CLASSROOM PRACTICE AND THE USE OF TABLETS IN SIAULIAI DIDŽDVARIS GYMNASIUM

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http://dg.su.lt
SHORT REVIEW HOW WE USED TABLETS BEFORE THE CCL PROJECT

In my gymnasium tablet computers were only used by the students in the International Baccalaureate Diploma Programme classes before this CCL Project started:

• The students use iPads as e-books.

• These devices also facilitate the organization of lessons. For example, the task can be sent to students by e-mail, uploaded to the Wikispaces or to the Google Drive and to be sure, that all students will bring the material to the lesson.
SHORT REVIEW HOW WE USED TABLETS BEFORE THE CCL PROJECT

As one of the IB students said, "iPad really strengthened the motivation to learn the subjects both in class and at home because with the help of such a device learning becomes fun.

Also, sometimes the knowledge acquired through games remains in memory much longer than when read in the book."
CLASSROOM ACCESS TO TABLETS

- We involved 30 students in CCL project, aged 15-16, 9th grade.
- For us the use of tablet computers in education is an attractive innovation.
- **The biggest challenge is** changing the practices of teaching, how to integrate into existing classroom curricula in an effective way.
CLASSROOM ACCESS TO TABLETS

• It is unfortunate that we have Apple iPad Tablets 1st Generation without a camera. That is why we have narrower possibilities to use tablets in teaching. Some of them have different tablet devices brought by students themselves, so they have a camera.

• We got the support from Education Department and 30 eStar are on the way to school.
We have prepared and tried out scenarios for mathematics:

- “Expressions with one variable: evaluation and graphs. To solve practical problems”.
- “Solving equations by graphing”.
PREPARATION ACTIVITIES FOR TOPIC “EXPRESSIONS WITH ONE VARIABLE: EVALUATION AND GRAPHS. TO SOLVE PRACTICAL PROBLEMS”

• Linking to the Curriculum Framework. Provisions: Taking an interest in properties of functions, graphs and their application to everyday life.

• The prepared material was uploaded to Edmodo: http://www.educreations.com/lesson/view/reiskiniai/13236492/?s=k2DFyp&ref=app

• Students read it before the lesson at home as we use “flipping” class elements.
STUDENTS’ ACTIVITIES FOR TOPIC “EXPRESSIONS WITH ONE VARIABLE: EVALUATION AND GRAPHS. TO SOLVE PRACTICAL PROBLEMS”

Activities according to learning styles:

- **Activists**: in the area of school do research of linear, quadratic, other functions from the list;

- **Reflectors**: observe examples how to draw graphs of one variable functions with Geogebra, how changing of coefficients impacts on function graph; write the properties of functions analysis.
Activities according to learning styles:

- **Pragmatists**: students use graphs of the functions to illustrate the relationship between math and everyday life. They show that buildings, objects and even plants involve functions.

- **Theorists**: observe the material from the website [http://vaizdopamokos.lt/pamokos/matematika/9-10-klase-matematika/funkcijos-tyrimas-is-grafiko/](http://vaizdopamokos.lt/pamokos/matematika/9-10-klase-matematika/funkcijos-tyrimas-is-grafiko/) and list the scheme of function analysis, give examples. Compare the work with the apps GoodGrapher, GeoGebra.

- All groups create presentations with Educreations.
CLASSROOM PRACTICE
CLASSROOM PRACTICE
WORK WITH “EXPERTS”

• Each group consists of students from different previous groups.

• Each group demonstrates their videos, others are experts.

• The "experts" make comments and advise on how to fix it.

• A student in the light of the experts' comments, edits the presentation.

• The final work is uploaded on Edmodo.
Students used apps: Geogebra, GoodGrapher for analysis of math functions;

Educreations for presentation;

Edmodo for collaboration.
OUTCOMES OF THE “EXPRESSİONS WITH ONE VARIABLE: EVALUATION AND GRAPHS. TO SOLVE PRACTICAL PROBLEMS”

- Example 1
- Example 2
- Example 3

- During the presentation a lively discussion took place, students do self-evaluation, evaluate difficulties, deal with problems.

- At home students revisit presentations from the Edmodo, comment on what allowed them to better prepare for diagnostic work.
EVALUATION OF ACTIVITIES

- Teacher **was coordinator** during the process.
- Before the Project I **uploaded rubric** for grading student work in the Edmodo.
- Teacher used **Edmodo Badges** tool for the encouraging of the students.
- Methodology to grade not only knowledge, skills, but also **evaluate how a student participates, communicates** and **collaborates** with others during the process, how **a student manages smart technologies** for learning.
EXAMPLE OF EVALUATION IN THE EDMODO
Activities according to learning styles:

• **ACTIVISTS**: in the area of school do research of quadratic functions, make the photos, and create and solve the problem for illustration.

• **REFLECTORS**: observe examples how to find zeros of function with Geogebra, solve the system of quadratic and linear equations by graphing.
Activities according to learning styles:

- **PRAGMATISTS**: the teacher gives tasks which have a relationship between math and everyday life, students solve a problem on paper and with apps GeoGebra, find zeros of a function, and compare the results.

- **TEORISTS**: observed the material from the website [http://vaizdopamokos.lt/pamokos/matematika/9-10-klase-matematika/](http://vaizdopamokos.lt/pamokos/matematika/9-10-klase-matematika/) and using it solve a problem and formulate justification: algebraical solution and draw a graph with apps GeoGebra, find zeros of a function, and compare the results.

- **Example of Student work**
SOLUTIONS (1)

• Students are receptive to computer technology and quick learners as they got rather good experience how to use apps Geogebra and Educreations.

• They got skills how to work in Edmodo, for all of them it was a new online collaboration space.

• Transforming traditional lessons teachers facilitate learning, encourage students to collaborate with classmates, while comparing their findings with others.

• When tablets are used thoughtfully and successfully, they **enrich the learning** and development process, that is why teachers have to practise intelligent methods and integrate this educational tool.
SOLUTIONS (2)

- It is a useful source of inspiration for both teachers and students.
- Practically all students were asking when again we will use tablets in the lessons.
IMPROVEMENTS

• As it was the first project with tablets for students we needed more time for practical activities (2 lessons more than was planned).

• If students are not so good at math it will be better to upload at least one example to the Edmodo. But in our case we used books too so they could find an example there.
OUR AMBITIONS
TILL THE END OF MAY, 2014

- I would like to involve more teachers to use tablets within 1:1 learning paradigm.

- Now we are preparing the lessons scenario with a biology teacher for the topic “Homeostasis is maintenance of the stability of the human body's internal environment”. Students’ activities will be planned according to the themes:
  - The role of incretion glands in homeostasis;
  - Description of the body’s internal environment;
  - Maintenance of the stability of the body’s water;
  - Maintenance of the body’s constant temperature;
  - Maintenance of the concentration stability of the body’s glucose;
  - Practical application of the knowledge about homeostasis.
OUR AMBITIONS
TILL THE END OF MAY, 2014

• At the end of April I will use tablets in my IT lessons “What are recent developments in computer system architecture: processor, primary memory, secondary memory, input and output devices”.
OTHER CHALLENGES

• To set up a class for work with tablets as we do not have an IT person for technical support of tablets and solutions.

• New level of organisation of lessons, ultra-portability of tablets allow students to take the device out of the classroom so a teacher should think how to manage the students, manage technology.

• Most teachers are not prepared to work methodically with tablets.
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THANK YOU

GOOD LUCK!

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