

## **Abstract**

Growing knowledge in the field of cognitive science can significantly improve the way we learn. Several methods and principles are being repeatedly confirmed by numerous studies as effective for learning. They include spaced repetition, test-enhanced learning, and desirable difficulty principle. With the continual spreading of ICT technologies, diverse software is being developed as well, some of which more and some of which less successfully employs the methods and principles outlined. Memrise, Purpose Games and Drill and Skill, web platforms which are examined in this thesis, belong to this software family. In the first phase, i conducted several interviews with teachers who were using Drill and Skill as part of their science teaching at elementary schools and a junior grammar school (all of them were teaching children approx. 11–15 years old). After this, i worked with a class from a grammar school (age around 16). i made several groups of educational games to help the students practice the topics studied in their biology lessons. Each group of games was reviewed during a group interview. Recordings from these interviews as well as from the interviews with the teachers were transcribed and these transcripts underwent qualitative analysis, which is an important part of the thesis. Drawing on all the experience, i wrote an analysis of various functions of the platforms which i hope could serve as an introduction to the platforms for others interested in their use. Qualitative data also helped to identify some suggestions for improvement for Drill and Skill. Finally, a list of tips was made for teachers including advice on how to work with platforms in general, as well as which games work well and which not in particular. Memrise was the most popular platform for students and on this platform, the courses preparing for Organism identification tests were the most popular courses. Introducing platforms in class was generally a success and students even continued with preparing their own bird recognition course after the joint work with me had ended.

**Key Words:** Memrise, Drill and Skill, Purpose Games, educational game, lag effect, Spaced Repetition Software, ICT, quiz, image quiz, multiple choice quiz, flashcard