Impact of GeoGebra Apps in Courses

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Abstract

In the last years there is an explosive growth of smartphone availability [1]. Some educational authorities drew attention to the disturbance it creates to the learning process [2]. However, previous reports described also positive contribution of this wave on high school and higher education learning [3].

In previous works we showed how smartphones technology can support learning [3]. We also showed that mobile Student Response Systems (SRS) improves the learning process and enhances the communication between teacher and learners during classical lectures [4].

In this research, we analyse our own teaching experience of introducing technology based on Smartphone in the classroom. We introduced the GeoGebra© App for smartphones as an integral part in lessons for mathematics teachers' education courses. The students were from two colleges of education, in three mathematics courses, 15-30 students per course, mostly 20-30 years old.

We investigated the influence of the Smartphone App GeoGebra© on the learning process. GeoGebra was already used in these courses for few years. The novel aspect in this research was the use of the smartphone App as a part of the lesson. We tested whether the App encourages students to use the dynamic mathematics Software more than before. We also checked whether the App helps the learning process and if so in what sense.

We used on-line questioners to collect data. We found that most of the students reported a positive attitude towards the GeoGebra App. All the students used GeoGebra on their PC in the past but not through the smartphone. They argued that the App is accessible and a user-friendly, it helped them to take active role during the lesson, thus achieving immediate and better understanding of the material in class.

We showed how the use of the GeoGebra Mathematics App for smartphone can contribute to enhance active participation in the lessons contributing to an improved learning experience and faster assimilation of the course material.

References: