

## Vault! a Parkour-Inspired Mobile Learning App

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### **Aim**

This short abstract presents the first results of an ongoing cross-scientific research project, (Computer Science/Sport Science) at Malmö University, that addresses the need for an educational change that arises after the societal changes that we encounter in the era of internet, social media, online communities, and knowledge sharing on the web.

From existing research in parkour, relational learning, and mobile learning, we have isolated the key features in Parkour's instructional model: self-, location-, and environment-awareness, analyzing, creating, exercising and sharing, as means for building up a challenge based learning framework. We take this as a source of inspiration for designing and implementing Vault!, a general-purpose challenge-based mobile learning app.

### **Purpose and Background**

The concepts behind this research came from the philosophy and educational model found within parkour. Within parkour there are no set teachers, no set rules regarding how to communicate the knowledge to others or who is allowed to provide this knowledge. These concepts are also found as key features in the relational learning paradigm.

*Relational learning* is a way of learning in which the individuals involved learn from each other through sharing experiences and ideas. Teachers, trainers, coaches, athletes, students, mentors and professors can all learn from each other disregarding the hierarchy that classically exists in the traditional educational relationship.

E-learning instructional models attempt to provide a better way for the delivery of learning from the content provider to the learner. *Mobile learning* takes the concept of e-learning and tries to make it more flexible and comfortable by the use of personal electronic devices. This removes the previous geographical limitations as well as the limitation on time; now a student/athlete can learn anywhere and anytime, but also the content provider can get insight into how the content is received and interpreted, and the learners can contribute with new meaning and understanding, aiding the learning process of other learners.

Vault! is an Android mobile app, that combines the benefits of *mobile learning* and *relational learning*, while at the same time reaps the reward of the community-based learning model existing in parkour, as well as game-based learning elements present in learning apps.

### **Results**

In this workshop we present Vault!, providing details about its design and technical implementation, as well as the results of the first closed field experiment carried out in a primary school at Höör, Sweden.

Vault was tested by six elementary school teachers over the course of nine days. A post-questionnaire showed that the participants felt like the application could be beneficial in the educational system and that it might be useful in the private live, highlighting that the main

benefit of using Vault within the educational system was to exchange ideas and tips for educational content within the classroom.

The participants found it easy to create content in Vault!, mentioning that the biggest benefit of using Vault in an educational system: having teachers being able to give tips, share ideas and provide experiences of educational content. The participants also reported that they saw the potential of using Vault! for learning possibilities, though this was not something that the participants would be interested in themselves, provided that they were using the app from the perspective of the educator. They pointed out that the application has potential for uses amongst the general public. The socialness of mobile learning did nevertheless show up as the participants did claim to feel like a part of a community.

The participants also indicated interesting features to be added in future iterations, like the possibility of recording video in the app, and thus not going through YouTube, which limits the ubiquity of mobile learning. The participants also emphasized that they felt like they would have needed more time with the application in order to fully evaluate the potential benefits.

### **Conclusions and Implications**

We presented a general-purpose educational model and community-based learning mobile application that we consider relevant in different learning settings. As part of an ongoing project, another user test will take place during the spring 2018, with teacher-training students in Physical Education (PE) at Malmö University. This test aims for getting feedback from prospective teachers, in order to improve Vault!'s design and features from a PE teachers perspective.

Thus, we consider the EASM-conference as a remarkable opportunity to share the design and the first results of the, Vault-project with the community of Sport Science. Through this workshop at the EASM -conference we hope to receive meaningful feedback and good discussions for this ongoing project. We will also present the project through articles at [www.idrottsforum.org](http://www.idrottsforum.org) and in a report to the Swedish School Council in December 2018.

### **References**

- N. Bavinton, N. (2007). From Obstacle to Opportunity: Parkour, leisure, and the reinterpretation of constraints. *Ann. Leis. Res.*, 10(3–4), 391–412,
- Waern, A., E. Balan, and K. Nevelsteen, (2012). “Athletes and street acrobats: Designing for play as a community value in parkour,” Proc. 2012 ACM Annu. Conf. Hum. Factors Comput. Syst. (CHI '12), pp. 869–878, 2012.
- Sung, Y. T., Chang, K.E. & Liu, T.C. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. *Comput. Educ.* 94, 252–275.
- Sicart, M. (2014) *Play matters*. MIT Press.
- Robinson, K. (2011). *Out of our minds: learning to be creative*. Oxford: Capstone.
- Säljö, R.E., & Rystedt, H.E. (2008). *Kunskap och människans redskap: teknik och lärande*. Lund: Studentlitteratur.
- Whitehead, M. (2010). *Physical literacy: throughout the lifecourse*. London: Routledge.