

DIGIEDUHACK SOLUTION CANVAS

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| Title of the solution: | Math Dash | Team name: | Math Dash |
| Challenge addressed: | EduTech4All: Inclusive, Creative, and Human-Centred Learning Ecosystems | Challenge category: | The Learning Experience |
| Background of the team: (multiple selections possible in case of mixed teams) | Higher Education Students Teachers Others (please specify) <input type="text"/> | | |
| | Researchers Primary School Students | Professionals <u>SECONDARY SCHOOL STUDENTS</u> | |

Solution description

What is the final product/service/tool/activity you're proposing? What are its main elements, technologies and objectives? Could you please include a brief implementation plan with some key overall milestones, resources required and eventual barriers foreseen?
How could your solution be used to enhance digital education nowadays? How could its success be measured?

The final product we are proposing is a light-weight game playable offline, which can be played both in single and multiplayer modes. In the game, students simulate a sprint race with hurdles, where each hurdle represents a maths question. The objective of the game is to make practicing maths problems a fun, engaging, and competitive activity to help students answer problems under time pressure. Students also have the possibility of starting from easy, medium, or hard and building up to the harder questions, allowing students who may be less advanced to match their peers' skill level. Currently, our implementation plan includes an experimental phase within Istituto Marymount to gather feedback and improve the product, after which we plan to release the game to the public. To do this, we would require resources such as a website domain.

This solution would enhance digital education because it would allow students to practice math problems digitally in an entertaining way. Its success could be measured through student and teacher surveys and by measuring the number of users.

Context

What is the current or future problem you're trying to solve? How does your solution align with DigiEduHack 2025 annual theme?
How does your solution confront the challenge posed by the hackathon organiser and how does it address the challenge category?

We are trying to solve the problem of students not practicing mathematics simply because they are bored or uninterested by it.

Our solution addresses the challenge proposed by the Hackathon organizer as it provides a solution accessible both offline and online, ensuring that students without constant internet access can still practice mathematics.

Target group

Who is/are the target group/s of your solution and how will they benefit from it? Why is your solution relevant to them? how do you plan to engage these groups so you fully meet their specific needs?

Our target group are primary and secondary school students who may not find mathematics engaging on their own. They will benefit from it because, by playing a game and competing against their friends, they can improve their math skills in a fun way. Furthermore, students who have to prepare for a timed exam can simulate those exam conditions using our in-game timer, helping them become more comfortable with the pressure and competition.

Impact

How will your solution catalyse changes in education and what impacts will it have at social and environmental level? Could you provide examples or scenarios illustrating how such changes and impacts might unfold?

Our website can have a large impact on education as it will make learning mathematics more inclusive for pupils who may find it boring at first. Moreover, it will allow students without constant internet access to practice specific maths questions and prepare for their exams. An example of how our solution may aid a student is a middle school pupil who doesn't particularly enjoy maths. However, they want to beat their friends at the in-game race. To do this, they must learn to solve the required problems, helping them develop the skills they need to functionally use mathematics in school, day-to-day life and, in the future, in the workplace.

Describe it in a tweet

How would you describe your solution in a short catchy way with maximum 280 characters?

🚀 Race to knowledge with Math Dash! 🏆

The fun way to do math

Pick your grade, exam type, & topic, then tap to sprint past maths hurdles. Play solo or 1v1, beat the clock, and level up your skills while you race!

Innovativeness

What makes your solution different and original? Are there similar solutions or approaches currently available or implemented by education sector practitioners? If so, why and to what extent is your solution better?

There are similar approaches being implemented which make learning more engaging, such as Kahoot!. However our solution is different and original because it explicitly implements a racing element. This makes it better because students may be motivated to race their friends to the finish line, prompting them to work hard on the math questions.

Transferability

Can your solution partly or fully be used in other education/learning contexts or disciplines? Could you provide any example?

Our solution was originally created for maths, however it can be edited to fit any other subject as well. For instance, English Literature can be studied by asking questions on the authors' lives such as key events which have affected their literary production.

Sustainability

Once you have a prototype, what are your plans for a further development, implementation upscale and replication of the solution? How do you see it working in the mid- and long term?

We have already developed a prototype (shown during the pitch). Our plans for future development include the creation of a more visually pleasing interface and the inclusion of other exam types (such as SAT, AP, TMUA, Italian Maturità, etc.).

Team work

Present the members of your team.

Why are you the perfect team to develop this work and what are the competencies you all bring in so the solution is developed successfully? What is your expertise within the thematic field concerned? Are you planning to continue working as a team in the future? If so, why?

Our team is composed of two high school students: Michele Cirino and Leonardo Gabrielli. Both excel at maths and wish to help others do the same. In addition, we have both lived in several different cities, helping us observe that the problem of disinterest in mathematics is widespread. We are planning to continue working as a team as, having done so in the past, we know that we are both extremely driven. Also, we like to work together through problems as our backgrounds may give us different perspectives on issues, generating more creative solutions.