

Abstract

The influence of digital media on the success of school lessons and learning in general has been discussed for years. Nowadays there are numerous apps and online platforms, which were designed to aid school purposes. The lessons are supposed to be shifted into digital environments, and mobile devices shall help teachers in terms of classroom management and students are now able to learn from digital contents. It is said that there is a tendency to overestimate the presence of digital devices in classrooms (Irion & Scheiter 2018). However, it has to be regarded that it is not just alternative forms of media representations which might lead to successful lessons. More importantly digital devices like tablets have to be thoughtfully included into teachers' lesson plannings and teaching methodology (e. g. Irion & Scheiter 2018, Mishra & Koehler 2006). At first most of the studies dealing with tablets in classrooms were concerned with opinions of perception connected with these devices. This is why there is a claim for more effective test procedures regarding learning outcomes and measurable data in that field (e. g. Aufenanger 2017). The conducted study for this dissertation aims at the effectiveness of tablets in primary science classrooms, specifically with regard to technical topics in class. Therefore, the use of tablet computers with its camera and video capabilities are examined, and how they might enhance students' understanding of simple transmission models in classroom experiments.

In a first step to determine possible effects of tablets, students' learning outcomes are examined when using tablets for recording experiments in classroom. The second step of the investigation tries to clarify the question if the availability of video recordings has an effect on children's science journals as a means of protocoling classroom experiments.

The results of the conducted study show that there were differences concerning the development of grade-three students' understanding for one of the two transmission models used, which is part of the first unit to the overall study. An influence of the availability of video recordings on children's science journals as the second step of the investigation could not be found.