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Piloting the Construit environment for “making construals” with Greek teachers

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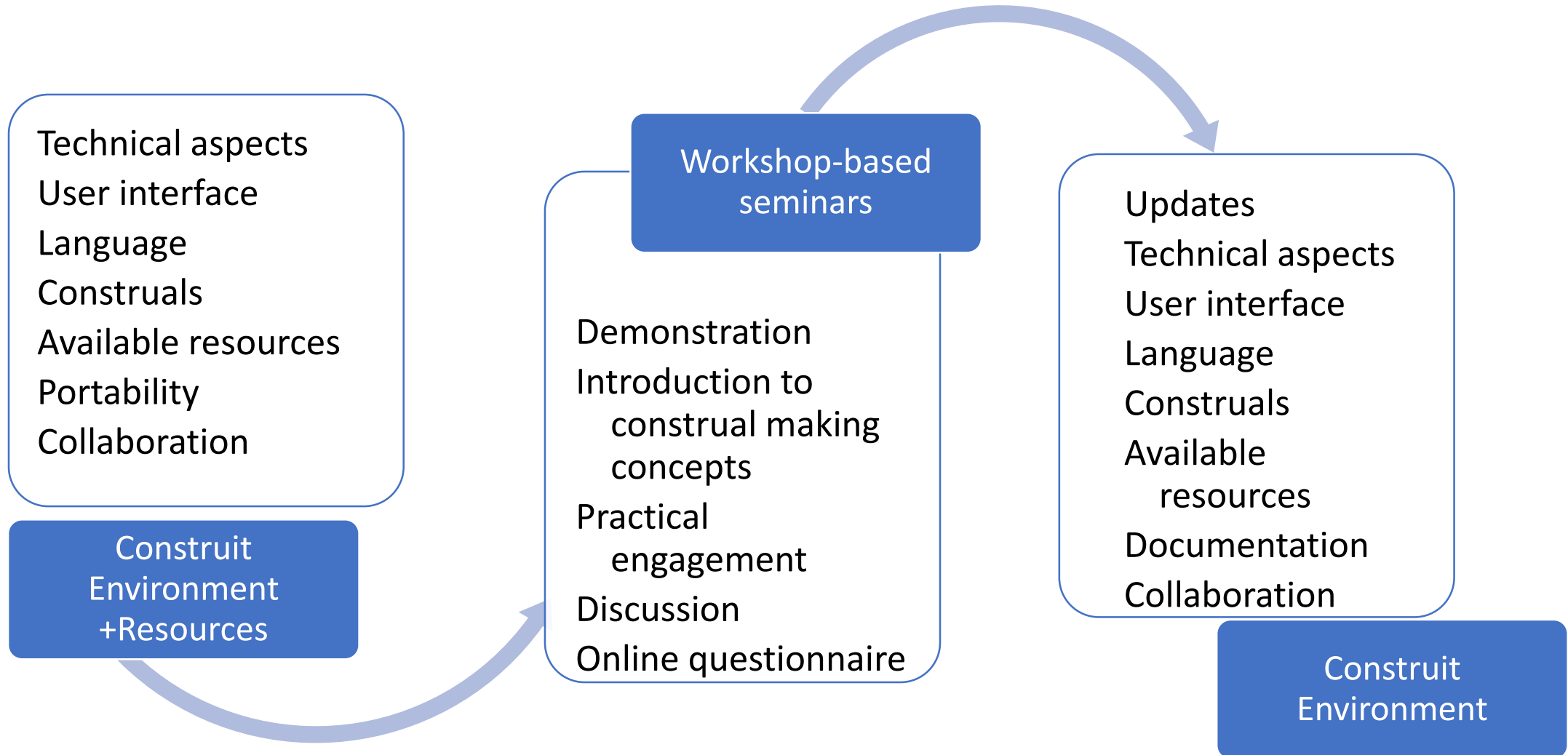
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Overview

- three main formal workshop-based seminars
 - 52 teachers
 - Focus on the different versions of the Construit environment and pre-developed construals in several thematic areas
 - **Feedback:** construals, construit environment, supporting materials, future workshop design
- one informal final workshop-based meeting
 - 7 teachers
 - Focus on of the final Construit environment in April 2017
 - Participation in the Athens Science Festival 2017

A closer look at the workshops



1st workshop (C14)

- Date: May 8-9, 2015
- Number of teachers: 16 teachers
- Resources
 - *Exploring and modifying construals: activities with the*
 - *Shopping construal ([Worksheet 1](#))*
 - *Light in the Room ([Worksheet 2](#)) pdf*
 - *The electrical circuit ([Worksheet 3](#)) pdf*
- Applying construals to support teaching and learning
- *Discussion*
 - *What can “construals” offer to the teachers?*
 - *what skills are associated with the construal making process?*
 - *What resources would support /motivate teacher engagement in construal making?*



Findings from the 1st workshop

Strong points

- ‘construals’ were seen as vehicles for the potential development of transversal skills such as problem solving, programming skills, analytical thinking skills and collaborative skills
- Interaction with an international team of experts
- Opportunities to work on multidisciplinary concepts and scenarios

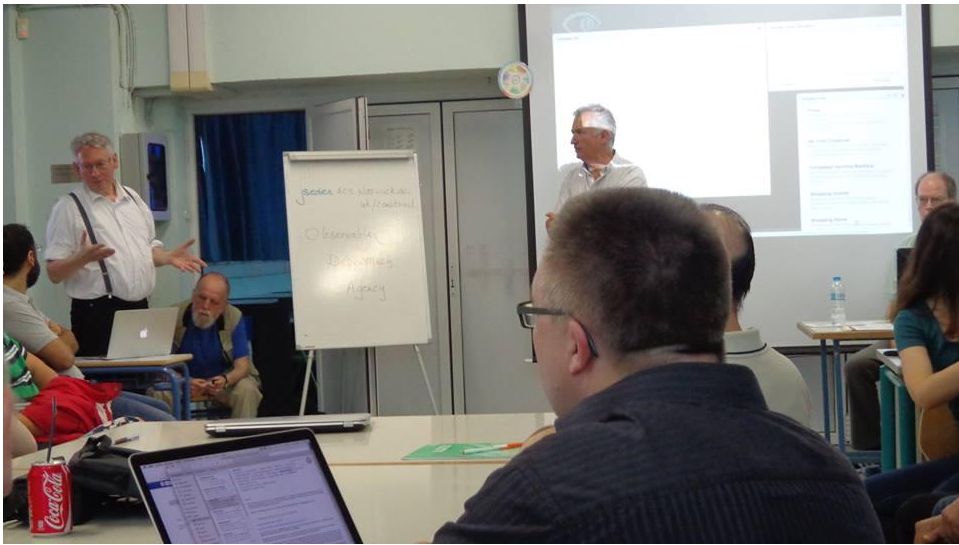
Weak points

- Construal making requires programming knowledge
- The construal environment is neither user-friendly nor easy to be used by school students, especially novices in programming
- Concerns about the applicability of construal making in the class and into their teaching practices.
- Need for more practical examples and training, more supporting resources and materials both on technical issues (i.e. user guides, manuals)

General question: what does it offer compared to other **environments for learning creatively programming** (i.e. Scratch?)

2nd workshop (C2)

- **Date:** September 19-23, 2015
- Number: 20 teachers
 - Most of the teachers were active in the area of Science, Technology, Engineering and Maths
 - 2 Greek Language teachers
- Approach
 - Introductory session
 - Practical engagement with pre-developed construals
 - Reflection

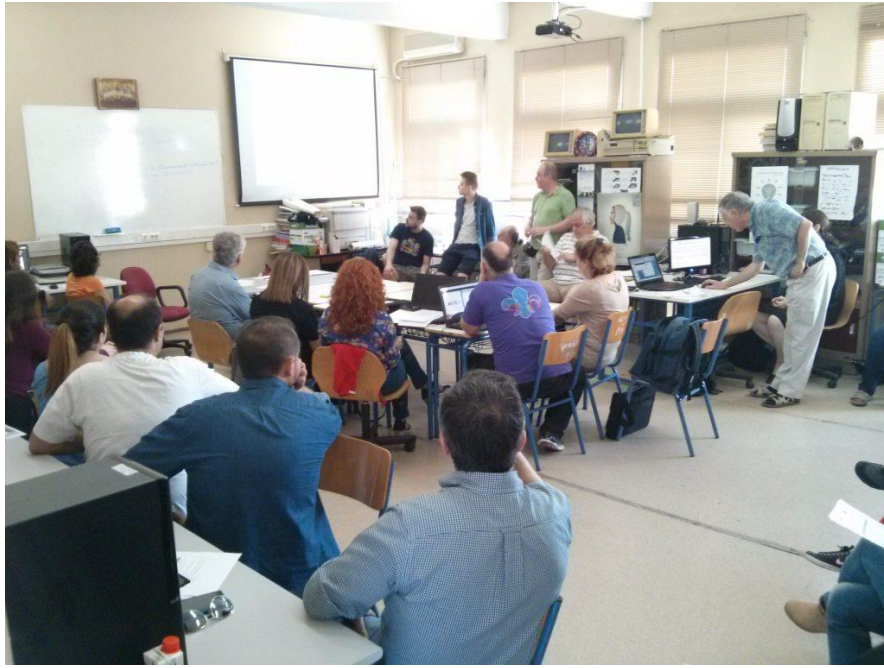


Findings from the 2nd workshop

- Need for **more time for practical engagement** in construal making
- This will allow them to find **whether and how construal making can be integrated into their teaching practices.**
- Need to **receive resources and materials in advance** so that to be better prepared
- **Concerns about the time needed** in order to implement it in the class

3rd workshop (C15)

- **Date:** April 16-17, 2016
- **Numbers:** 16 teachers
 - Most of the teachers were active in the area of Science, Technology, Engineering and Maths
- **Resources**
 - Very short introduction
 - Practical tasks
 - Getting started with the Construit environment
 - Building a model of the solar system ([worksheet](#)) [pdf](#)
 - Experience sharing



Findings of the 3rd workshop

- **Strong points**

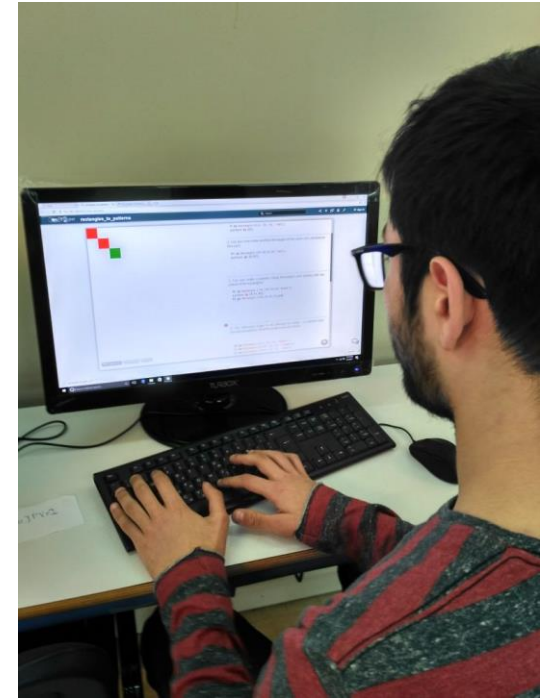
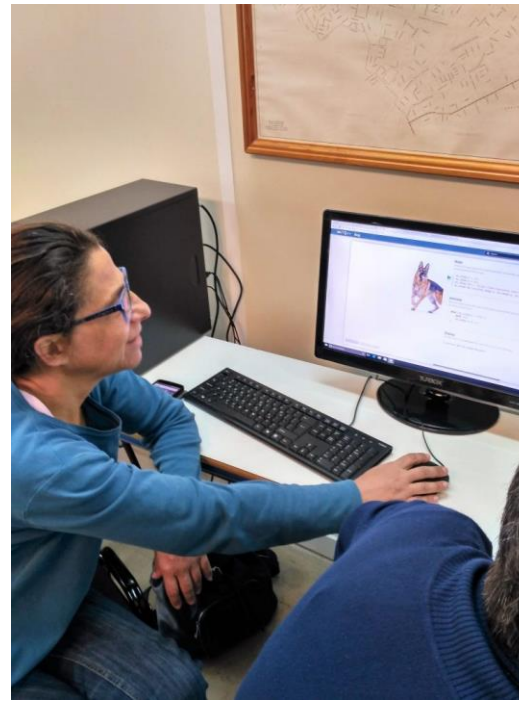
- the opportunity for **exploration and reflection** and the engagement in **interdisciplinary activities**
- the **immediate feedback** provided through the Construit environment and the opportunity for **visualization, customization and parameterization**

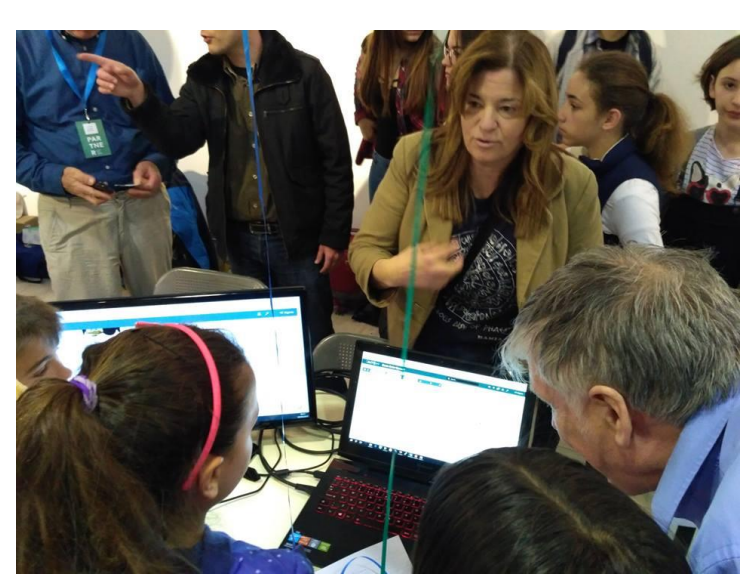
- **Weak points**

- **Time consuming** and not in line with the tight school curriculum
- Construit environment has been improved but it is still **not easy to use**
- **Need for more supporting resources** both on **technical** issues (i.e. user guides, manuals, repository enrichment, construals linked to the school curricula) as well as on **pedagogical** ones (i.e. lesson plans, worksheets)

4th workshop (C16)

- Date: April 1-2, 2017
 - Informal meeting and discussion with **7 teachers**
 - Participation with the updated Construit version at the **Athens Science Festival**
- Small tasks in the updated version of the Construit environment
 - Focus on features for personalization and collaboration
 - Focus on the presentation of the pre-developed construal within the environment
 - Focus on worksheet creation in the environment





Findings from the 4th workshop

Strong points

- A tool for creative explorations and constructions
- Portability and usability
- Open environment
- Immediate feedback
- More attractive user interface
- Nice build in features (for creating your own worksheets and instructions)

“[...]the students can have the possibility to challenge their creativity in a such environment. Concerning our previous meeting, it's pretty obvious the improvement of the interface! The previous was a bit confusing for me” (participant teacher)

Findings from the 4th workshop

Weak points

- Need for help screens readily available
- Syntax for the scripting language
- Construal making is a time consuming process
- More examples of “construals” that can facilitate educational purposes

Teachers were **more positive** in using the construct environment; recognized that the updates were towards the correct direction and they now focused on more practical issues like help screens, specific construals etc.

A sign that they have started optimizing the real use in the classroom

For more...

- www.construit.org
- www.edumotiva.eu
- info@edumotiva.eu