Orchestration Graphs: enabling rich social pedagogical scenarios in MOOCs

Stian Håklev (EPFL), Louis Faucon (EPFL),
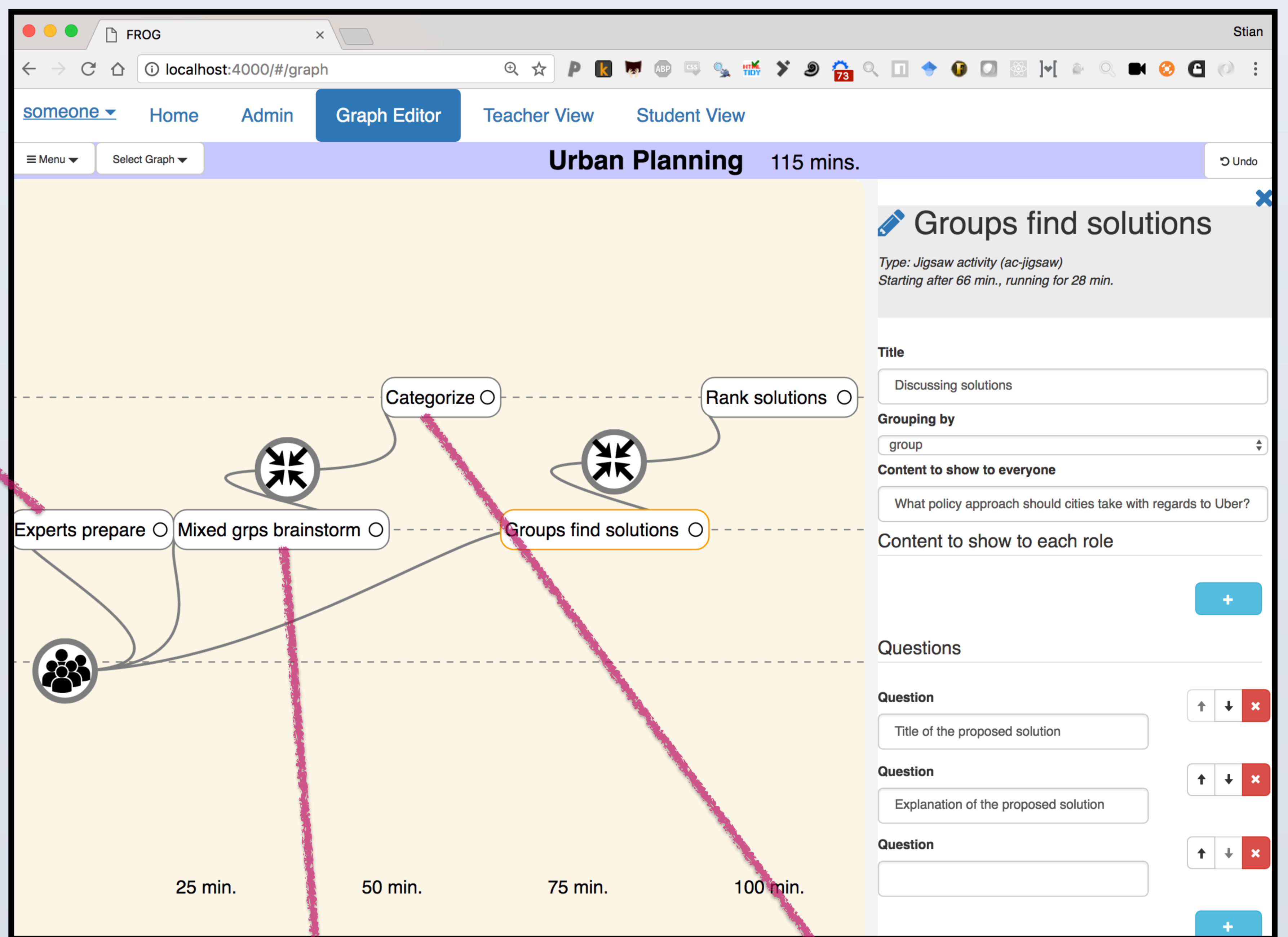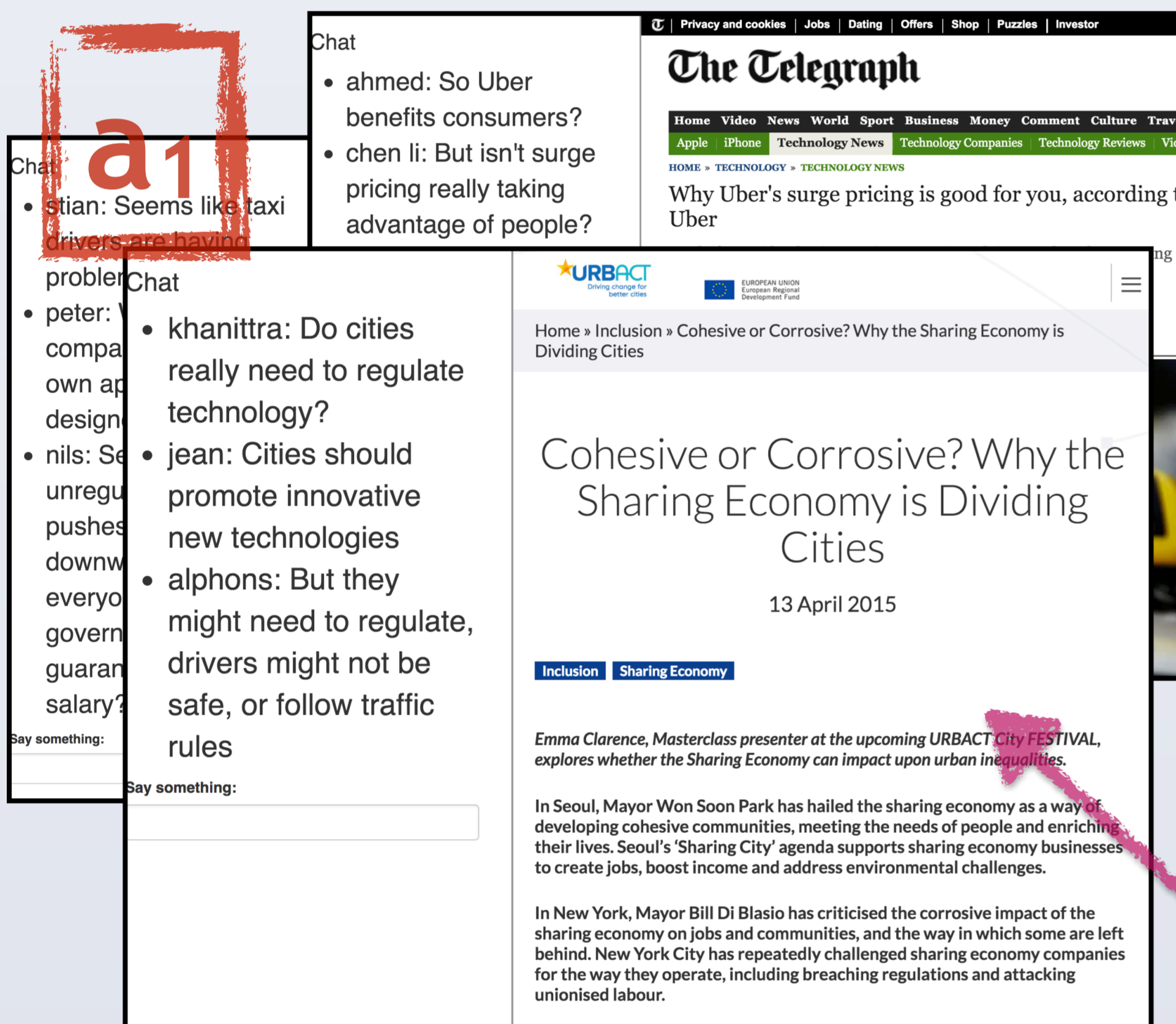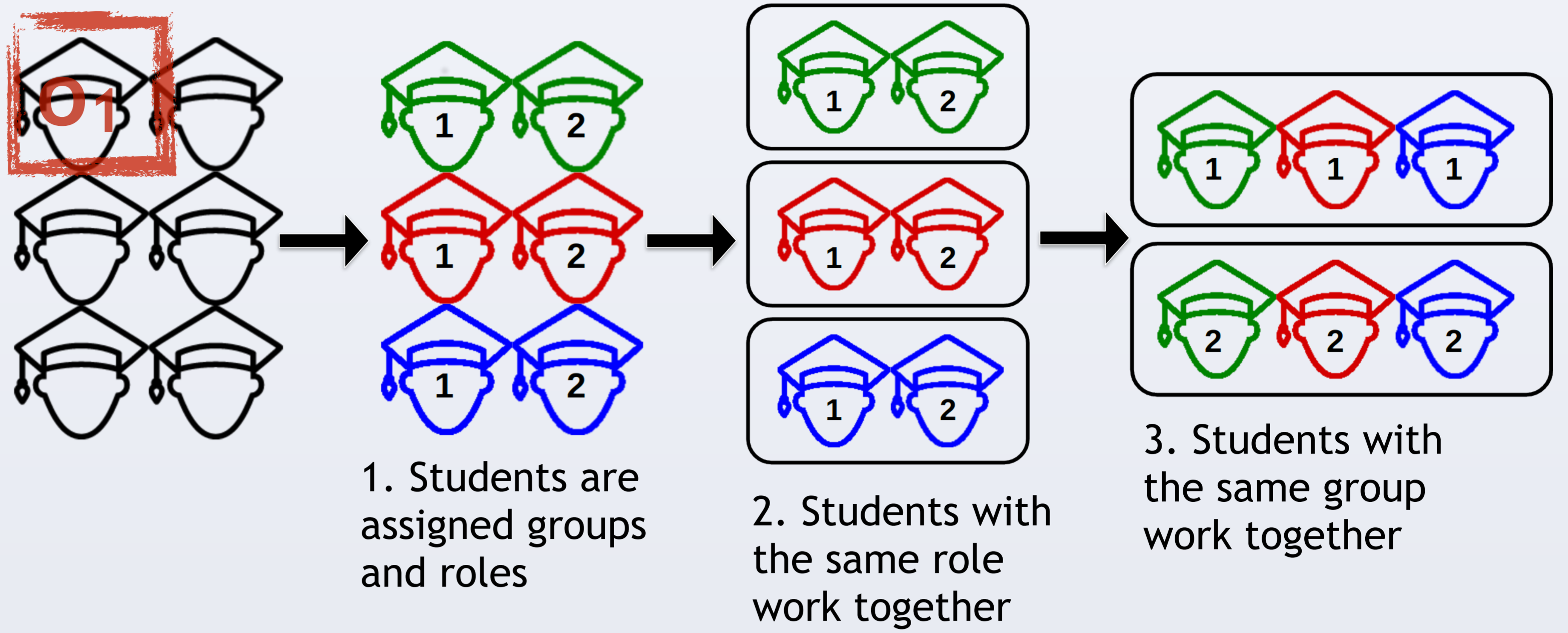Thanasis Hadzilacos (Open University of Cyprus), Pierre Dillenbourg (EPFL)

FROG

FROG is a web application for designing, running and orchestrating collaborative pedagogical scenarios. It has been implemented with the focus of enabling a wide range of possible scenarios.

Graph Editor

The graph editor allows teachers to design lessons based on the modelling language of Orchestration Graphs. A graph contains learning activities and operators whose role is to handle the flow of data produced by students while learning.

Engine

The engine executes the graph. It groups students in the learning activities according to the social operators and provides the content computed by the product operators.

1. Students are assigned groups and roles

2. Students with the same role work together

3. Students with the same group work together

What policies should cities adopt towards Uber? A jigsaw collaborative learning script

In this example scenario, nine students engage in an exploratory discussion around the policy issues faced by cities in the new economy. The goal is for students to get exposed to a wide variety of arguments and conflicting interests, and develop critical thinking, argumentation, synthesis, and creativity.

1. An operator (o_1) takes the class list, and generates groups of 3, distributing expert roles among the students (taxi drivers, policy experts, consumer advocates)

2. Experts (e.g. all taxi drivers) read an article related to their expertise and discuss relevant ideas (a_1)

3. Mixed groups bring their expertise together and brainstorm problems, ranking them (a_2)

4. An operator (o_2) aggregates the problems from the different groups and sends it to a_3

5. The whole class sees the top problems, and collaboratively sort them into four different categories (by clicking and dragging) (a_3)

6. Mixed groups try to come up with solutions to the problems in a_3 (a_4)

7. An operator (o_3) creates a list of all the suggested solutions, and creates a list of the highest ranked ones

8. The list of solutions is displayed, and a class discussion follows (a_5)

Fork me on GitHub

chili-epfl/FROG