Empathy Map

This is a template for COMP2S01 students to write in the following 4 areas your team's (A) understanding of your service recipients **before** the workshop, (B) observation of your service recipients **during** the workshop, and (C) adjustment in the workshop.

Service Location:	**Zoom (for South African Recipients)**	**Age / Study Level of Service Recipients:**	**Township Learners (Grade 8 and 9)**
Team:	**4d**	**Supplementary Details:**	**Community College in South Africa**
	(A) Before the workshop	**(B) During the workshop**	**(C) Adjustment**
Motivation *Why do your service recipients join this workshop? What is their area of interests?*	They may be interested in learning some computer skills with their latest application and technologies like programming or controlling drones.	Most of them joined the workshop because of the curiosity of drones, and they have no interest in knowledge of artificial intelligence and machine learning and relative presentation. Thus, no matter how easy we explained on these concepts, most of them still felt bored and sleepy.	We tried to more focus on using Google teachable machine and Huskylens for object recognition. They would be more motivated to do these things on their own.
Gain *What will your recipients learn from this workshop? What do your recipients gain from interacting with you and/or their peers?*	Basic artificial intelligence and machine learning knowledge with their application, presentation skills, trigonometric calculation, and drone flying with block-oriented programming in Mind+.	Recipients learned how to prepare the presentation (only basic methods), how to calculate the angle of right triangles by calculators after measuring distances, how to identify direction of rotation, and how to control drones (neither in a comprehensive sight nor writing codes independently). They needed to focus on learning and respond to us, but they usually responded in a perfunctory way.	Some of recipients joined in the programming exercise as we expected, so we asked them to drag blocks to compose a demo program for competition without any distances and angles and later to prepare presentation independently. However, some of recipients might not have enough time, so we jumped this part, directly encouraged them to together do PowerPoint, and send the competition codes to them later.

Pain *What are the frustrations, obstacles, worries or concern your recipients will face?*	They have little background of math (e.g., functions) and computer (e.g., programming). The electrical power and internet connection may be unstable.	Most of them did not have any foundations in triangles. When we taught trigonometric functions, they felt difficult and did not really understand what we are talking about. For programming, they yet did not have foundations and did not would like to learn about relative knowledge during the workshop.	We directly led them to take some exercises in calculating length and angles of right triangles without learning trigonometric functions, and we simultaneously showed them the calculation process using online simulative software and kid-friendly calculator. We introduced them about the forever loop statement and other conditional statement needed in programming, showed them in flow diagrams, and then asked them to drag coding blocks in Mind+ with us.
Learning Behaviours *What are the learning attitudes of your recipients? How would your recipients behave in class? Will they respond to you actively?*	They have little math or computer skill and may be bored with some contents. They may be shy to answer questions and shy to ask question if they are confusing with something.	They did not enjoy the knowledge they were not cared or felt bored. They were relatively active to answer our questions. However, their environment was a little noisy and chaos (especially for day 4 and 5). This made them hard to focus on our speaking and often be bothered by others. Sometimes, they did not respond to us actively because maybe they were confused about our questions, or they were focus on their work.	We asked them questions to attract their attention and followed up their status more frequently. If they were attracted by others, took off their earphones, and even left seats, we could only use gestures, reminder words in chat box and in sharing screen. Moreover, we asked them to share their screen to show us their work, at the same time, we entered some reminder and highlighted strokes in sharing screen without disturbing their working process, especially during the Mind+ coding part and presentation preparing part.