IO1

Digital Classroom

MaSCE³ MathCityMap

Co-funded by the Erasmus+ Programme of the European Union

„Digital Classroom“

...of MathCityMap allows the creator of a math trail to use additional pedagogical and organisational tools for a limited period of time with the aim of keeping track of what is happening during a math trail.

The Tracking shows user activities and progress in real time, the Chat can be used to give differentiating hints and lastly the subsequent created E-Portfolio archives all events that happened during the D.C. for further analysis, evaluation and improvement.

Take action with these new tools for a modern way of teaching!

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Phases

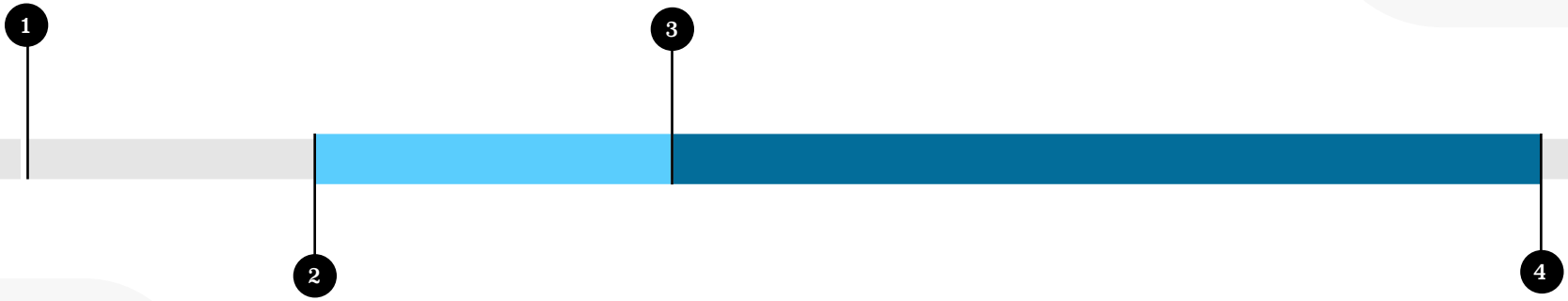
Depending on the time, a D.C. is in one of four phases, each of which has special features.

„Upcoming“ > 30 min before start

- Editing of D.C.
- No Joining / Observation

„Running“ – During the DC time period

- Joining / Observation / No Editing [except ending time]
- Processing and solving of tasks
- **Tracking & Chat**



„Preparation“ < 30 min before start

- Joining / Observation / Possible Editing
- No Task opening / solving

„Completion“ – post D.C. period

- No Joining / No Editing
- **E-Portfolio** data can be accessed by the author up to 6 months after completion

Getting Started I

With the help of the portal editor, new D.C.s can be created or already existing D.C.s modified.

The editor is accessed throught the main trail options where you can choose to create or edit D.C.s in the „Ongoing“, „Upcoming“, and „Completed“ sections.

Digital Classroom Settings

1. Basics

Name
Shown to the user in the MCM app when joining.

Starting & Ending time / Duration
Date and time when the D.C. becomes active or ends. The time span must not exceed 48 hours. Half an hour before the start of the DC, users can already join, but not yet process tasks.

2. Messages

Welcome + Goodbye message
Messages that are displayed to the user in the app when joining and finishing the D.C.

3. Options

Leaderboard
Enables or disables the display of the leaderboard in the MCM app.

Automatic task assignment
On an ordinary trail without D.C., users can choose a starting point themselves. To ensure that all tasks are equally worked on during the D.C., the system offers the following options to automatically assign predefined start tasks to the users:

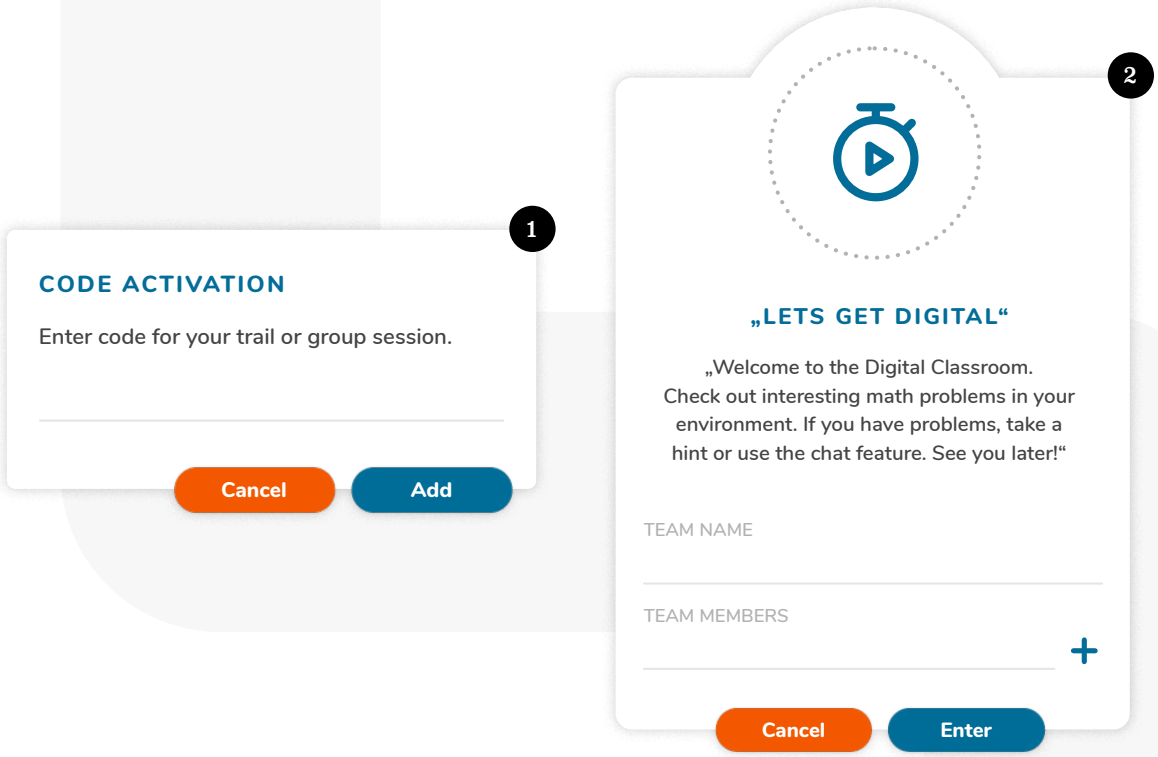
a) Increasing: The tasks are assigned to the users in sequence (1,2,3 etc.)
b) Odd first: The odd tasks are assigned first, for a sweet little buffer inbetween.
c) User-defined: The author can sort the list of math trail tasks

Getting Started II

1. Users in the app join the Digital Classroom by entering the activation code provided by their author and subsequently downloading the matching trail.

2. The process is finalized by choosing a team name and the including members.

ALL SET & DONE,
NOW LET THE TRAIL BEGIN!



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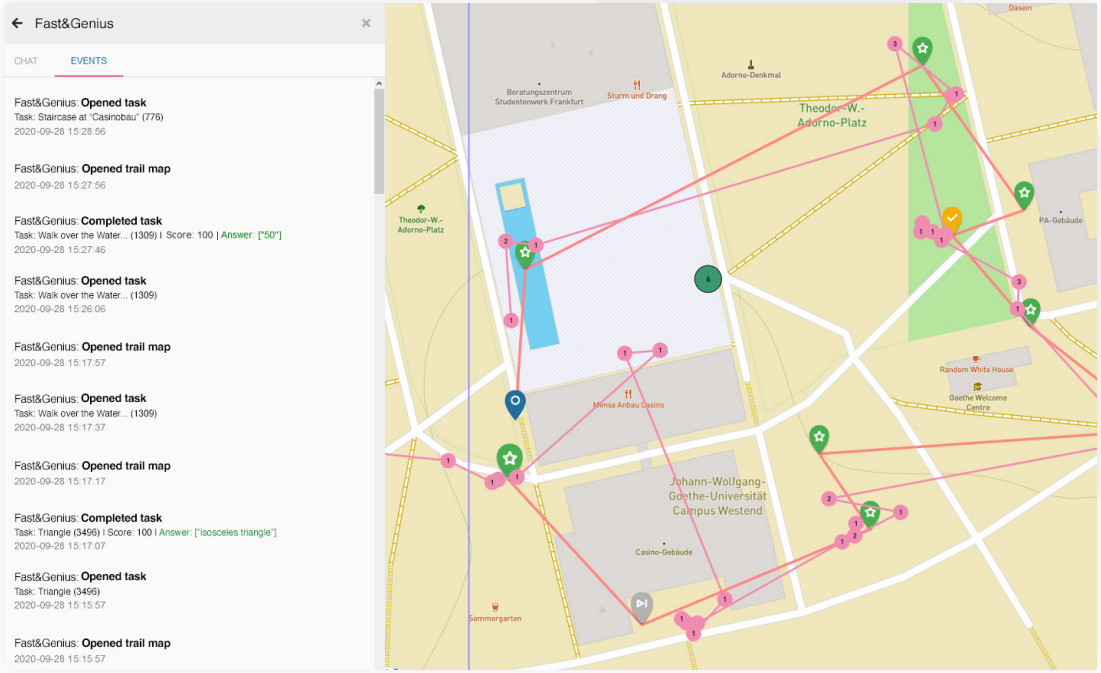
Tracking

One of the author‘s core D.C. tools is the monitoring of each participating user group on a map and their progression on the trails‘ tasks. By assigning each user a number and an individual colour, all moves during the D.C. can be observed clearly.

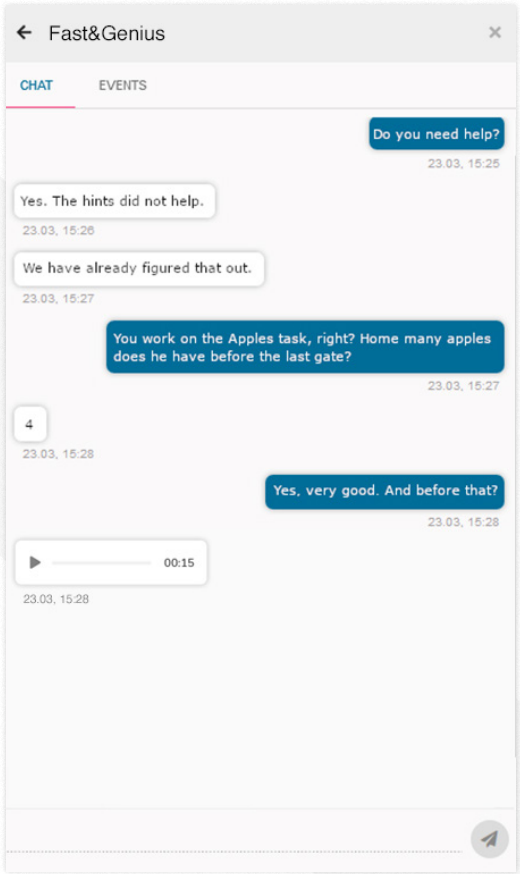
A detailed view of actions, task development and even an optional walking path of an individual user can be selected on top to provide the best overview of the D.C. situation.

The users‘ individual progress state on all trail tasks is communicated through specific markers:

- Not yet opened
- Opened
- Skipped
- Solved [perfect]
- Solved [allright]
- Failed [sample solution used]



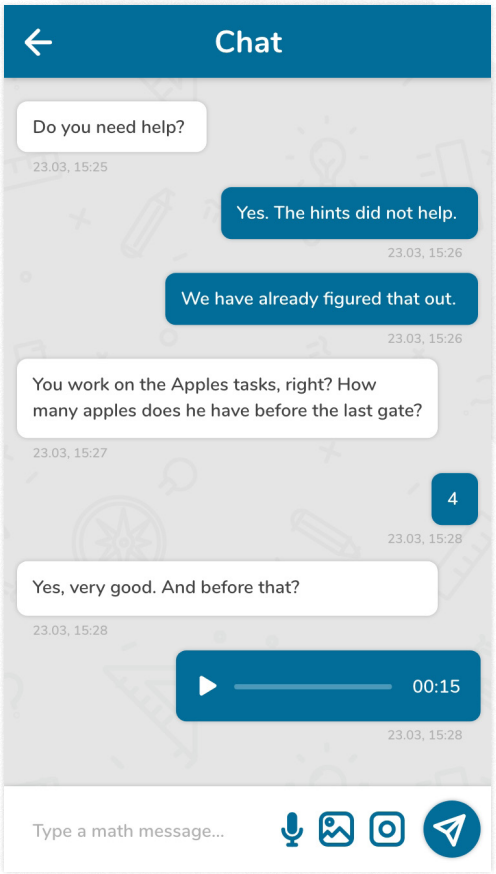
Chat



> communication via portal

The chat is a communication channel between the author and the users of a D.C. The author is able to give individual and differentiating hints, answer questions and react to help requests or send organisational instructions as well as pictures and audio files via chat.

At the end of the D.C. details, there is an All-Chat, which allows the author to send a message directly to all users. This feature should make it easier for the author to quickly send organizational things that affect everyone.



> communication via app

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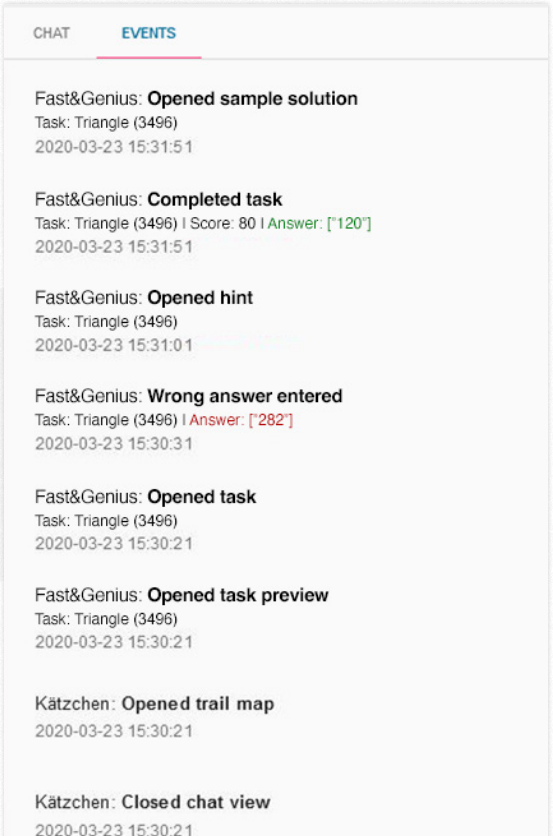
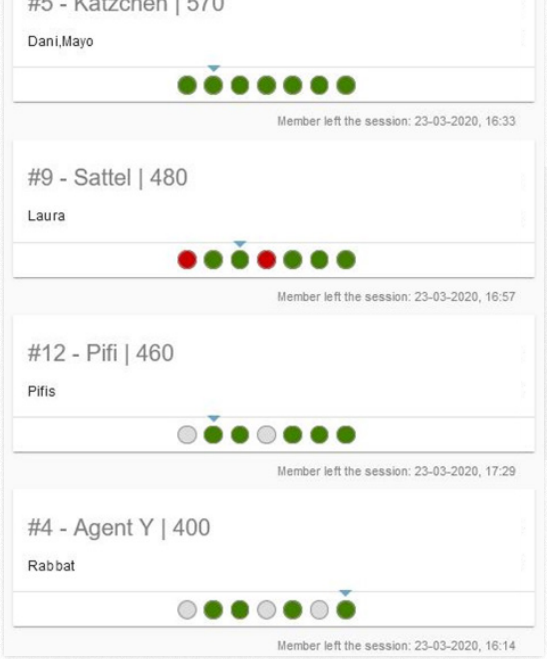
E-Portfolio

The e-portfolio of a user describes the totality of all events, the user‘s progress and the chat history between author and user. The data collected during the time period of the D.C. are accessible to the author for up to six months after completion of the D.C. This information can be used for a follow-up of the math trail, as a foundation of the trail improvement, as well as, subsequent classes.

On the one hand, the math trail itself can become an object of insights by analyzing user solutions, user behaviours and actions or the chat history in order to improve unclear task phrasing, determine better solution intervals and store pictures of the written solution processes.





On the other hand, the e-portfolio can be used for targeted identification of frequent mistakes. By selecting individual tasks from the trail, certain topics can be discussed and deepened in class – a neatless merge of outdoor math trails experience and classic classroom lessons.

AND FINALLY a conclusive award ceremony can take place based on the user scores if competitive leaderboards were activated.

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masce.eu / mathcitymap.eu/portal

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