Students' Difficulties in Understanding Evolutionary Trees in China

Name: Yi Kong, Doctoral Student, Department of Curriculum & Instruction

Contact Information: ykong@purdue.edu

Goals: I intend to figure out pre-service biology teachers' difficulties in understanding evolutionary trees in China and how these difficulties differ from reports of research done in other countries.

Methods: Using questions from published assessments (Baum *et al.*, 2005; Meir *et al.*, 2007) followed by semi-structured interviews, I investigate students' tree thinking abilities.

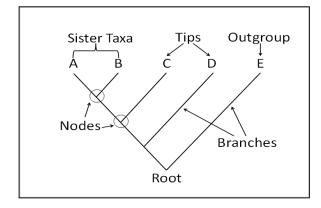


Figure 1: Evolutionary Tree Ladder Format. Revised from Gregory (2008)

Expected Outcomes: Understanding Chinese students' difficulties with evolutionary trees will make it possible to improve learning in evolution.

Collaborators: Dr. Nancy Pelaez (npelaez@purdue.edu), Dr. Trevor Anderson (ander333@purdue.edu), and Miss Emily Han (han235@purdue.edu)

Key References:

Baum, D., DeWitt Smith, S., & Donovan, S. (2005). The tree-thinking challenge. *Science, 310,* 979. Gregory, T. R. (2008). Understanding evolutionary trees. *Evolution Education Outreach, 1,* 121-137.

Meir, E., Perry, J., Herron, J., & Kingsolver, J. (2007). College students' misconceptions about evolutionary trees. *The American Biology Teacher, 69,* 71-76.

Schönborn, K., & Anderson, T. (2009). A model of factors determining students' ability to interpret external representations in biochemistry. *International Journal of Science Education*, 31, 193-232.