to preserve the initiative of learning till a moment where it would be possible. The timing of going into studying mode depends on each users; even one user has different timing and availabilities on different days. therefore, it is best if the application can predict when exactly the user enter into a "learning period" and change the delivery timing of the push notification. That is why Castalia develops a new function to schedule that moment, that can synchronize with other calendar applications, and which is capable of sending push notices in a timely manner by determining the user's in-between time. Secondly, the type itself of message is encouraging or not, depending on the user. A message saying "You haven't proceeded with your learning recently. It's about time!" may be effective or not depending on the mood of user, and some other users need encouragements when working continuously such as "You are on a five-day learning streak now!". That is why Castalia adapted the function to allow users to customize the type of notifications they can receive. This, to again, let the user "keep learning".

Social influence and facilitating conditions

As explained before, the social side of this application is a key feature, because it has been revealed that its lack into other form of digital learning has been an important reason for drop out and low achievement rate. It creates both competition and cooperation that strengthen the will to learn. In the continuation of a learning experience, the important element is to maintain the connection with other users based on their learning behavior, which is in other word, to participate in a learning community. The aspect of competition with other users is created by visualizing each user's learning status on a leader board or timeline and motivating users to do not want to be behind, or late in the learning compared to other users. We analyzed from the hearing sessions of our experimental studies that a

user is more prone to a learning behavior when the real-world inter-human relations are brought into the "gocus pro" world. Push notifications are facilitating but also social, it allows to communicate between users through messages to request help, or point out a subject after having completed it. Indeed, the aspect of "cooperation" with other users is created by way of the "nudging (showing support)" and the "recommended contents" functions. The "nudging" function is the one users use when they send a push notification to other in order to encourage learning behavior. And is also use to openly ask for help other students about subject or topic discussed out of "gocus pro" or if the subject has not been find back even using the research fuction that keeps tracks of past learnings. The "recommended contents" allows a user to recommend to other, through the timeline, the content that he or she took on and found interesting. We believe that the fellow learners' learning experiences eventually lead to the learning experience of the user. Thus "gocus pro" recreate real social interactions among users to secure the continuous learning, in gaining knowledge through the connections that users make and re-creating a team spirit and share of knowledge and subjects that members are likely to share. Such "competition" and "cooperation" functions are aiming so to let the user "keep on learning". The social interaction is among students but also with a teacher that, through the content management system, stay close to them and guide, analyze results and follow students progression. He or she can easily send push notifications to students that did not study since a moment, or answer questions of students, help them to see a specific topic to understand the global subject.

Even if those characteristics, especially gamification and social link are, according to us, strong argument to sustain the continuous learning, we think that the user should be able to easily point the result of the learning. The learner should be able to finish that sentence : "In following open courses about X and Y, I will be able to become A and do B". That is why we think that develop a frame clearly understandable by the user showing that "finishing classes X and get knowledge Y" lead to special results and application, as much as for a special task than for a real job, is also essential.

Because users might be student, but might mainly not be, and just want to acquire some knowledge for fun, for personal use or for promotion in a job. Gathering courses under main topics than can certify ability to pass test for real certification is vital and can be proceed easily on "gocus pro" system. Without this, user can easily drop out, not being sure of the achievements, and capacities they are gaining, taking time following classes.

With the framework equipped with devices described above, we will continue to strive for the world where open educational resources are utilized more actively among more people. We are confident that to make people more exposed to learning through open educational resources is the key for open courseware and open educational resources to survive in the future.

Even if "gocus pro" is not open itself, we aim to participate in this movement in being a host for open contents on mobiles devices. We think to implement our services in universities, NGOs, association, foundations and even companies in creating partnership with content provider and offer the services of Castalia for an access to those contents, adapted on mobile devices plus the unique features of "gocus pro".