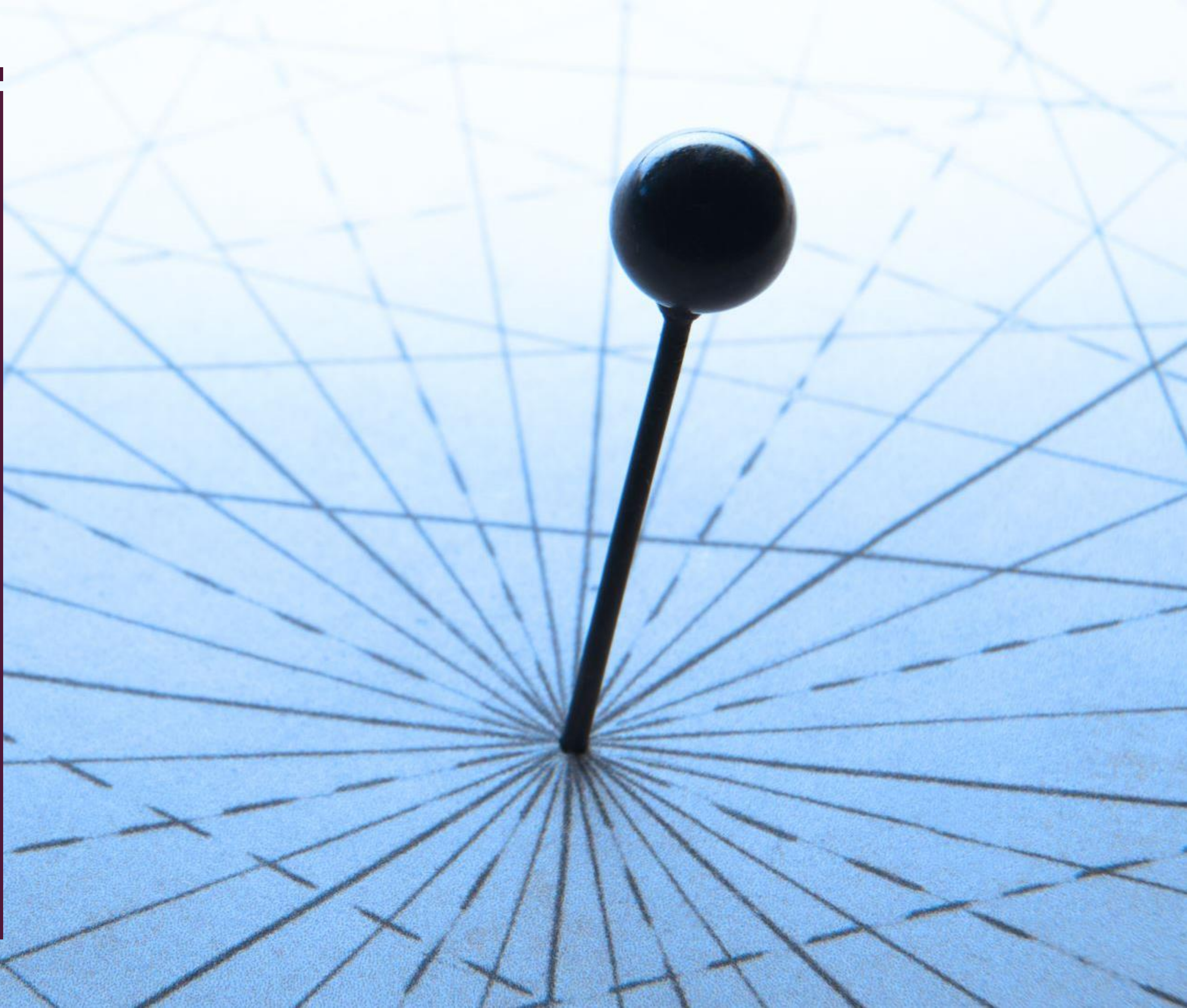
1. SENSEMAKING WITH CONCEPT MAPPING



COURSE CONTEXT & DESIGN PROBLEM

Context	Online undergraduate Information Science course
Design Problem	Students struggled to see how system-design concepts relate in meaningful ways.
Instructional Solution	Designed a two-step concept mapping task (Individual Map to Group Map) requiring collaboration to merge and refine ideas.
Tools Used	CmapTools, synchronous video meeting
Key Impact	Supported deeper explanation of relationships between concepts. Students actively engaged in comparing and merging their understanding.

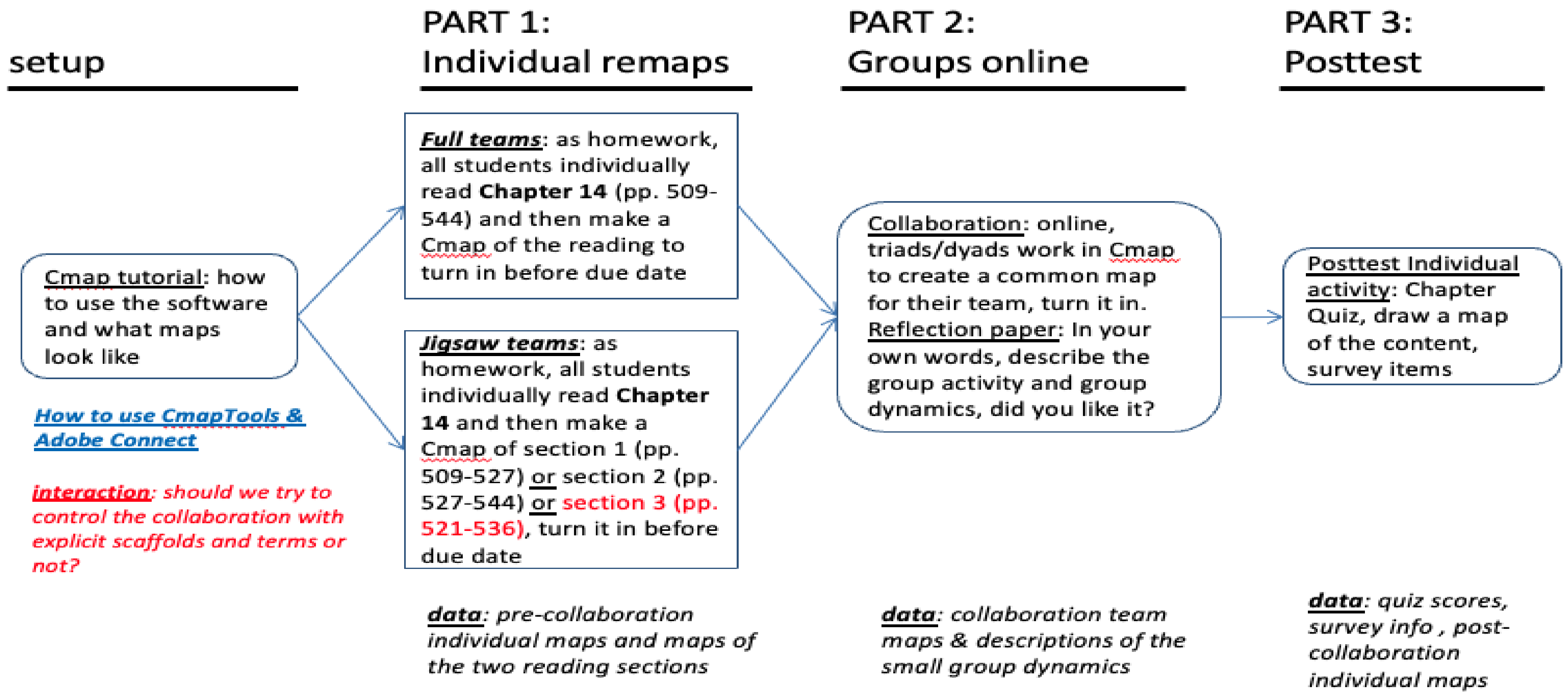
INSTRUCTIONAL DESIGN SOLUTION: A TWO-STEP CONCEPT MAPPING TASK

Learner Instructions (summarized):

- Create an individual map identifying key concepts.
- Meet in a group of three online.
- Build one **shared concept map** (min 20 concepts)
- Label relationships clearly.
- Submit final map.

Design Elements Included:

- Clear prompt + structured instructions
- Minimum concept count to guide depth
- Use of visual mapping to scaffold understanding
- Collaboration guidelines to support negotiation



setup

Cmap tutorial: how to use the software and what maps look like

[*How to use CmapTools & Adobe Connect*]

***interaction**: should we try to control the collaboration with explicit scaffolds and terms or not?*

PART 1: Individual remaps

Full teams: as homework, all students individually read **Chapter 14** (pp. 509-544) and then make a Cmap of the reading to turn in before due date

Jigsaw teams: as homework, all students individually read **Chapter 14** and then make a Cmap of section 1 (pp. 509-527) or section 2 (pp. 527-544) or section 3 (pp. 521-536), turn it in before due date

***data**: pre-collaboration individual maps and maps of the two reading sections*

PART 2: Groups online

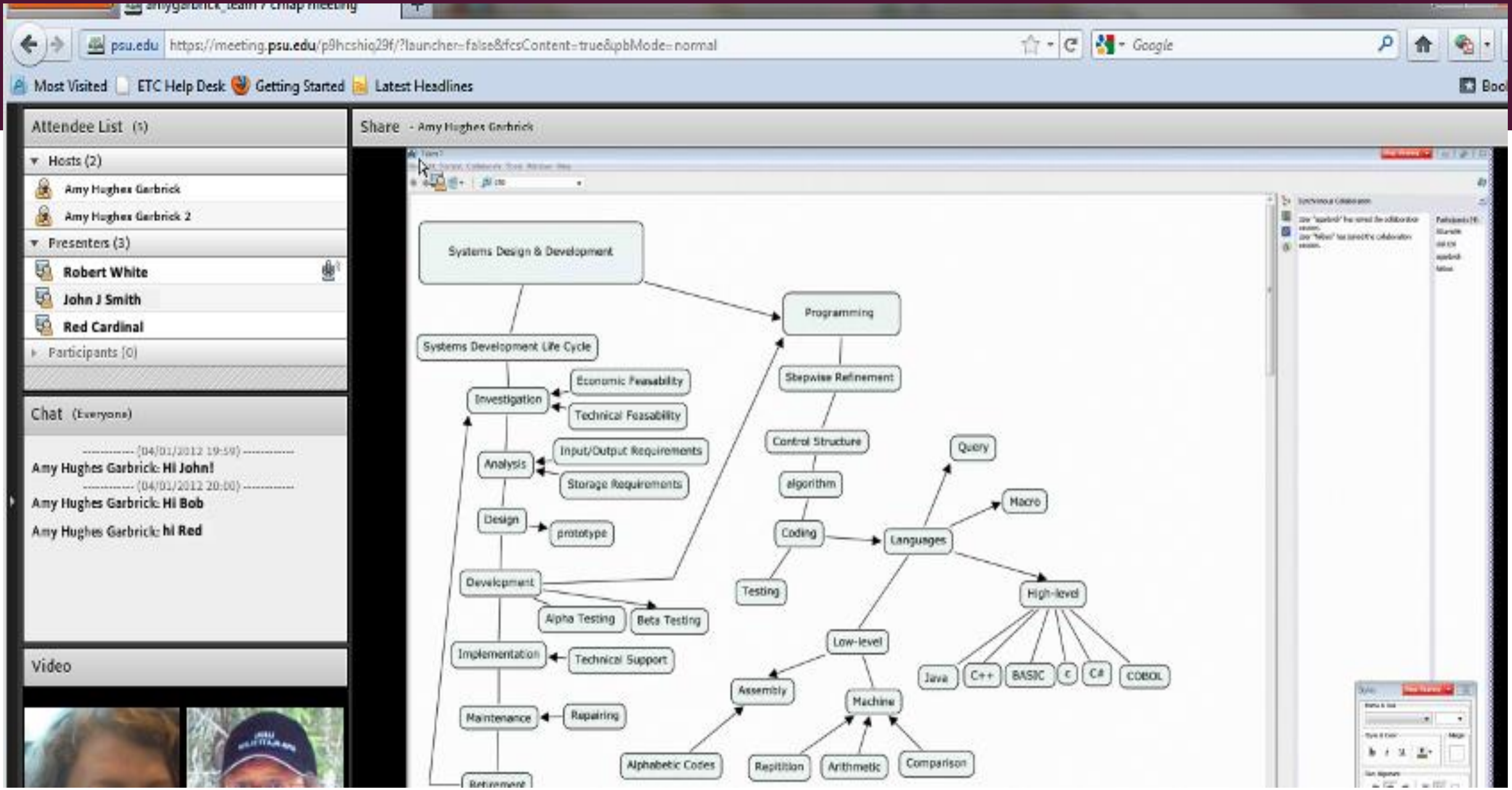
Collaboration: online, triads/dyads work in Cmap to create a common map for their team, turn it in.
Reflection paper: In your own words, describe the group activity and group dynamics, did you like it?

***data**: collaboration team maps & descriptions of the small group dynamics*

PART 3: Posttest

Posttest Individual activity: Chapter Quiz, draw a map of the content, survey items

***data**: quiz scores, survey info , post-collaboration individual maps*



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Attendee List (5)

Hosts (2)
- Amy Hughes Garbrick
- Amy Hughes Garbrick 2

Presenters (3)
- Robert White
- John J Smith
- Red Cardinal

Participants (0)

Chat (Everyone)

------------ (04/01/2012 19:59) ------------

Amy Hughes Garbrick: **Hi John!**

------------ (04/01/2012 20:00) ------------

Amy Hughes Garbrick: **Hi Bob**

Amy Hughes Garbrick: **hi Red**

IMPACTS &REFINEMENTS

Impact Observed:

- Students engaged actively in comparing and merging their understanding.
- Groups with balanced preparation had richer conversations.
- The structure supported deeper explanation of relationships between concepts.

Design Reflection & Iteration

- Reduce pre-workload to avoid cognitive overload.
- Provide guiding questions for negotiation (e.g., “Why connect these?”).
- Add a short post-reflection to solidify understanding.

•https://members.aect.org/pdf/Proceedings/proceedings21/2021/21_10.pdf