Alytaus šv. Benedikto gimnazija

2017-2020

INTRODUCTION

During the academic year 2017-2018 the primary school teachers of St.Benedict‘s Gymnasium decided to search for the new methods of teaching pupils aged 6-10 and set the following goal:

To help pupils at primary school to acquire such a set of knowledge, skills and provisions of mathematics that will enable them to solve their daily life problems, pursue learning successfully and stimulate interest in mathematics while studying mathematics through gamification in non-traditional spaces.

WHY?

We have noticed that students become more involved in the learning process while learning in non-traditional spaces which encourages motivation to learn.
The gamification elements encourage students to apply knowledge actively (rather than passively gain it), teaches to cooperate, discuss, justify their attitudes, agree, listen to each other's opinions, find more areas that interest them and encourages active actions.

Games are useful as both teaching and learning combined with a physical activity are more effective, emotions make learning process easier and boost memory skills.
The Curriculum of Primary Education states that while studying in non-traditional spaces “Pupils are taught in a concerted effort to achieve common goals and objectives. They are encouraged to tackle problems together… Pupils are encouraged to solve problems, find new solutions… The school strives to make pupils apply knowledge immediately to evoke their imagination, creativity and insights” (Primary Education Program/Curriculum, 2008)

FACILITIES AND ASSOCIATES

For teaching mathematics we use non-traditional outdoor and indoor spaces of the gymnasium: an outdoor class, a natural science laboratory, a3D class, a swimming pool, the Futronic interactive floor system.
The lessons of mathematics take place at the pupils’ parents and social partners’ workplace.
Lessons and integrated activities for pupils are conducted by pupils' parents and members of the Gymnasium's Young Mathematicians School

MANIPULATIVES

Japanese constructor LAQ, a field pendulum, a parachute, a rope, tangrams enable pupils to apply the acquired math knowledge while playing games such as At the Shop, At the Bank, measuring the air temperature in their calendars and etc.

OUTCOME

By learning through gamification in non-traditional spaces, pupils more easily memorize information and understand the content. Learning process becomes more attractive, more motivating with a warm emotional learning environment prevailing, social skills and academic achievements improve and overall motivation increases.

CHALLENGES

- Group management (each pupil should be involved into different activities)
- While planning the lesson a teacher has to differentiate tasks and think about an alternative lesson plan as the bad weather can ruin your lesson
- Resources are one of the main challenges, it takes time to collect and prepare appropriate manipulatives

STUDENTS' REFLECTION

I like maths outside the classroom,because

I can move and play
My parents can teach me
We work as a team

I do not like, because:

Noise confuses me
I get tired

TEACHERS' REFLECTION

- Prior to the start of the ERASMUS+ Project M4TM we used gamification as a way of teaching maths outside the classroom, mainly in the Gym or yard once-twice per week.
- Since the beginning of the Project we have changed our awareness about educational spaces and now we work in the 3D classroom and the Great Hall with the interactive floor; within the frames of the Project there has been set up an outdoor classroom, a science lab for primary school and a drawing wall in the corridor.
- The list of activities has also expanded from doing relay and using natural resources for calculations to workshops with parents at their workplaces and at school, piloting Home-School pack with unusual manipulatives (e.g.rope), playing interactive games, estimating and proving hypothesis in the science laboratory and etc.
- These changes have boosted teachers'confidence and creativity bringing meaningfulness in teaching maths and joy for pupils in learning the subject.
- Gamification in non-traditional spaces as a teaching method is mainly used for consolidation and revision.