

## ***Creative Café Report***

**Your Name:**

Tobias Halbherr (ETHZ), Karin Niffeler (UZH), Laurent Mocozet and Omar Benkacem (UNIGE)

**Title of Creative Café:**

Technology-Enhanced Assessment Services at Swiss Higher Education Institutions

**Participants (if known):**

1. Session: circa 18 people
2. Session: circa 3 people
3. Session: 1 person

**Which main topics emerged during the discussion?**

Introduction

The creative café “Technology-Enhanced Assessment Services at Swiss Higher Education Institutions” was well attended. Especially, in the first session, where 18 people showed their interest in the topic. This report will give a short overview of the subjects which were discussed during all sessions.

E-Assessment and legal aspects

Examiners are afraid of the complication as well as the aggravation of e-assessments due to legal aspects. As a consequence of quick changes in technology, it is even more demanding to monitor students, who are “armed” with smart watches and other private devices, which enable external communication or even ghost writing during examinations. The use of Wi-Fi makes the situation more complex and in addition, shutting down the telephone network is forbidden. The safe exam browser (SEB) could be a solution, nonetheless, how will you deal with an exam situation of bring-your-own-device (BYOD) with up to 600 students? Particularly, in BYOD exams a sufficient number of spare equipment needs to be provided in order to be prepared for possible software or hardware failures of



student computers. In other words, if there is not the necessary equipment such as tablets and remotely installed software, the situation will be hardly manageable.

In one occasion, a student complained that the results of the exam were stored in the system without entering them himself. More specifically, that this was caused by a system malfunction. Thanks to a screen recording of the student's exam it was possible to disprove this claim. Talking of appeals, some stakeholders believe that web-cam supervision technology and artificial intelligence helps to prevent dishonest behaviour. Nevertheless, many café participants are skeptical regarding such solutions – especially due to the risk of false positives.

### E-Assessment infrastructure

Those institutions, which are already operating an e-assessment centre have to deal with different infrastructure conditions. First of all, the support of the school board is a prerequisite for a successful running e-assessment centre. Unfortunately, the independent working departments in many Swiss HEIs slow down such progress. Correspondingly, it is often hard to find a suitable room and to get financial support. Another issue is the device. Besides the kind of device, e.g. tablets or notebooks, the organisers have to choose between purchase or lease. Anyhow, BYOD is often considered the most cost-effective solution. In fact, BYOD entails many hidden costs (e.g. support for heterogeneous computers). Thus, from a financial point of view, it is currently uncertain, which solution is preferable - the HEI-owned and managed computers or the BYOD. For instance, in institutions, where students are not expected to possess their own computer or the state of the devices differs from student to student, the BYOD approach is even more complicated. On the contrary, institutions, which have already a BYOD-policy in place, BYOD online exams seem to be the reasonable way to go. Regarding these uncertainties, Swiss HEIs should inform themselves about e-assessment solutions offered by the private market. In parallel, questions regarding data protection and data privacy have to be answered. Besides that, the K12 Free Online Public Schools in California and the app technology iBeacon were mentioned during our sessions.

The technology enables smartphones, tablets and other devices to perform actions when in close proximity to an iBeacon. iBeacon uses Bluetooth low



energy proximity sensing to transmit a universally unique identifier picked up by a compatible app or operating system (Wikipedia: iBeacon).

### The benefit of e-assessment

In the end, we discussed the benefits of e-assessments for the students and the investigators. In particular, the omission of handwriting is an advantage for both examiners and students. Furthermore, computer-based examinations offer substantial advantages for subjects such as programming or statistics, where e-assessment enables authentic and competence-oriented exams, that would not be possible on paper. The general idea of less exams and the changes in exam implementation was welcomed. For example, in many cases project or performance orientated assessments are more valuable for student's learning and better integrated in the curriculum than traditional exams.

### Recommendations

In brief, a class size of roughly 20 students is ideal for gathering first experiences in actual ECTS graded e-assessment exams, as well as the subsequent evaluations.

### Reference

Wikipedia: iBeacon. 2015. From Wikipedia, the free encyclopaedia; [accessed 2015 Feb 8]. <https://en.wikipedia.org/wiki/IBeacon>.

### **What is the relevance for the Swiss HEI?**

- Legal exam aspects
- Financial aspects
- E-Assessment infrastructure (room, devices, software...)
- Exam supervision/controlling
- Benefit for student/benefit for lecturer
- Type of test / adaptation of testing / less tests



**Suggested next steps (if any):**

Requirements clarification

Clarifying basic legal requirements and conditions

Sharing costs – different institutions working together

Building an e-Assessment centre

**Additional comments:**