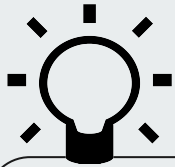# Design Research Activities
Activity 1: Concept Mapping

Group 1: Reeti Mathur, Rachana Solanki, Ghaida Khunain, Steffi Gogoi, Yuewei Wang

Research Question

How do partners separated by distance communicate online?

- Our main objective is to study how partners separated by distance communicate with each other.
- We want to learn what kind of online social media applications and messengers they use in order to communicate with each other.
- We would want to know which applications they use to communicate what kind of media (text, files, photos, videos) and why.

Why Concept Mapping?

Clarity

Improves organization

Helps to have a clear structure of the topic. Maintains focus on the research question.

Understandability
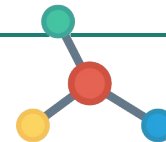
Better knowledge representation

Creates an understanding of our own knowledge and the relationship between different concepts or entities.

Derivability

Renders appropriate meanings

The propositions formed by connecting concepts with links and linking words aid to derive logical meanings.

Rasmussen, L. (2013, 7 14). *3 ways concept maps help you learn*. Retrieved from Thinker Academy: https://thinkeracademy.com/3-ways-concept-maps-help-you-learn/

How to create a Concept Map?

Define

Define and formulate a focus question (typically a research question)

Identify

Identify from 15 to 25 concepts related to the focus question. Represent these concepts in an oval or a rectangle.

Connect

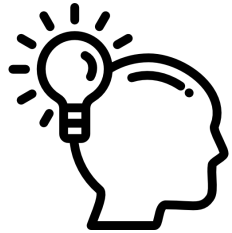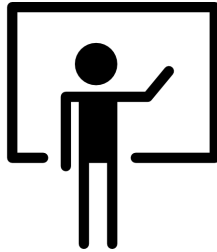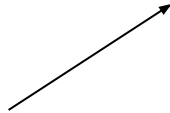Connect these concepts by using crosslinks and linking words to form a proposition (statement).

Revise

Revise the concept map until the answer to the focus question is obtained in a hierarchical manner.

Martin, B and Hanington, B. (2012). Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions
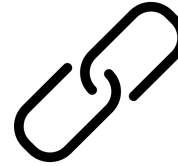
Case Study: Our Approach to Concept Mapping

We first framed our focus question and brainstormed on different related concepts based on our own knowledge.

We then used a whiteboard and sticky notes to transfer our knowledge and concepts from paper onto the board.

This helped us envision the topic clearly by following a hierarchical order with the most general concepts at the top leading to the most specific concepts at the bottom.
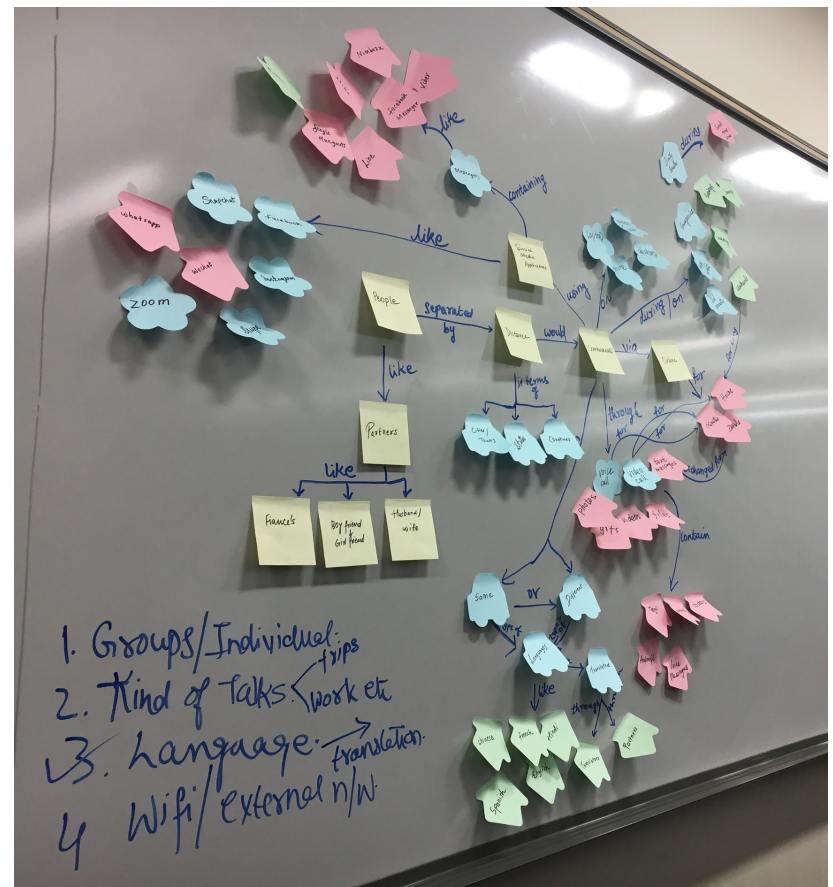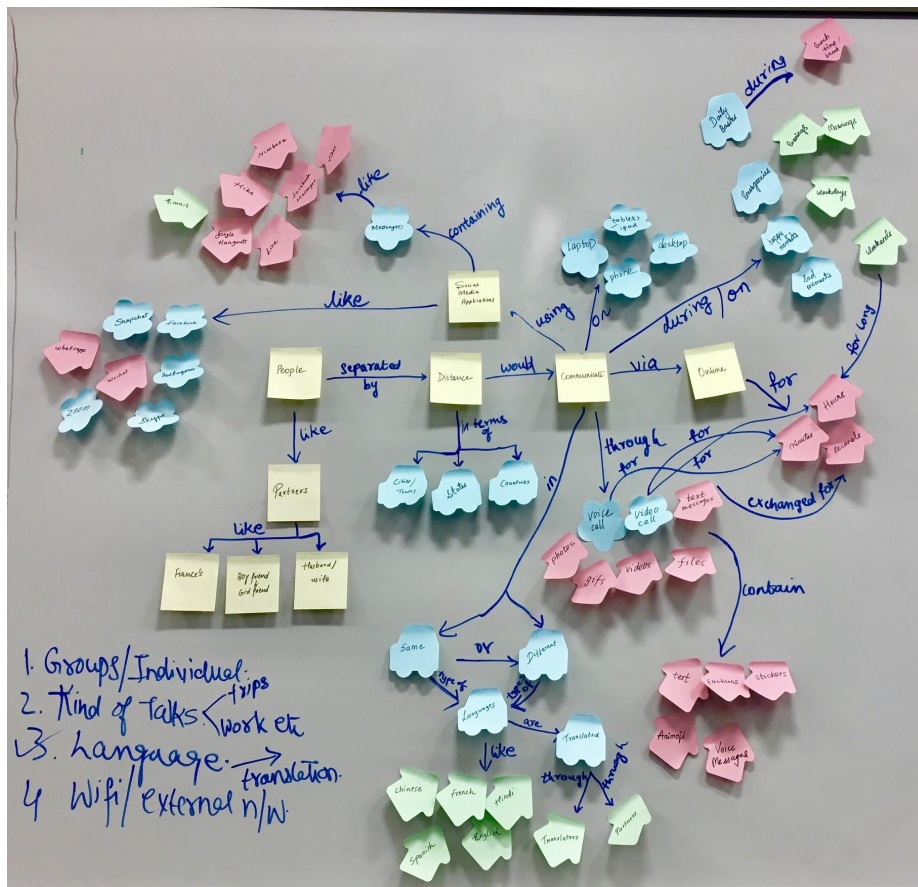
Certain verbs, phrases, prepositions and adjectives helped us connect concepts using cross links to frame meaningful sentences or propositions.

At this stage, we revised some concepts and moved them around to derive better conclusions according to the hierarchy.

creately

We finally used Creately, an online tool which enabled us to create the final concept map.
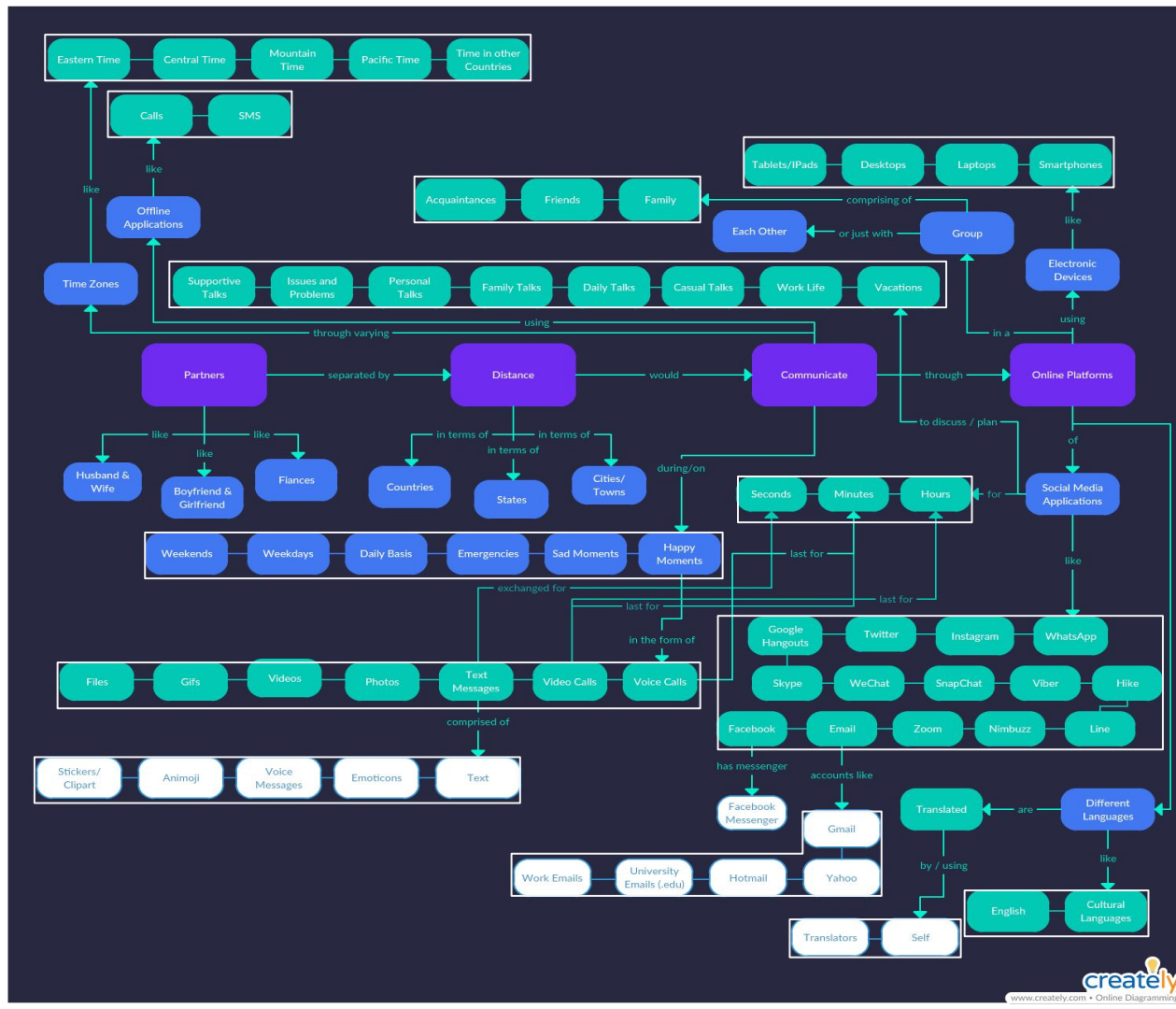
Initial phase of brainstorming concepts and whiteboarding

Final version of our Concept Map created in Creately

- Creately is an online diagramming tool renowned for its ease of use.
- Its interface helps to create flowcharts, mind maps, concept maps, UML, site maps etc.

https://creately.com/

Key Findings: What we understood from our Concept Map

- Partners separated by distance would communicate through Online Platforms of Social Media Applications like WhatsApp, Facebook Messenger, WeChat, Google Hangouts, Skype, SnapChat, etc .

- Partners separated by distance would communicate through Online Platforms in the form of voice calls, video calls, text messages, photos, videos, gifs and files during happy moments, sad moments, emergencies, daily basis, weekdays and weekends.

- Partners separated by distance would communicate through Online Platforms using different Languages Like Cultural languages, English, etc.

- Different language communication is either translated by self or by using translator feature of social media applications.

- Partners separated by distance would communicate through varying Time Zones like Eastern time, Central Time, etc.

Key Findings: What we understood from our Concept Map Contd...

- Partners separated by distance would communicate using offline applications like Calls, SMS .

- Partners separated by distance would communicate through Online Platforms of Social Media Applications for seconds, minutes or hours.

- Partners separated by distance would communicate through Online Platforms using Electronic devices like Smartphones, Desktops, Laptops, Tablets or iPads.

Major tips and insights: Our Reflections

1. Use a top-down approach while creating concept maps., working from general to more specific. Due to space constraint and clarity of concepts and links, we decided to work from inwards by having the general concepts in the center and branching out to specific concepts on the top and bottom.
2. Use different colors for concepts to identify different types of information.
3. Combine all similar concepts in a big rectangular box to avoid confusion.
4. Organize knowledge into meaningful sentences.
5. Think about the 'big picture' (focus question) by seeing connections among concepts. This made us develop higher-level thinking skills and strategies.
6. This activity helped us integrate information and ideas by making new relations between already known knowledge using graphics effectively.

Provost, O. o. (n.d.). *Concept Maps*. Retrieved from provost:
http://provost.rpi.edu/learning-assessment/teaching-tools-and-resources/teaching-strategies/concept-maps