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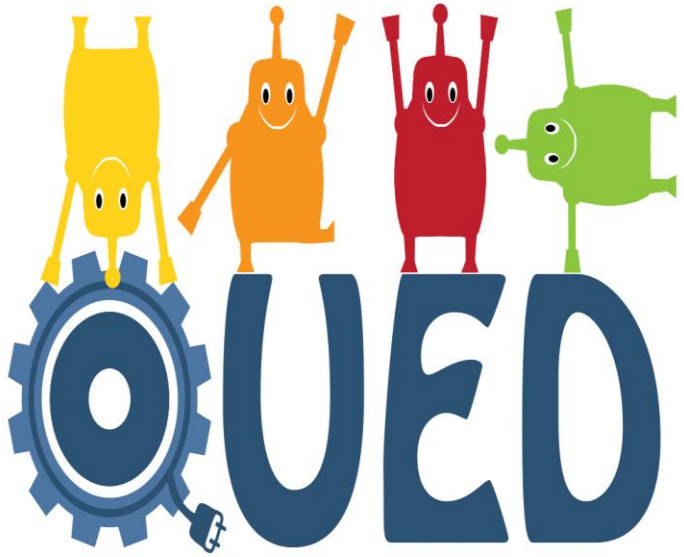
Handbook



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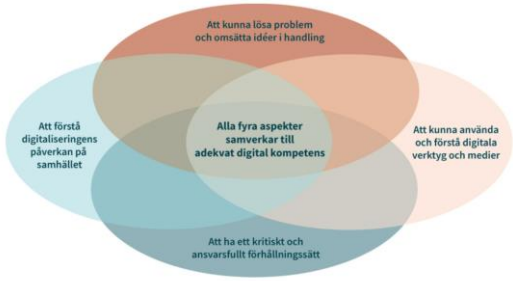
QUED

This project was inspired at an Erasmus+ seminar in Stockholm 2019.



We how started the project are from Sweden, Finland, and Latvia we made this in a project with help off Erasmus+.

Sandra (Sweden) and Janna (Finland) meet in Stockholm on an Erasmus + event and got talking about digital competence in preschool and schools. From that we decided we would like to take a shot at provide preschool and school with the right level of digital competences, thus increasing the quality in teaching and learning.

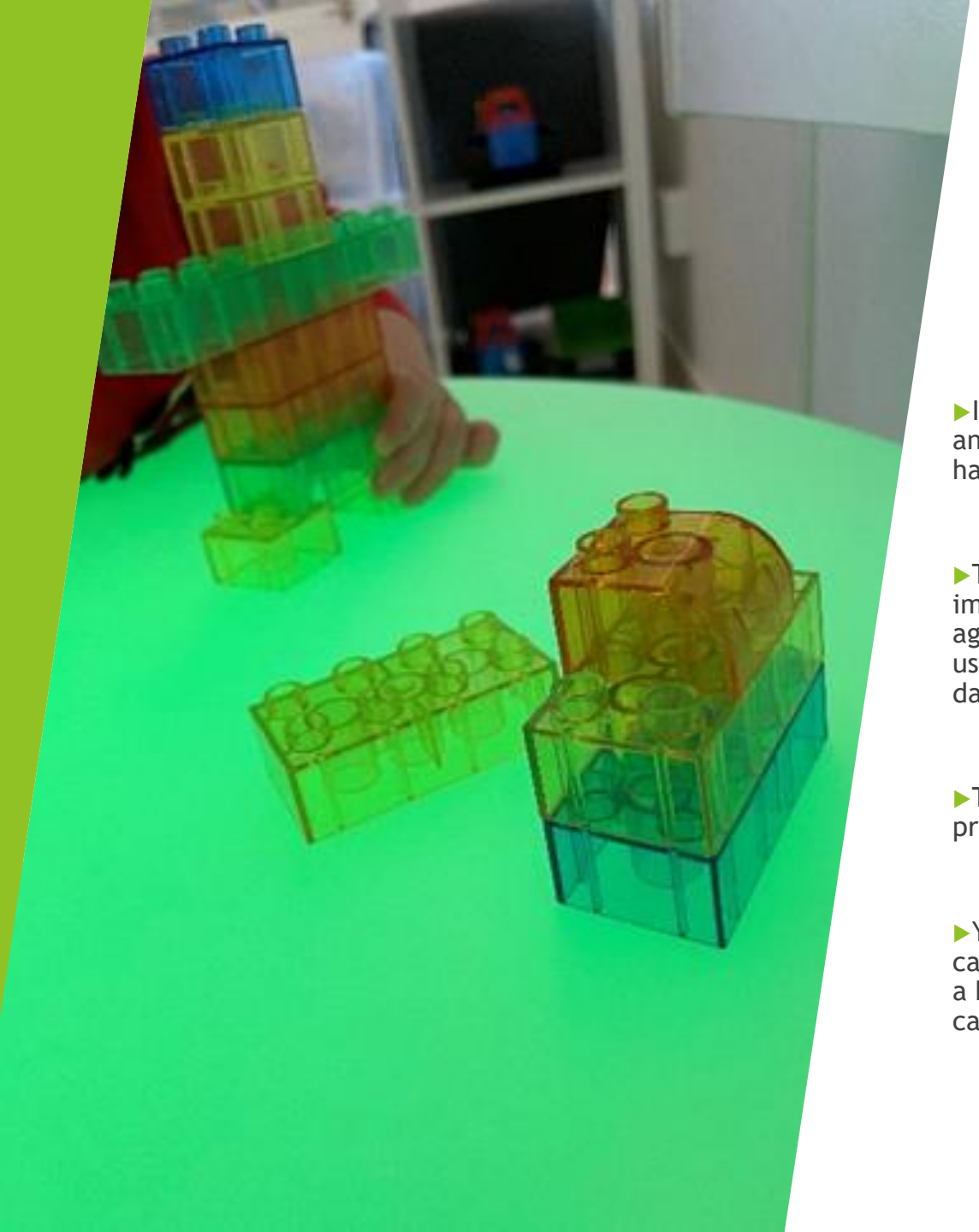
So we got the idea to do an handbook for teaches and pedagogues about digital competence.

We also got in contact with Julia in (Latvia) that wanted to join us on this project. To spread the appropriate knowledge and enthusiasm to the other teacher and pupils.

The plan was to visit etch other schools and have teachers staff training events. But as we all now the big C hit so we had to go digital.

So thanks to that we now are all experts on Zoom, Teams and how the mic works right?

The thing that started it all the 4 aspects of digital competent.



Chapter 1: Being able to solve problems and put it in to action.

- In this chapter we focused on Leaning problem-solving and coding. And the fun thing about this is you don't have to have digital tools for it.

- The irony and this it how it usually looks like, we imitate the use of digital devices during play. Preschool-age children both use themselves and see how others use a variety of digital technologies and devices on a daily basis.

- This is easier then you think and really good for problem solving.

- You can let your puils sort after colour or animals you can also let them follow a simple instruction as to copy a Lego structure in size or in colour only the imagination can stop us now.

Activity tip!

For this activity you can get this game called Let’s go code! Or make your own cards as we have done so we could play this outside

This is an easy way to introduce programming and to teach the children to give and follow instructions.

One child-programmer independently tries to lay out a path with various tasks and obstacles from the given elements. When the path is ready, they give you instructions (one steps forward, turn right, turn left, jump,) to the child-robot, pointing to the corresponding signs on the card keyboard. The child-robot tries to accurately execute all the commands given by the child-programmer.

The children really enjoyed this, and we have taking it outside and just made arrows and now they program each other.

Activity tip!

For this activety you can use any pictures you have. We choice pictures of the clothes we needed to put on for going outside like our boots, jacket, mittens and a hat.

Get your pupils to put them in order they need to put on their clothes for going outside.

You as teacher can also put it in order with a “bug” like so -> Can you put on your boot before their overall?

The children can then discuss and the moment before going outside later gets interesting as they help each other out and try different routes.

This activity is good because you can change the pictures to any topic or even a short story.

Activity tip!

For this activity you need a Blueboot 1 Pen, Paper, blocks and tape.

Here we put the blue bot on the floor on a big piece of paper with tree blocks on as obstacles. and told them to get from one side of the paper to next.

Here we recommend to use the App that comes with the Blueboot on an iPad.

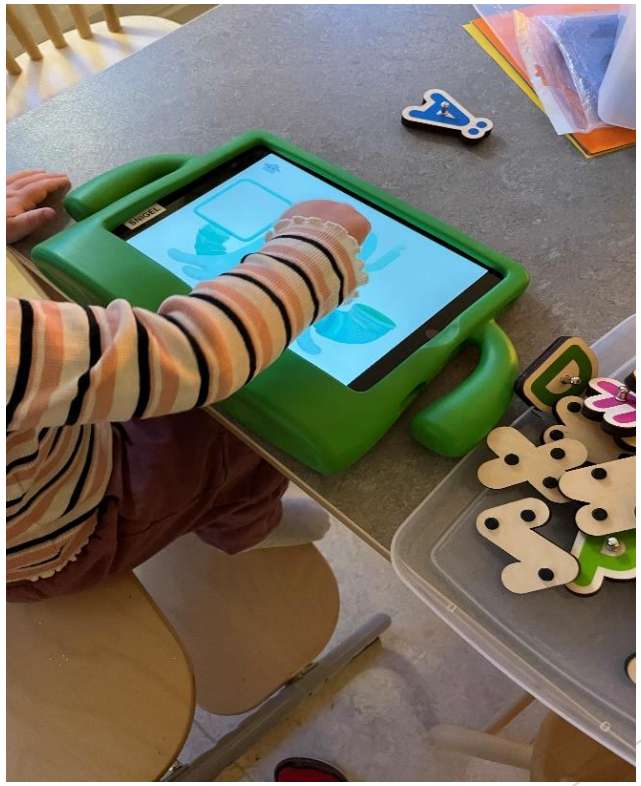
Collegial Learning - success factor

When implementing digital skills in preschool, it is extremely important to critically observe and evaluate the feedback – how such lessons are going, whether they are successful. Any new activity requires evaluation of results and feedback. This is good to look back on an evaluate with your team and even with a bigger groups to discuss and learn from.

Chapter 2: Understanding the impact of digitalisation.

So for more of an heavy topic. The future is digital. And society has been changing at a rapid rate, with all the digitization and technology taking over. It has affected almost all the aspects of the our life and in our world and daily use.

- To be aware of the conditions under which children are more vulnerable and exposed to the risks of violence, such as personality traits, family circumstances, availability of support. The responsibility for promoting a safe internet environment must be shared by all stakeholders, including parents, carers, educators, society as a whole and, as children get older, children themselves. Valuable materials for educating children about children's media literacy.



Secure devices, applications and platforms.

To be aware of situations in which children may encounter unwanted content of information, depending on the age and needs of the children. For younger children, parental controls, firewalls, internet apps designed for children – are of great importance.

Safe use. With the help of adults, acquire knowledge and learn the skills to use modern technologies and platforms in a safe way, in order to avoid malicious activity and the use of children's age-inappropriate content, as well as involvement in illegal activities, including emotional violence, bullying and harassment.

Caregivers

Here we can only work together. On one of our first meeting with the caregivers of our pupils we talk about how important it is for us to work together on this and even give them tips how to lock their ipad for example and make it safer and give them tips on the apps we use in school.

Activity Tip!

- **Marbotic abc and numbers. Marbotic shapes**

- You need to download the app to your mobile device from App Store or PlayStore.

Marbotic ABC:

- Try to find the first letter of your first name
- Type your own name.
- See which letters match with what sound
- Write different words
- Test what else is possible with this digital tool

- Marbotic Numbers:

- Explore the different numbers
- Pick the number that reflects your age
- Put two or more numbers together to do basic additions

Chapter 3: Critical and responsible approach to the development of digital skills

When it comes to a critical and responsible approach to the development of digital skills in early childhood education, it is worth paying attention to the following aspects:

- - use of digital skills and diversity of digital tools in school
- - the skills of a digitally competent pedagogue

- The use of digital devices and technologies has become an integral part of the planning and implementation of the preschool educational process, taking into account that one of the tasks set in preschool is to ensure a high-quality preschool educational process that meets modern requirements, using innovative teaching methods and digital technologies.

- Speaking about the content of education, for example, mathematics, the child should first be given the opportunity to count real apples and only later move on to counting abstract objects. This can create a false impression that the child has learned something. The child can be the perfect answerer to questions. For example, a two-and-a-half years old child can learn to count to 10 as a nursery rhyme, but this does not mean that he or she understands what these words mean and what they entail. However, parents also need to evaluate which practical activities are worth replacing with digital ones: for example, a traditional bedtime story is a much richer experience than a story that is delegated to the screen. If the screen tells the story, the child is absolutely passive, and time is stolen for a real conversation and emotional contact with the parent.

Chapter 4: Be able to understand how digitalisation affects society and the individual.

Every day the teacher teaches a child how to use a specific digital device, how to distinguish the virtual world from the real one. Together with the children, the teacher develops rules for the safe use of digital devices.

Children often have difficulty distinguishing between the real and the digital world, so it is important in preschool to teach:

- to distinguish the virtual world from the real world,
- to understand the role of digital technologies,
- to observe the rules for using digital devices.

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Activity tip!

- Blue-Bot and mathematics

- The children are in a small group. One participant gives a mathematical task, the other programs the Blue-Bot robot to find the correct answer on a transparent mat.

- **REFLECTION/TIPS:**

- Can mathematical tasks be solved so interestingly? Children solved tasks and gave the answers, helped each other to program the robot. Gave advice, figured out how to act correctly. Children can come up with their own mathematical examples or solve textual tasks.

Chapter 5: Collegial learning, how to spread the knowledge to your colleagues.

- Instructing colleagues in the use of digital tools takes place through peer learning.
- We organize a joint experiment and teaching in the afternoon, when children have left from the daycare center and the educators can focus on learning new digital tools. Through our own experience, we dare to introduce new equipment. By working together and with enthusiasm.
- Our afternoon consists of small activity points where digital tools are on display.
- Teachers and school staff is divided into groups of 3-5 people. Each point has an instructor who already knows how to use the digital medium in question.
- After the activity's feedback is collected and later discussed in collegial learning situations.
- And through our own experience, we dare to introduce new equipment, such as play equipment intended for coding. By working together and with enthusiasm

What does a digitally competent teacher do?

- Professional involvement – purposefully uses digital technologies for communication, cooperation and professional development.
- Digital resources – plans the use of digital resources, selects, improves and develops, as well as shares digital resources.
- Teaching and learning – uses digital technologies meaningfully in the process of teaching and learning.
- Evaluation – uses digital technologies to improve the evaluation system, uses the obtained data for analysis and plans feedback.
- Support for children – uses digital technologies to ensure personalized learning, promote inclusion and active engagement of learners.
- Promotion of digital competence – encourages/invites children to use digital technologies creatively and responsibly, developing children's digital literacy.

Responsibilities of the teacher

Communication, document sharing, regular and up-to-date communication with employees and parents;

Use of teaching/learning materials according to the learners` learning needs;

Collection of data on learning, their analysis.

Offering digital tools and methodical materials encouraged pedagogues to plan and organize a different teaching and learning process, which made the curriculum more interesting, exciting and easier to understand.

- Techers at Brålanda preschool had a workshop made by the project leader and with the different tools given and used in this project and had questions to reply to along the way. This opened the eye of our colleagues to what we have learned and also gave us more ideas and inspired us even more. The discussions where the made in smaller groups and then written down on to post it notes to then be sheard with everybody.

- Teacher at Daugavpils City Preschool Educational Institution No.27, participated in the experience exchange seminar organized by the Daugavpils Education Department and spoke on the topic "Using Digital Technologies in Learning Latvian for 4-7-Year-Old Children". The teacher also talked about the coding of learning material, which helps learners independently learn about topical and interesting topics. Pedagogues must carefully evaluate the learning material for generating QR codes and select it according to the topic, achievable results of the play lessons, age and interests of the children

End of the project

At the end of the project, we note that the offered digital and methodological tools create a maximum effective play lesson and motivate learners for self-directed learning. We got encouragement and confirmation that we are working in the right direction.

We wish we could write an entire book for you or even a series with everything we learn along the way, but this is the a hand book to get you inspired and a starting point to jump in the world of digital competence. Its kind of sad to say good bye to this project even tough it will never be over. This is a project that will be with us for many year to come and we will have more things to ad over time.

Jaana, Sandra and Julija says thank you to our colleagues that have put up with us and our strange ideas an our sift shifts in the lesson plan with them.