

# Using Concept Maps to Gauge Student Understanding

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# Background

- Used to “diagnose misunderstanding, improve study methods, and glimpse how learners *come to know*” (McAleese, 1998).
- Help students reflect, organize thoughts, reveal new connections (Kinichin, Hay, & Adams, 2000).
- Reflect an individual author’s understanding (Kinichin, Hay, & Adams, 2000).
- Provide a point of communication for the student and instructor (Kinichin, Hay, & Adams, 2000).

# Methodology

- Students in an experiential learning class
- List personal learning goals for the class
- Concept map around “What I know about how people learn” at beginning and end of semester
- Comparison of pre-course and post-course maps

# Benefits from a Student's Perspective

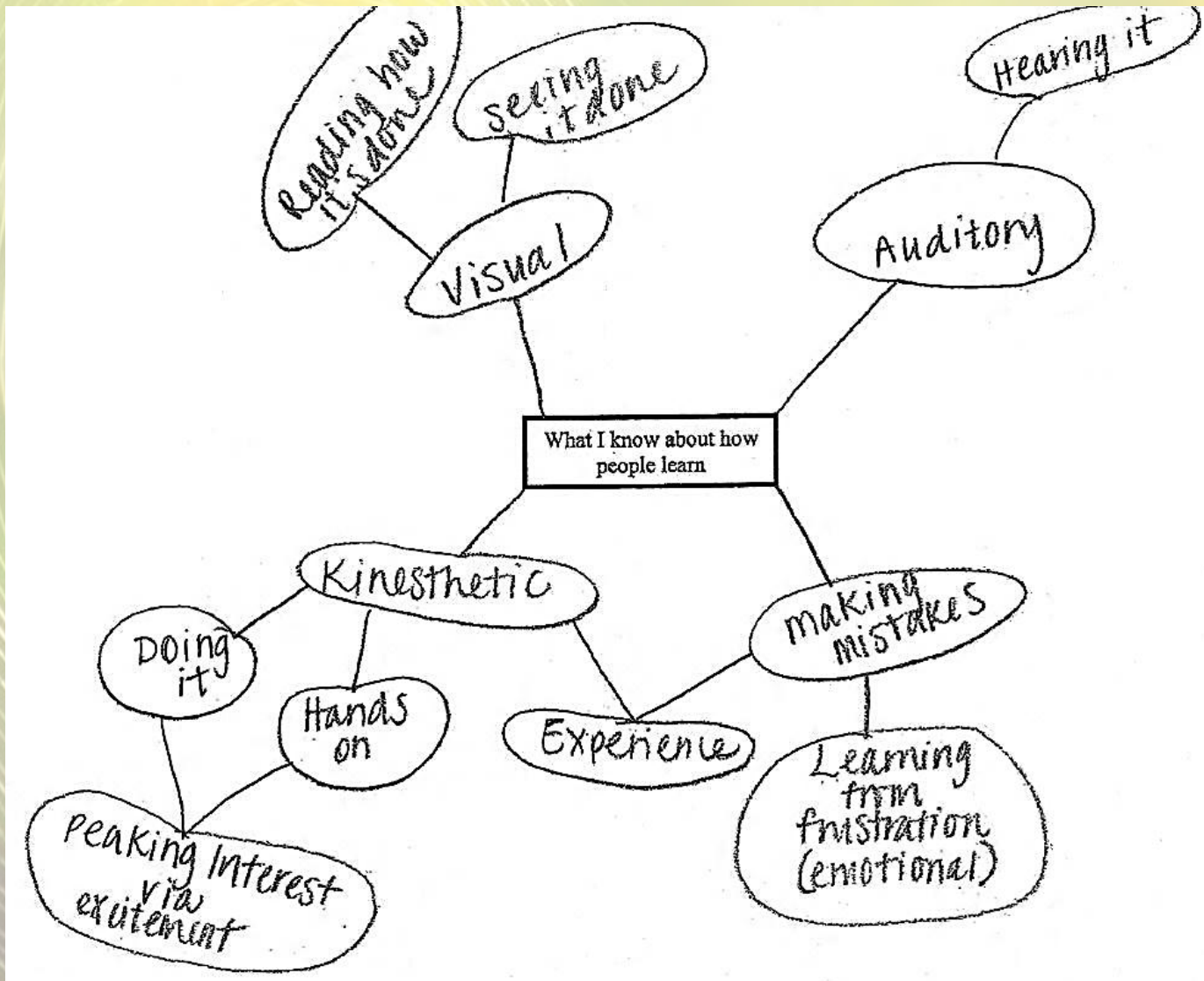
- Goals
  - Student-centered
  - Sense of ownership/personal responsibility
- Concept Map
  - Organization of thoughts and connections
  - Strengths and weaknesses
  - Ways to improve
- Comparison
  - Reflect and see progress

# Benefits from an Instructor's Perspective

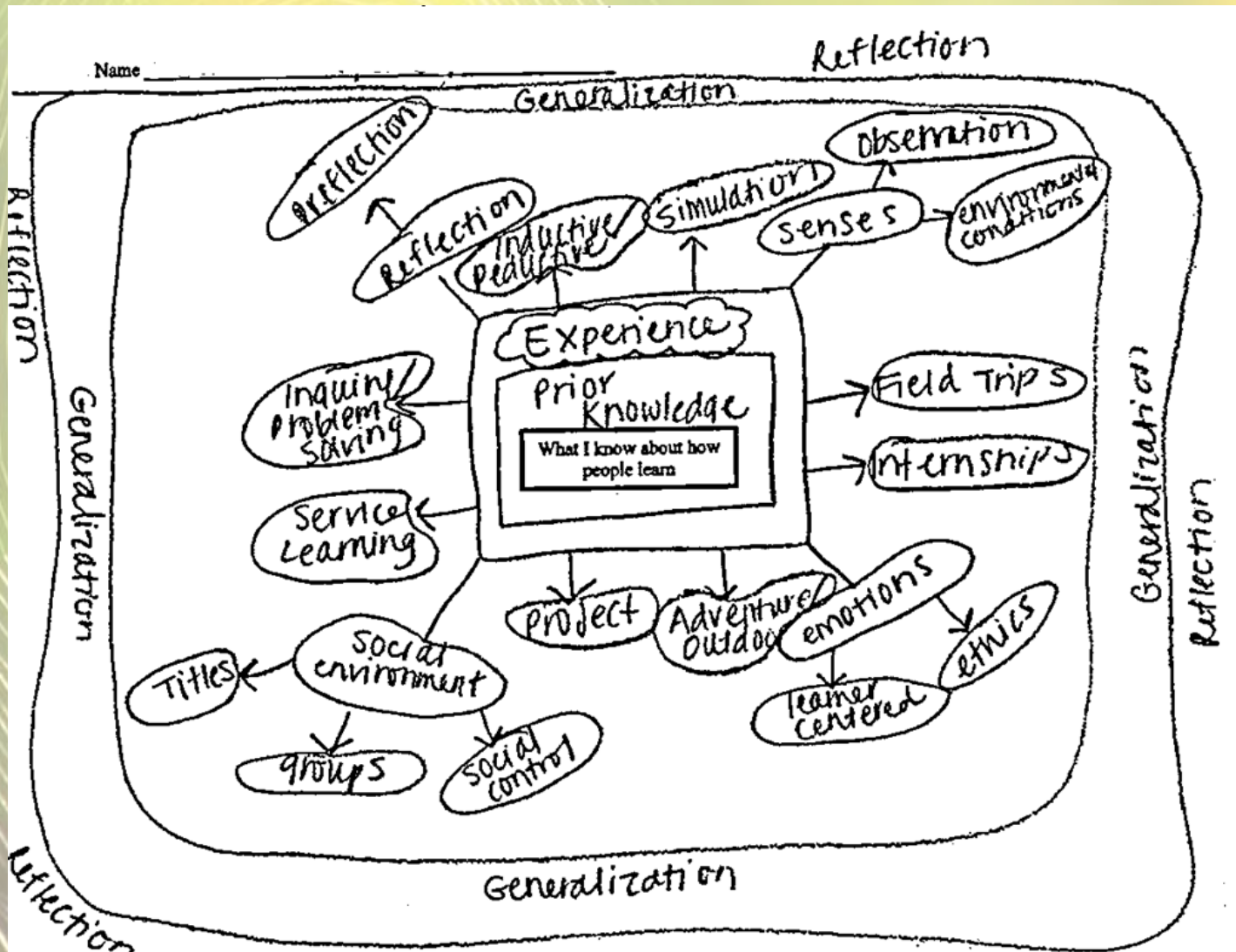
- Assess current knowledge, misconceptions, depth of knowledge
- Understand individual schemas
- See growth in students, let them see personal growth



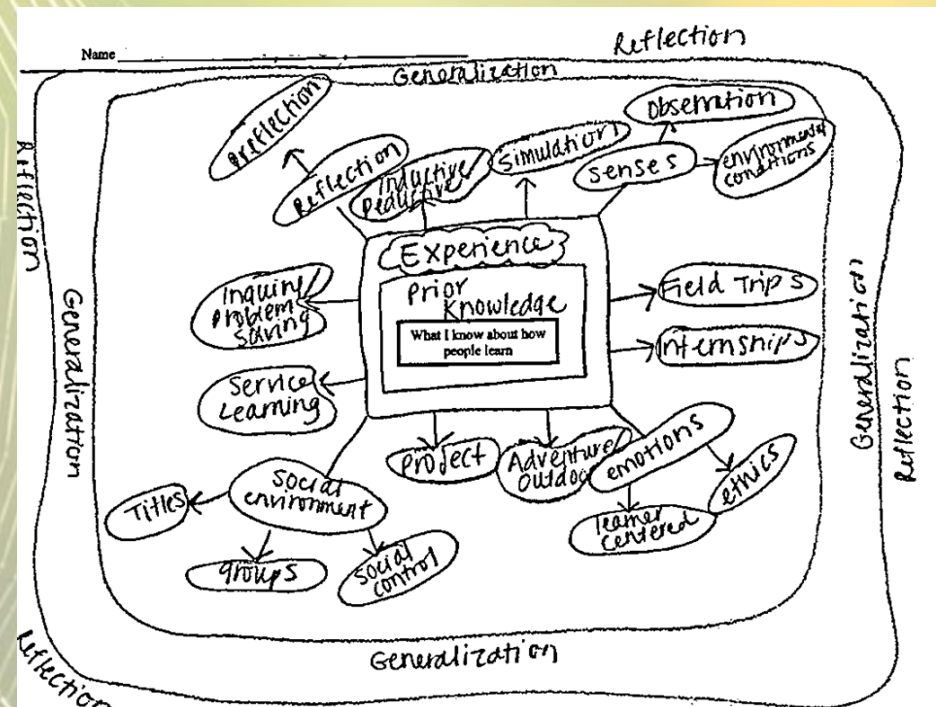
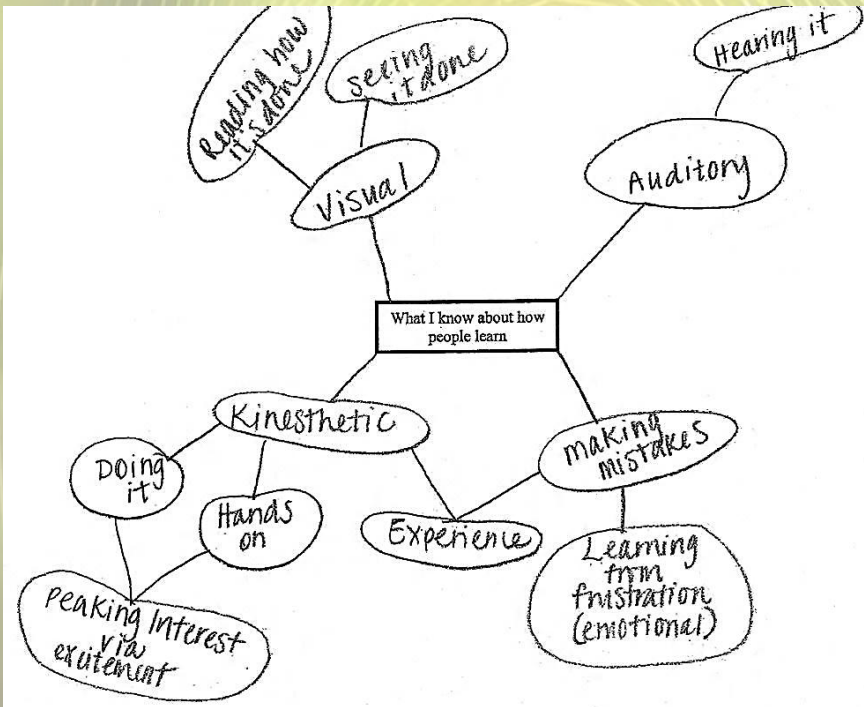
# Example Beginning – Student A



# Example End – Student A

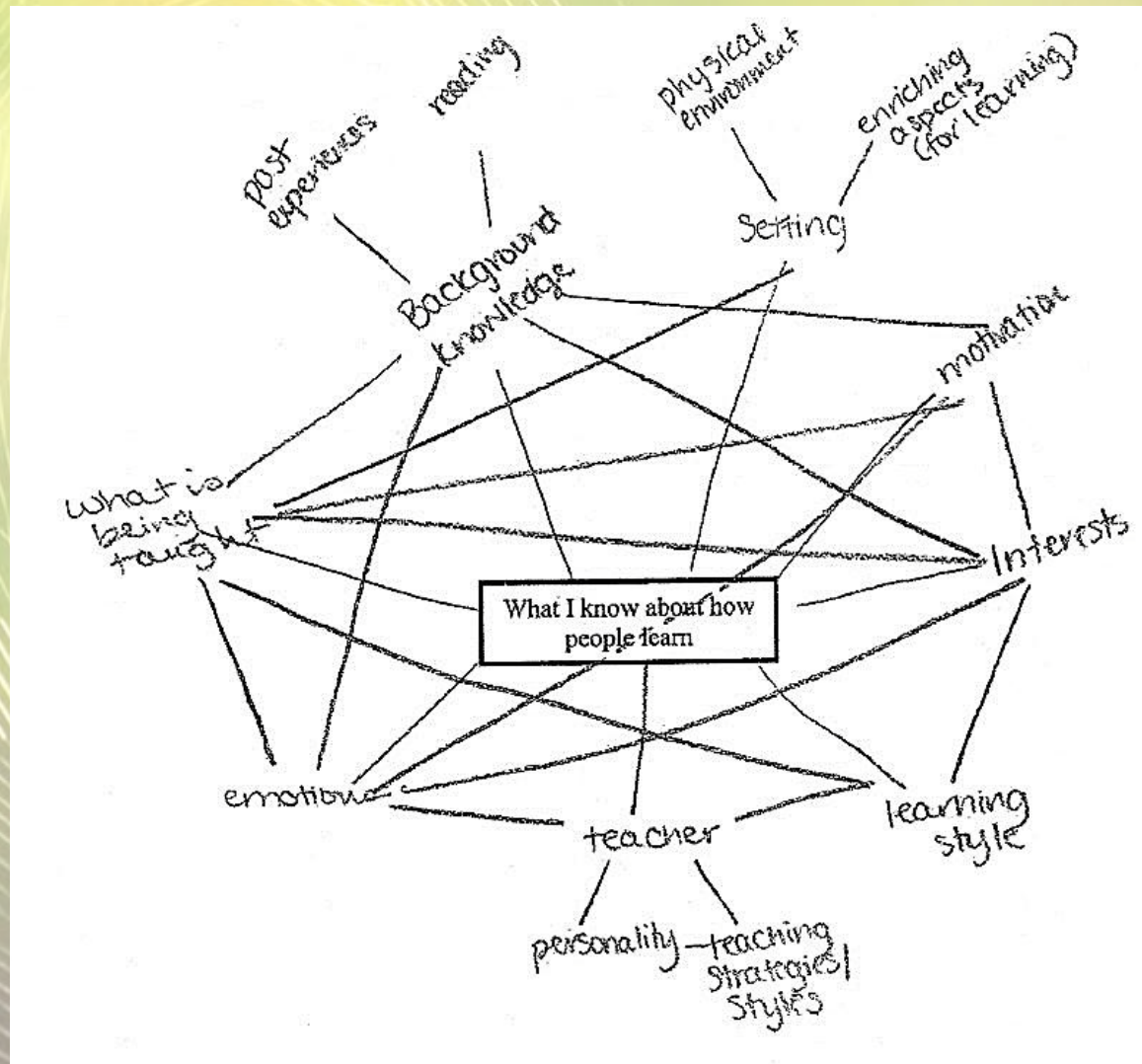


# Student A

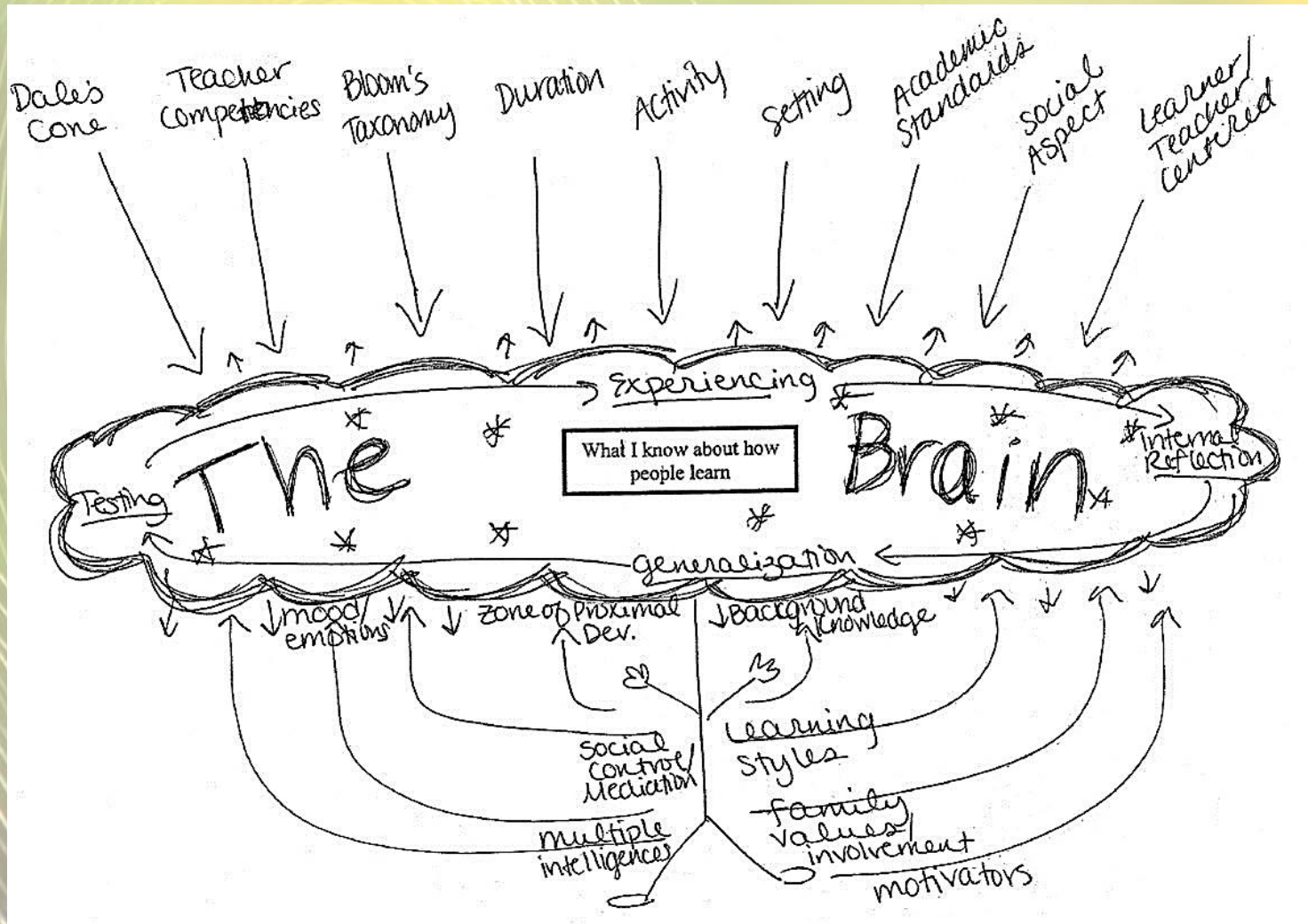




# Example Beginning – Student B

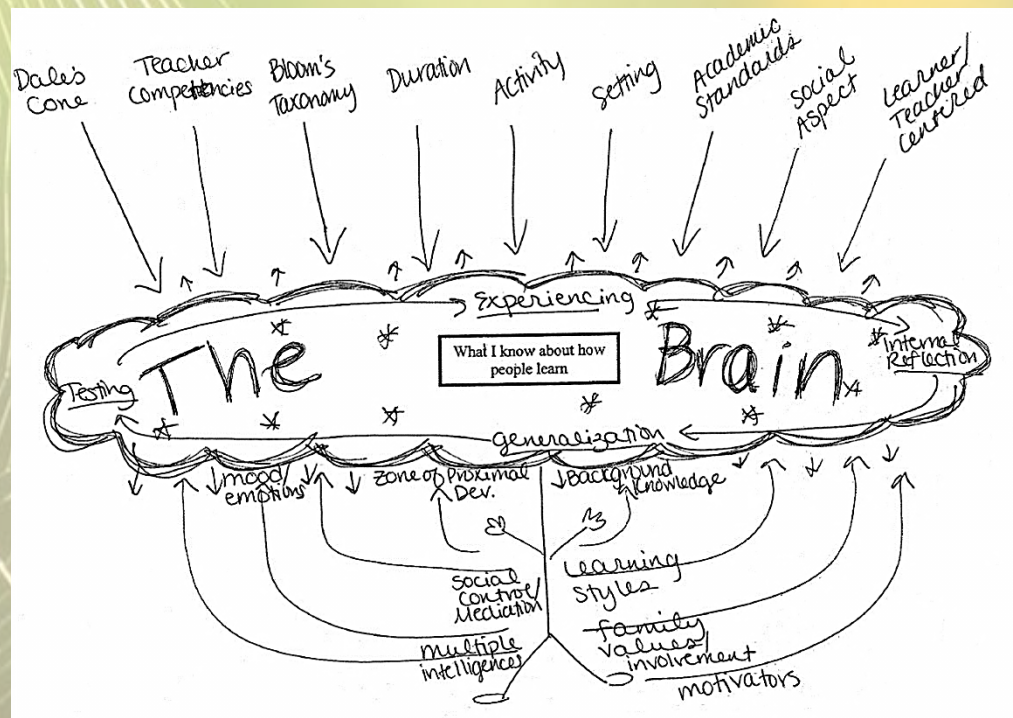
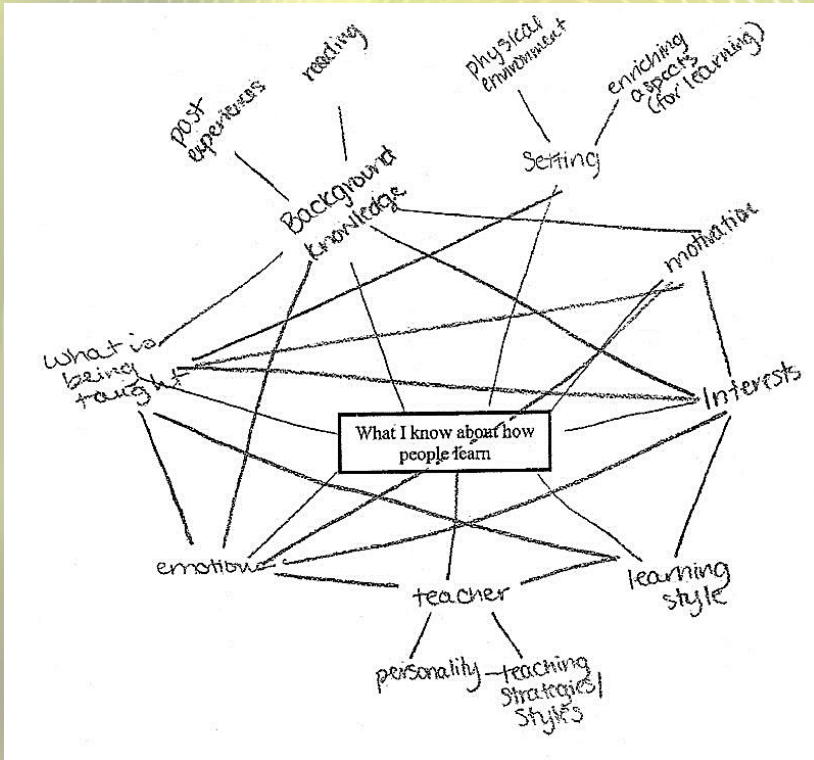


# Example End – Student B





# Student B



# Recommendations

- Instructors
  - Use the beginning concept maps to tailor the class to the students
  - Learn which concepts in the course “stick”
- Students
  - Focus on improving weaknesses
  - Use strengths as an advantage





Questions?