

# HOW TO SET UP A FORMAL DESIGN THINKING COURSE THAT WORKS? A PRACTICAL GUIDE FOR HIGHER EDUCATION SETTINGS

## PROBLEM

Despite the growing recognition of Design Thinking (DT) in higher education, institutions face challenges in formally integrating DT into curricula in ways that are pedagogically sound, contextually relevant, and sustainable.

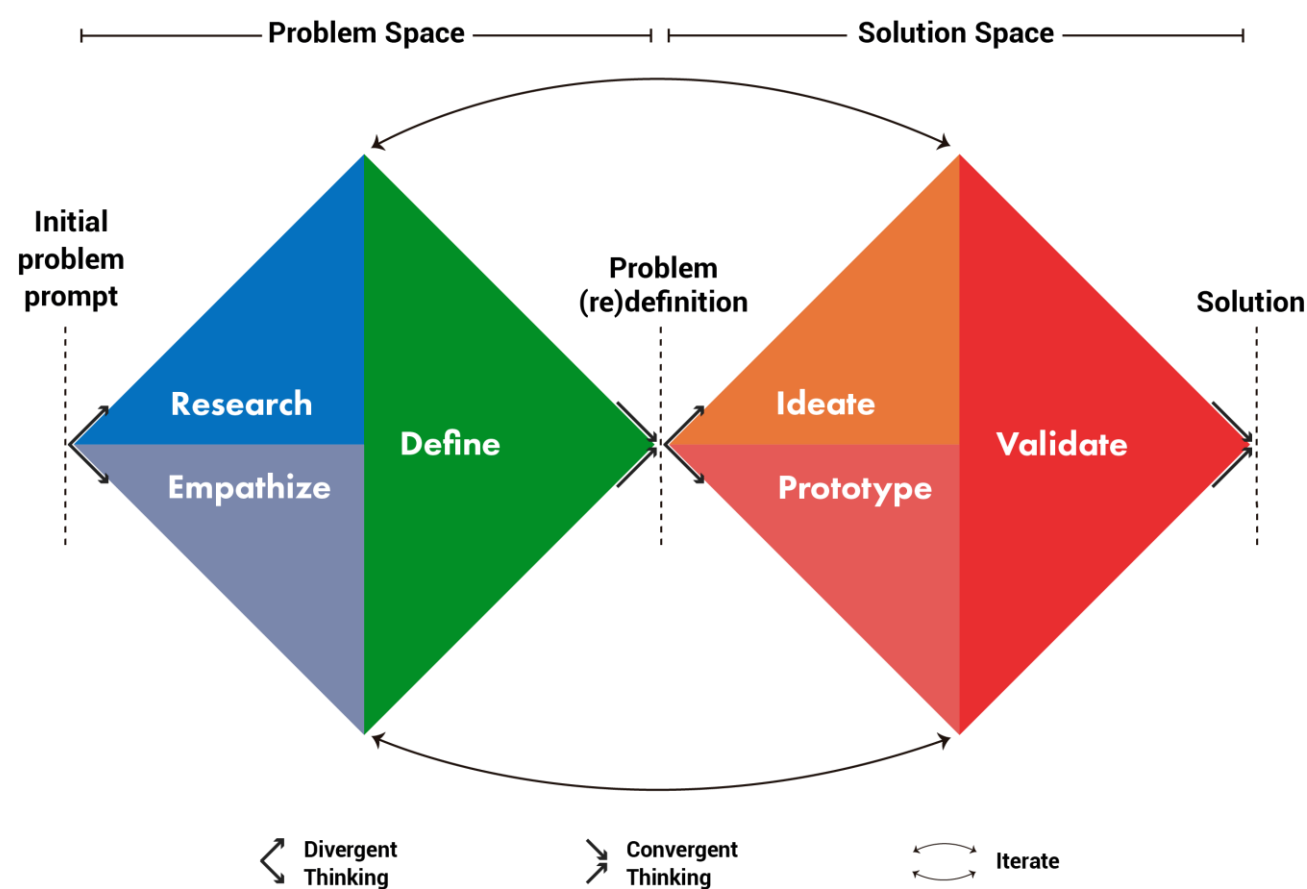
## GENERAL OBJECTIVE

To provide full disclosure of an evidence-based DT course that fosters problem-solving, creativity and teamwork skills, serving as a guide for educators, researchers and educational managers seeking to implement DT at their institutions.

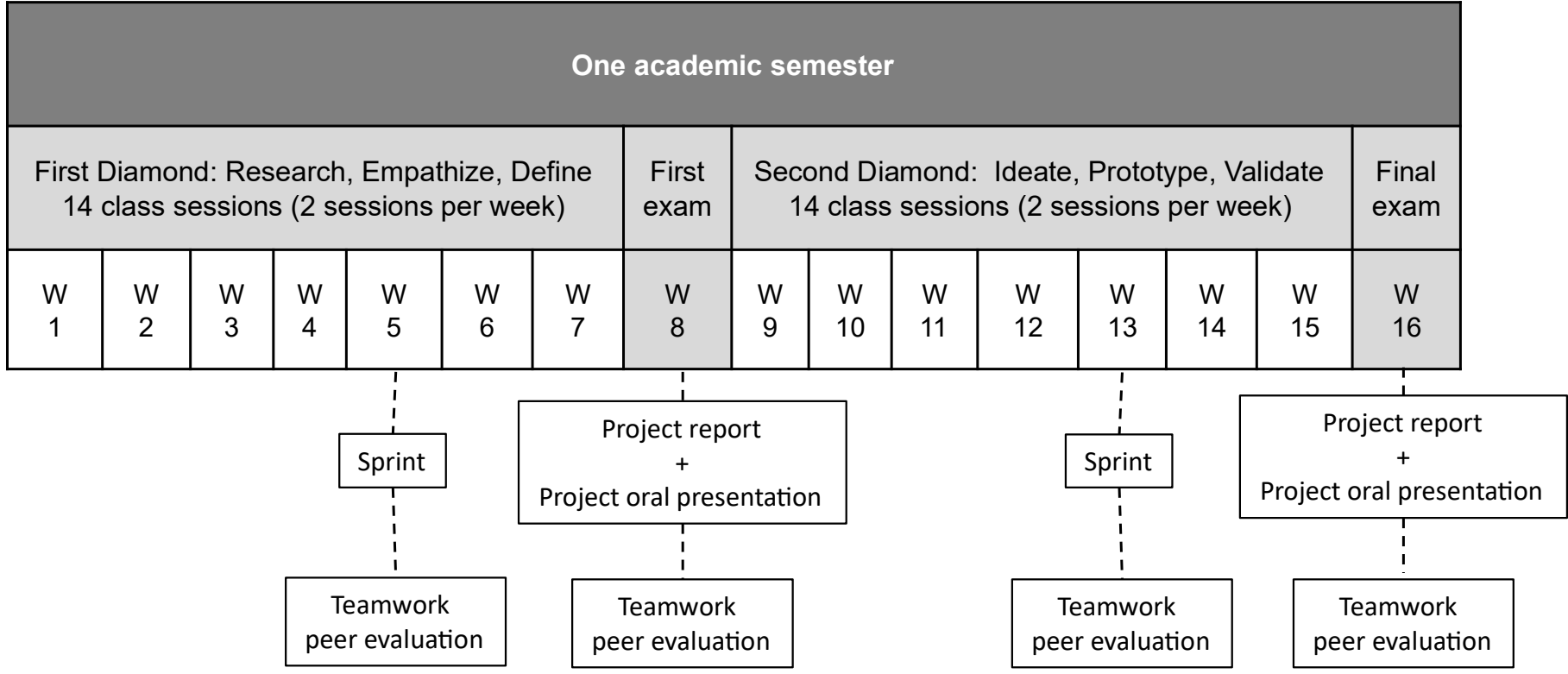


## Designing and setting up the Design Thinking course

### 1 Six-stage double diamond DT model as course framework



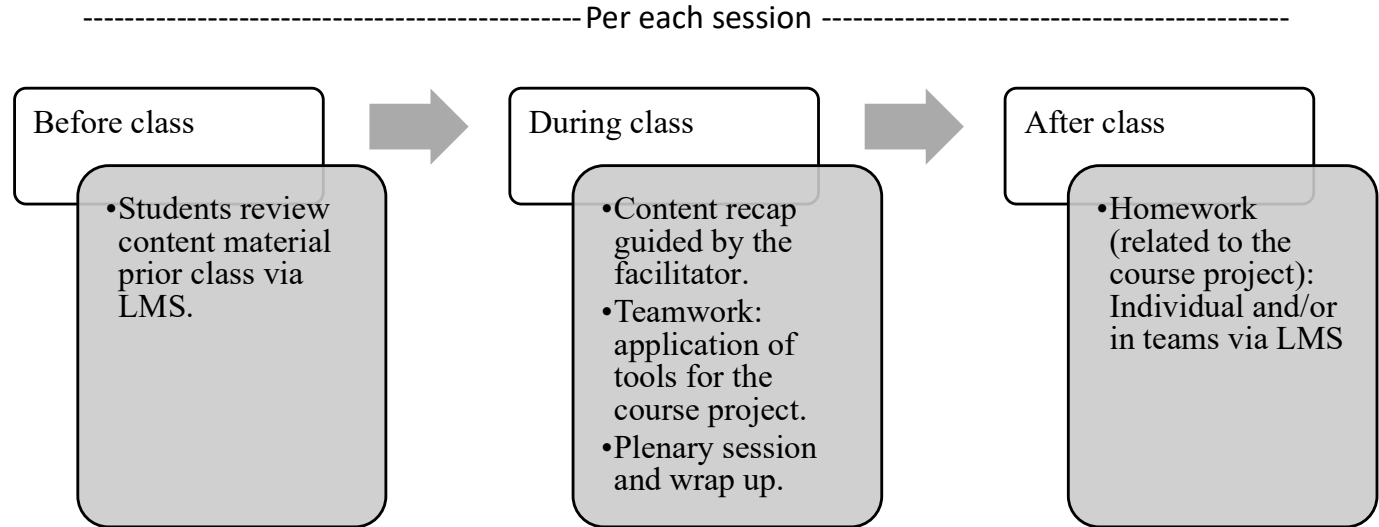
### 2 Session distribution of the DT course



#### Additional planning

- Facilitator training
- Finding real-life problems and sponsors
- Classroom setup and materials
- Group composition and teamwork
- Evaluation and grading policy

### 3 Structure within class sessions

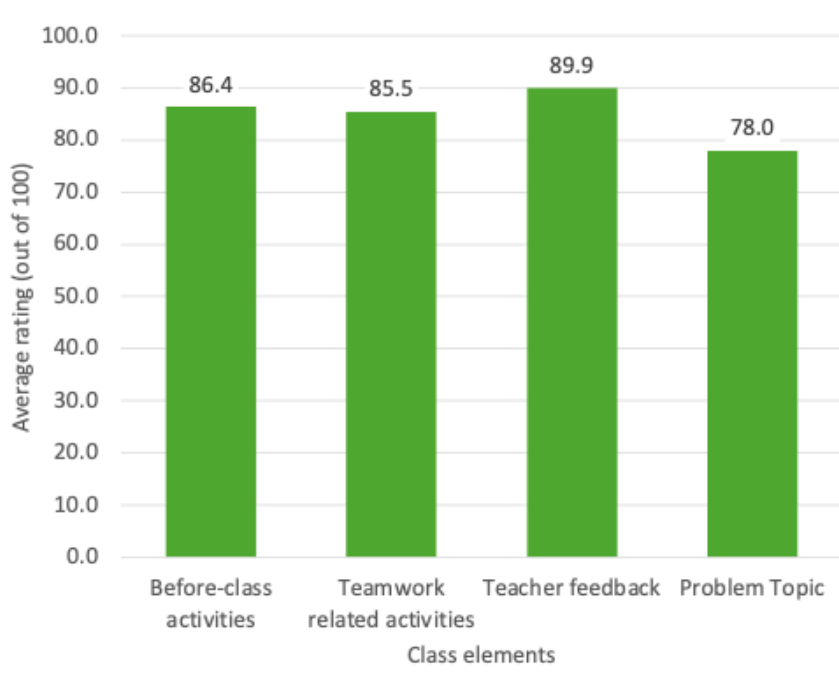


### 4 Description and Instructions to Students (example)

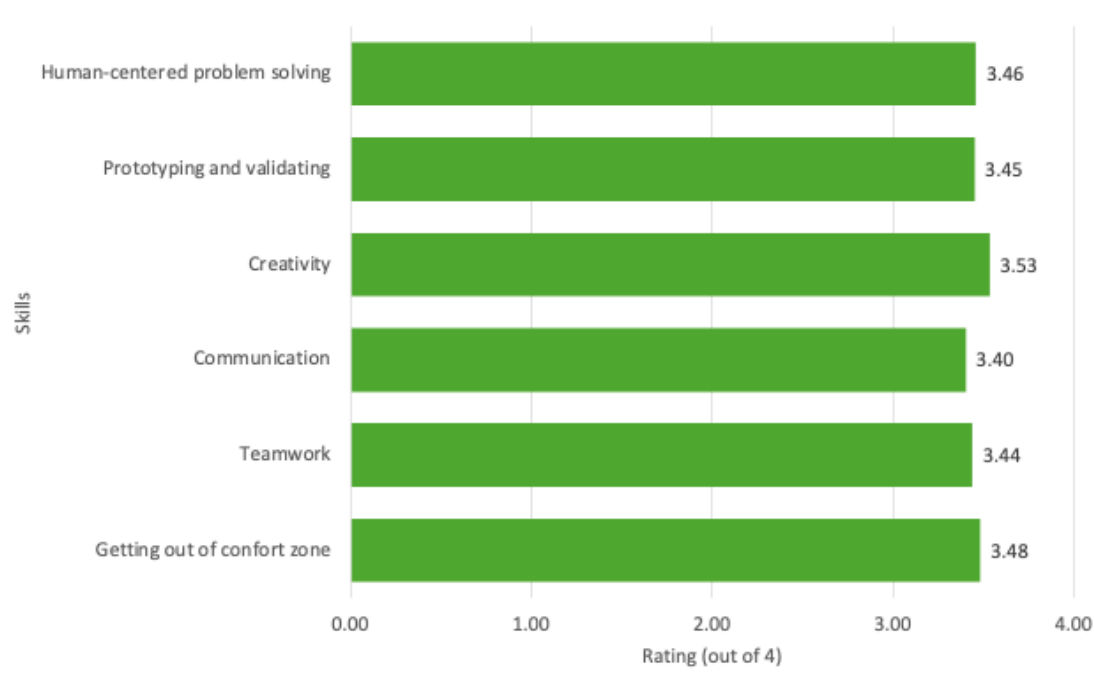
| Techniques and Tools   | Class Moment   | Description   |
|--|--|---|
| <b>Customer's Empathy Map</b><br><br><b>Objective:</b> Synthesize the information collected and understand the demands of present or potential users and customers by identifying their feelings, thoughts, and attitudes. | Before class session   | <b>Individual:</b> Check the content material about Customer's Empathy Map via the LMS.   |
|  | During class session   | <b>Team:</b> Select one stakeholder from your stakeholders' map for which you have the most information. Then, start filling out the empathy map using the provided template. You are expected to first fill out information about what the stakeholder sees, hears, does, and say. Then, fill out the "feel and think" section. Finally, fill out the "obstacles" and "success" sections of the empathy map.   |
|  | After class session  | <b>Individual:</b> Build at least one empathy map considering the information that have been individually collected through observations and interviews up to this point. Use the provided template. Include this information in the appendix section of the report document.<br><br><b>Team:</b> Synthesize all individual empathy maps per stakeholder to build a single empathy map per stakeholder. Use the provided template. Analyze which thoughts, feelings, obstacles, successes, are a pattern within stakeholders, and from stakeholder to stakeholder, along with any other learnings that arise from building these maps. Include this information in the corresponding section of the report document.  |
|  | Questions teacher can ask to guide teams during the activity | <ul style="list-style-type: none"> <li>What objective information do you have regarding what the stakeholder sees and hears? (in order to use information from research instead of guesses)</li> <li>How do you differentiate what the stakeholder says from what he thinks or feels?</li> <li>What can you infer from feelings and thoughts? What objective, observable behaviors and oral comments from the stakeholder make you infer those feelings and thoughts? (help them separate what a stakeholder literally does and says, from what the team is inferring the stakeholder is feeling and thinking)</li> <li>What would you say could move the stakeholder /her away from success? What data in your research makes you think so?</li> <li>What would you say has to happen for the stakeholder to feel successful? What data in your research makes you think so?</li> <li>What do you learn from the stakeholder based on all information you have included in the empathy map?</li> </ul> |

## RESULTS

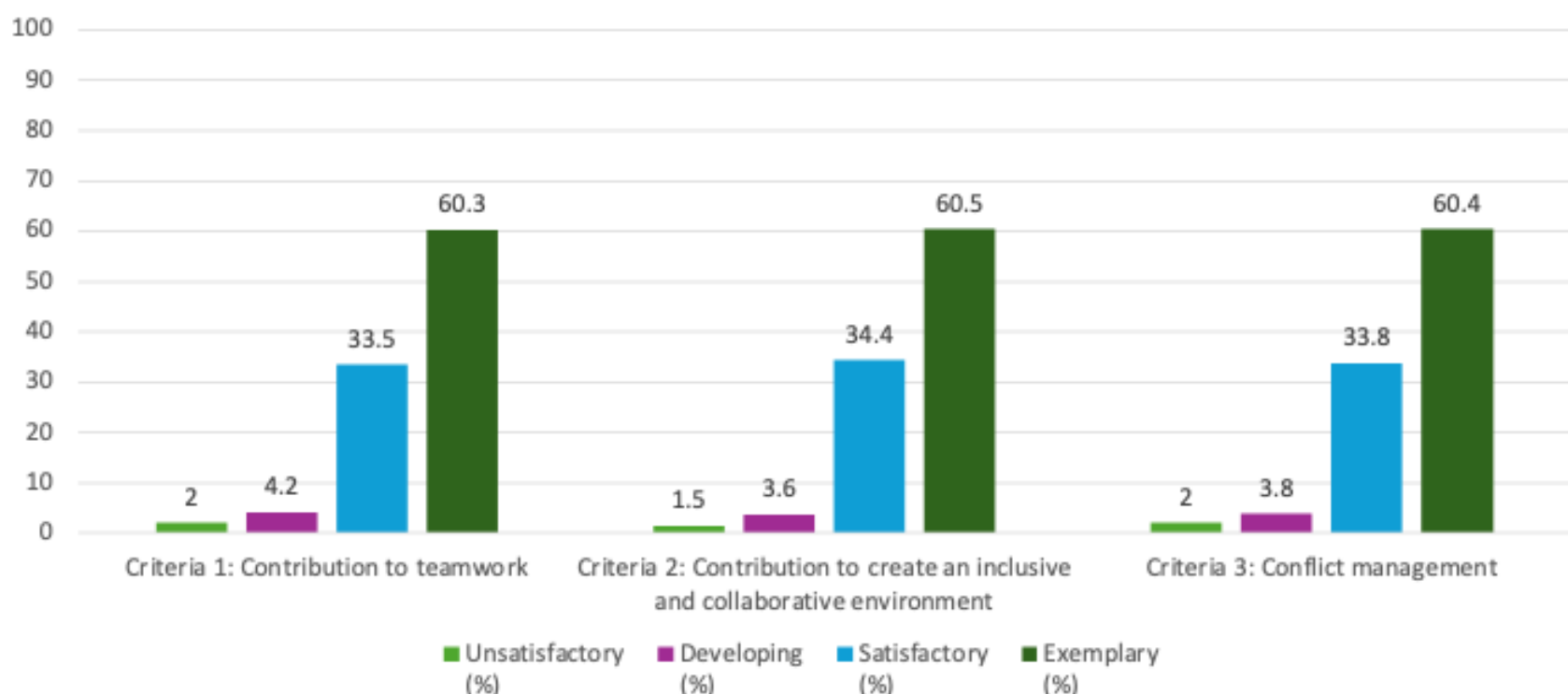
### High student satisfaction with class activities



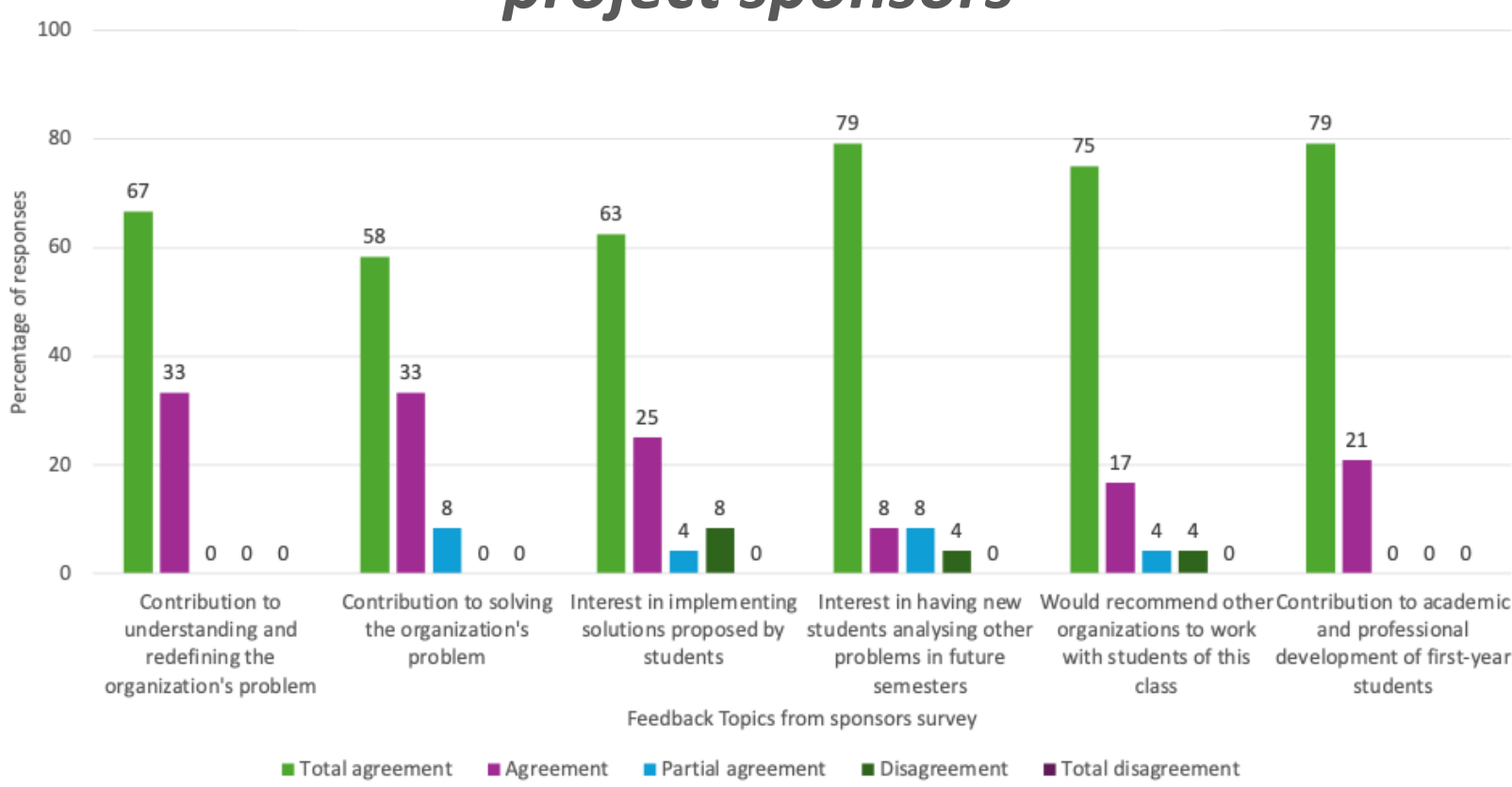
### Positive self-perception of skills improvement



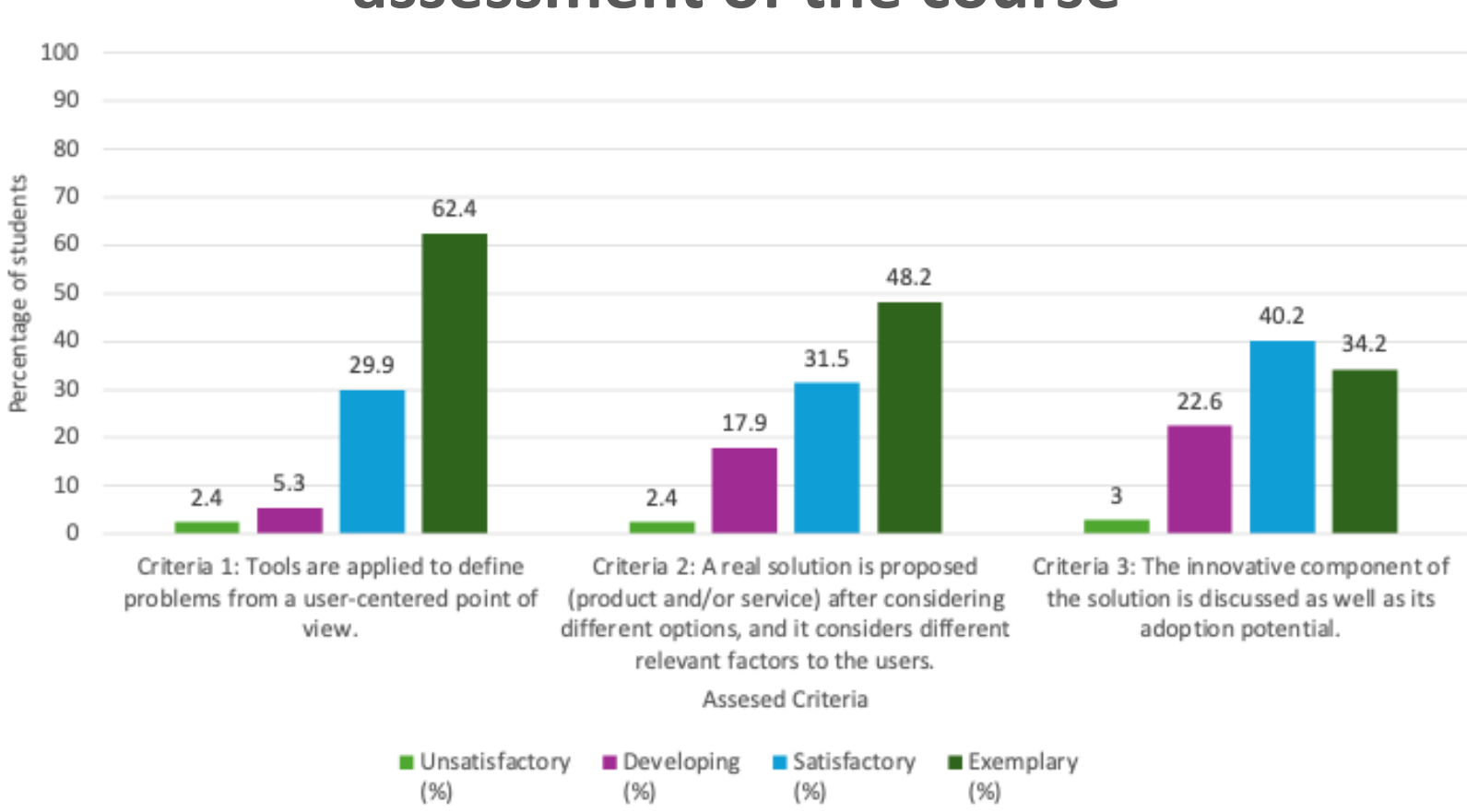
### Positive results from teamwork assessment of the course



### Positive reviews from project sponsors



### Positive results from value creation assessment of the course



## CONCLUSIONS

- Our DT course has proven effective in enhancing students' skills, delivering a highly satisfactory learning experience, and addressing real-life problems through a user-centered approach, as evidenced by student surveys, portfolios, and sponsor feedback, with students expressing motivation to apply DT beyond the classroom.
- This instructional paper offers a guiding framework for effective DT facilitation—adaptable across disciplines and contexts—from non-designer facilitators to non-designer students, addressing real-life problems while fostering essential 21st-century skills.

See previous studies where the impact of this course has been assessed and further research on DT at [www.i3lab.org/articulos](http://www.i3lab.org/articulos)