

the “Find Hypotheses” card in their Plan indicating the solving strategy they followed (Figure 1).

5.2 Novel constructions

Having finished with the bug-fixing phase, the two Subgroups used the experience they had gained during their experimentations to create novel constructions using the Twisted Rectangle as a building block. Having created a “participating in collectives” culture, the subgroups of students shared separate artefacts in LASAD and discussed on how to combine them into a jointly constructed one (Figure 6).

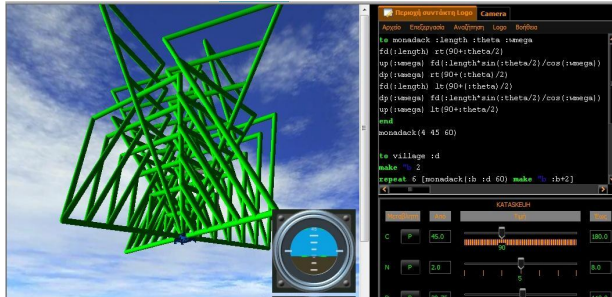


Figure 6. The “ice-cream cone” construction

The integration of the artifacts initiated a new process in which the students engaged in two types of activities. The first one related to making sense of the artifact received and of the way it was constructed. The second one referred to how to combine it with their own so as to generate a more elaborated artefact.

6. Discussion

Understanding creativity as a term that has been coined through different approaches, we used in this paper the students’ problem solving and posing strategies to explain how they came to create novel and interesting artefacts as they worked with an web-platform. Our specific focus was on evaluating the design of the platform that included two on-line shared workspaces and a half-baked microworld with a buggy behaviour. The open-ended problem of “How to close the open shape” was thus chosen to call for planning of actions in advance, discussing in collectives and exploring mathematical ideas to fix the 3d shape.

As the students worked with the Platform’s tools to address the problem, we signified several occasions in which they used interchangeably problem-solving and problem-posing strategies. Those were related to: cutting down the initial problem to smaller and more manageable pieces, translating it using terms close to the resources available for solving the problem, reshaping the problem creating special cases of the general problem, sharing the outcomes of the posed problems and assessing others’ attempts, recognising situations in which the restated problem didn’t lead to any results with regard to solving it, generating larger problems that combining the solutions of smaller ones.

The experience leaves us with a sense of needing to find out more about how to design affordances of tools that may create situations for problem-solving and problem-posing opportunities, aiming at studying if and how these may constitute a more solid indicator for the appearance of creativity.

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