

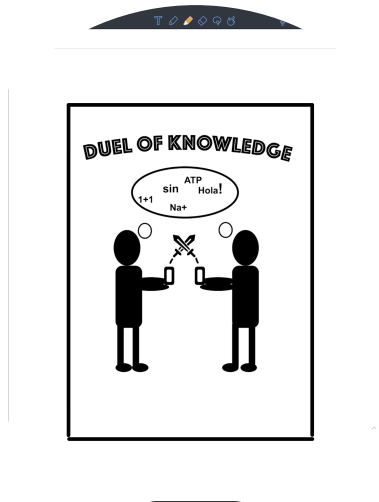


## **DigiEduHack Solution**

### **Emerging technologies for holistic learning (Berlin)**

### **Challenge: Emerging technologies for holistic learning (Berlin)**

## **Duel of Knowledge**



### **The promise for your lasting learning success.**

Our app is the promise to all people who want to learn successfully. You don't just learn content for the next test, you learn for life. It teaches how to learn in a modern and innovative way. With a lot of motivation and discipline, our app becomes a fun helper for everyone.

### **Team: Das eiserne Trio**

#### **Team members**

Jonas Lindenau; Kilian Nicklas; Darvid Rosenmüller

#### **Contact details**

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## **Solution Details**

### **Solution description**

#### **What is your final product/service/tool/activity?**

Our final product consists of a smartphone app that provides students with a well-flowing learning system.

#### **How could the solution be used to enhance digital education in your challenge area?**

"DoK "improves digital education by teaching necessary learning content to users in a fun, attractive and effective way.

### **How could the success of the solution be measured?**

The learning progress becomes visible through evaluations of the user responses in the form of statistics. Whereby the student receives an attractive animated representation in the form of an avatar that visibly

improves / levels / develops.

### **How will the solution provide benefits to the challenge owner?**

In addition to the attractive mediation of learning content, the user has a predefined learning system / strategy, which guarantees him lasting learning success, if used regularly.

Furthermore, the user has the opportunity to duel and compete with classmates and other classes worldwide. This increases the ambition and appeal for many users.

## **Solution context**

### **What problem are you facing?**

We have chosen the following 2 main problems among many other small and big problems:

1. independent learning is not designed attractively for students. From our own experiences we still have difficulties on some days to motivate ourselves to start learning.

Once you have started, you usually even like it and afterwards you are even happy that you have completed this learning phase. However, the next time you are faced with the challenge to start learning again.

In addition, many students do not choose the optimal time for learning, so it often happens that the concentration during learning dwindles.

2. teaching content is not taught effectively! Intuitively, students use a wrong strategy when learning. Many students, including us in the recent past, like to put off studying for an upcoming knowledge test at school.

It is noticeable that the totality of what needs to be learned is seen as too much of a challenge for students because it is all there at once.

Another problem is the retention of what has been learned after the knowledge test. Many know the problem under the name "bulimic learning".

In "bulimic learning", students study for a test and then forget most of it.

### **What challenge(s) are you solving?**

Let's move on to the digital solution "DoK", which allows students to solve the problems mentioned above.

"DoK" adapts learning to students, which means that necessary learning content is taught to the

student in a playful, attractive and effective way.

Earlier and earlier in life children get the opportunity to use a smartphone, which is a danger for them uncontrolled, but a conscious use, offers a huge opportunity to use a seemingly infinite knowledge database for the development and knowledge building.

"DoK" playfully conveys learning content in the form of smartphone games.

These games are categorized into a main game, the "Duel of Knowledge", where the structure resembles the app "Quizduell", and several mini-games, which have similarities with the well-known games Memorie or Scrabble, for example.

You can duel / compete with classmates and other classes in individual competitions and group tournaments.

A point system / reward system ensures that one can improve his own avatar and also his class / group in a ranking look at can.

DoK" also cleverly solves the previously mentioned problem of "bulimic learning" by creating a well-continuing learning system with effective teaching of the learning content.

"DoK" uses the cumulative effect of regular learning periods and at the same time it solves the problem of having to provide motivation for learning.

"DoK" creates an incentive to complete a challenge, in the form of a knowledge duel, every day in a fixed self-determined time period of 3 hours by putting an increased reward on it. The goal is to create the habit of learning for about 25 minutes a day, which solves the problem of having to motivate oneself to learn. In a period of one month, the daily learning of 25 minutes in the morning should be unconsciously integrated into the life of the students, like the daily brushing of teeth.

This challenge has among other things the advantage that learning contents are divided over a longer period.

As an extended thought, "DoK" may and can block all other functions of the smartphone, such as social media channels, known as distractions, until the challenge is completed and are only possible through a password from the parents, without completing the challenge.

## **Solution target group**

Ages 7-19 will be targeted and thus the app will be available for the entire school career.

## **Solution impact**

### **What is the impact of your solution?**

The learning system is to be fundamentally changed. This means that the digital transformation should also apply to learning, so that young people born in this age have the chance to learn quite early how to use digital media and to work with an effective learning system. This will prepare them for the future in a modern way.

### **How do you measure it?**

It is measured by statistics. In the app are algorithms that evaluate the answers from students to posed questions. This gives a clear picture and methods and approaches can be adapted.

## **Solution tweet text**

Our app is the promise to all people who want to learn successfully. You don't just learn content for the next test, you learn for life. It teaches how to learn in a modern and innovative way. With a lot of motivation and discipline, our app becomes a fun helper for everyone.

## **Solution innovativeness**

What sets our product apart from conventional products is the fact that this app affects the whole life of the user. In the future, the attitude towards new unfamiliar topics will no longer cause uncertainty, but will be fun for the user. The user is taught how to approach tasks with discipline and motivation. In addition, there is the possibility to duel with other users and to put one's knowledge to the test, thus awakening a certain ambition.

## **Solution transferability**

### **Can your solution be used in other contexts?**

Our solution can also be used for other areas and older people, but our main aim is to make learning easier for students.

### **What parts can be applied to other contexts?**

The in-game games are programmed for younger generations up to high school graduation. Of course, you can also use this app to get an overview of topics in other areas. Accordingly, we would say that all areas can also be used in other ways.

## **Solution sustainability**

For our app we need computer scientists, content creators and designers in the medium term, who can support us in the implementation of the project. The computer scientists have to do the programming of the mini-games. These will be created automatically by an algorithm that pulls information from pre-made tables that can be easily filled in by teachers, as well as ordinary people. Based on this, the mini-games can be generated, each containing the predefined learning content for the students. The app must also be programmed in such a way that it can be easily used by students. If the project is to be successful and professional, designers are needed who have the necessary know-how to raise the design of the app to a higher level. In the medium term, the content creators have the task of preparing basic knowledge in the various subjects for the launch.

## **Solution team work**

### **How well did you work as a team?**

Our team worked very well together. We developed the idea together and discussed how we wanted to approach the matter. After that, we listed all the tasks that would come our way and jointly

determined the division of labor.

**Could you continue to work as a team in the future?**

Yes, we got along very well and solved all the tasks well without anyone doing too much.

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