

The VideoM@t project

**Engaging students on learning tricky topics in
mathematics through creative skills**

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WHAT IS VIDEOM@T PROJECT

VideoM@t is a project that focuses on helping students understanding **threshold concepts** in mathematics with the help of technological tools and collaborative high-level reflections.



WHAT IS A THRESHOLD CONCEPT

According to literature a **threshold concept** is a complex concept of high level on which the student has difficulty in understanding and overcoming, sometimes taking refuge in memorisation without understanding (Meyer & Land, 2006).



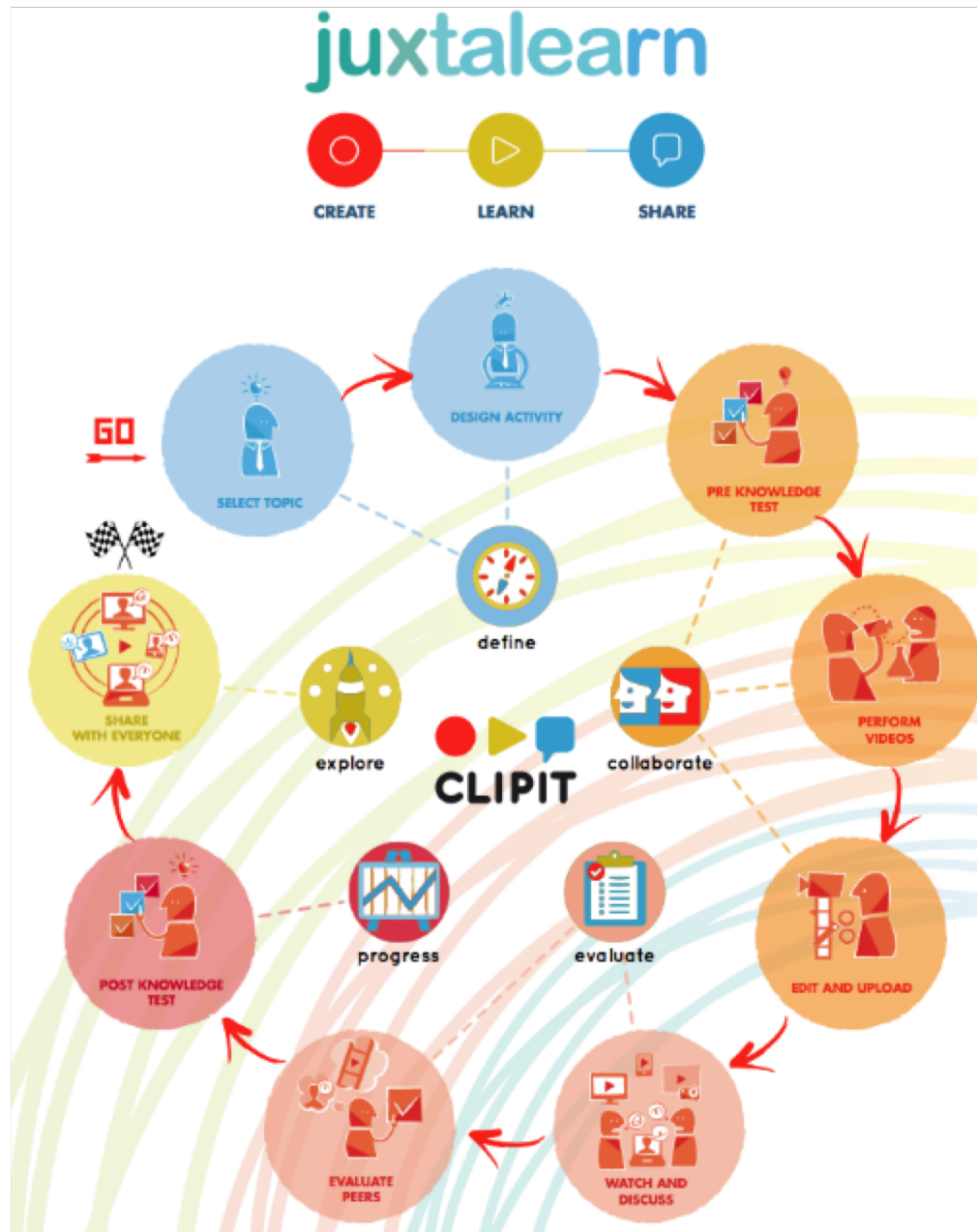
WHAT IS VIDEO@T PROJECT

VideoM@t presents a approach which focuses on helping the teachers identifying **threshold concepts**, and equipping the teachers with a detailed understanding of the causes of the problems so they have the understanding they need to better help their students overcome the problems.

The VideoM@t uses creative video editing by students to get them to a deeper understanding of a threshold concept



Juxtalearn learning Process



- The project involved 52 students (9th grade) and 3 math teachers.
- First, teachers identified the threshold concepts that their students have, and put them into the CLIPIT.
- Then, we presented the teachers the 8 steps of the JuxtaLearn process, and we coached them in the implementation of these phases with their students.



- Applying a flipped learning approach, the students started exploring the materials shared by teachers about the threshold concept and the corresponding stumbling blocks.
- The students were given time to study and to ask questions to the teacher. They then performed a quiz.
- Based on this diagnosis, the students, organised in groups, created storyboards and instructional videos on the topics.

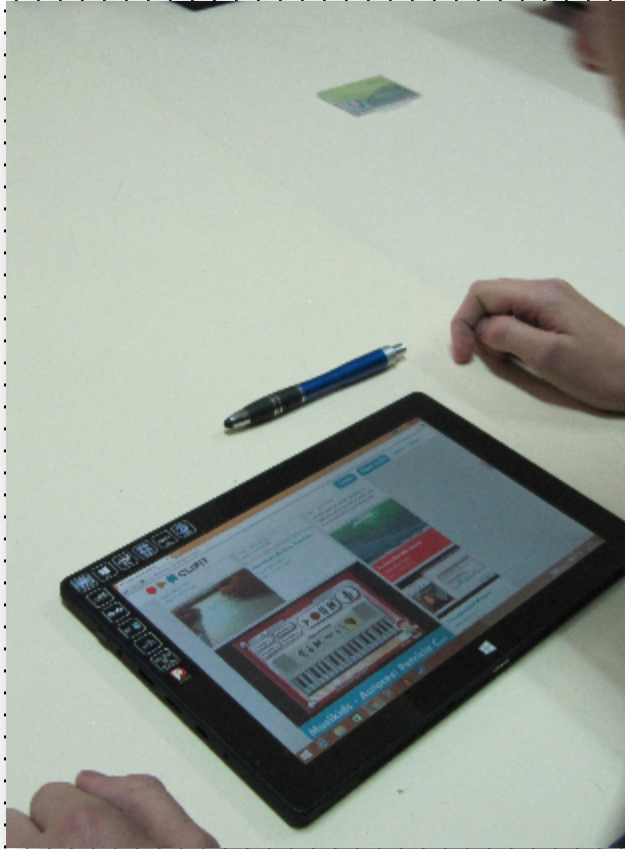


Co-developed with teachers, CLIPIT is the Web Space for the JuxtaLearn project



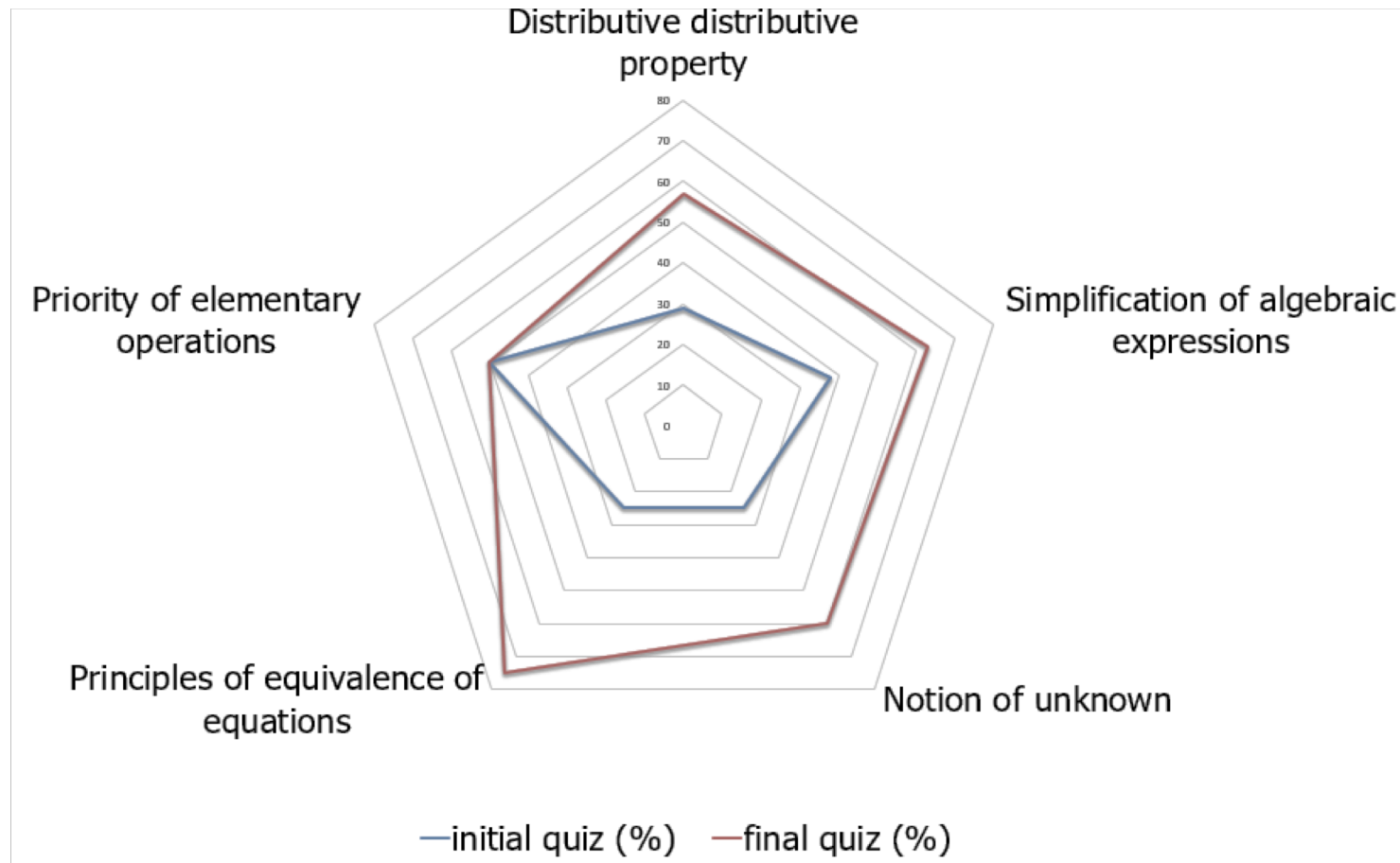
<http://clipit.es/uminho/>





Students using the CLIPIT

RESULTS (STUDENTS)



Radar chart with initial and final quizzes





Propriedades das operações elementares

O par ordenado é solução da equação?

ACKNOWLEDGEMENTS



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