

## **Appendix D: Concept Mapping**

### **Interview One with Case-study Teachers**

#### ***Confirm prior to interview***

1. Consent form signed.
2. Understands the purpose of the interview.
3. Understands that the interview is being recorded but that they can turn it off at any time.
4. Understands the confidentiality and anonymity agreement.
5. Understands their right to withdraw at any time from the research.

#### ***Part A: Biographical***

1. Can you tell me about your teaching background?
  - years teaching experience?
  - years in junior classes?
2. What age-level are you teaching this year?
3. How many children in your class?
4. Could you describe your current maths programme?

#### ***Part B: Concept Map***

1. Show teacher the Happiness concept map. Explain the purpose of concept maps and how they are created:
2. Allow teacher to draw a practice concept map on a topic of their choice, eg, holiday planning.
3. Give teacher the opportunity to ask any questions about concept maps.
4. Ask teacher to draw a concept map about **“the knowledge you have that allows you to effectively teach number to young children”**.
5. Tell me everything you can about your concept map.
6. Focus questions on map.
  - Were there concepts you weren't sure where to put?
  - Which aspects of your map are you most certain of?
  - Why?
  - Which aspects of your map are you least certain of?
  - Why?
7. Do you know where you got this knowledge?

### **Interview Two with Case-Study Teachers**

#### ***Confirm prior to interview***

1. Consent form signed.
2. Understand the purpose of the interview.
3. Understands that the interview is being recorded but that they can turn it off at any time.
4. Understands the confidentiality and anonymity agreement.
5. Understand their right to withdraw at any time from the research.

**Purpose**

The purpose of this second interview is to consider the impact CMIT has had on your knowledge and to discuss the factors you perceive have contributed to changes in your knowledge since the first interview.

Look at the concept map drawn during your first interview. While reviewing your map, consider changes that you would like to make that reflect new knowledge. In particular focus on:

1. Mathematical content: *knowledge of new content or strategies that have benefited your personal mathematical development or are necessary for children in your class to learn.*
2. Pedagogical knowledge: *knowledge related to teaching strategies, lesson and class management and knowledge of resources used by you to teach number.*
3. Knowledge of how children learn mathematics: *for example, stages of development and ways to help children learn number concepts more effectively.*

You may draw a new map or modify your original map.

**Follow-up questions**

*These are a guide only and will be used as prompts to help focus the discussion around the professional knowledge of teachers.*

1. Did you change your map from the one you drew last time?
2. Were any changes a result of new mathematical content or strategy knowledge?
3. Were any changes a result of new teaching strategies or knowledge of new activities and resource for teaching mathematics?
4. Were any changes a result of new knowledge of how children learn maths?
5. Can you identify where these changes to your knowledge came from?
6. Which aspect(s) of your map do you think has changed most?
7. Which aspect(s) of your map do you think has changed least?
8. Do you think that any changes in your knowledge that you have just mapped have had an impact on the way you teach mathematics to children? Can you give some examples?
9. Which aspects of the project did you find most helpful?
10. Which aspects of the project did you find least helpful or confusing?

Any other comments?