**RESEARCH METHODS FOR THE LEARNING SCIENCES, 2010 TERM C**

**INSTRUCTOR: RYAN S.J.d. BAKER**

**ASSIGNMENT FIVE**

**TRANSFER/PFL**

**HANDED OUT:** Friday, February 26

**DUE:** Friday, March 5, 11:59am by email to instructor  
(if your submission is over 10.0MB, please email me a web link)

In this assignment, you will develop measures of transfer and preparation for future learning. You can carry out this assignment either in pairs, or individually. If you carry out the assignment in a pair, you should hand in this assignment together.

**STEP ONE:** Choose your process or task

You should choose a process or task that is of educational importance. It does not necessarily need to be a task you are researching, although you are welcome to use such a task. A task almost certainly has educational importance if it is taught in a significant number of schools or universities (or in trade schools, professional training, etc.). Any educational domain and topic is OK. It is recommended for this task to be one that you studied in assignment 4, but this is not required. If you used the same task as in assignment 4, no further work is needed for this step. If you are using a different task, please give a quick summary of the educational task, in the form of any of the following: annotated screenshots, learning materials used to teach the topic (it’s OK to hand in a webpage or a few pages from a textbook), a worked example of the process (with an annotated explanation), or a task-analysis model or cognitive model. Using an task or materials developed by someone else is acceptable, so long as credit is appropriately given.

**STEP TWO:** Develop pre-test(s) and post-test(s) for your task, that measure the exact skill or process taught in your educational task. Hand in those tests. Also hand in a brief explanation (1-2 paragraphs) of how the tests will be administered – e.g. one test for both pre-test and post-test, one test for each, some form of counterbalancing? Justify why this choice is appropriate for your domain and topic.

**STEP THREE:** Develop a transfer test for your original task. Justify why your transfer task is a valid measure of transfer, which genuinely measures different knowledge from the original domain or task, but which can tractably be solved using robust learning from the original task. Ideally this justification should express how the original skill differs from the new skill, and how a student would build on skill and conceptual understanding developed in the original task, to solve the new transfer task.

**STEP FOUR:** Propose a preparation for future learning study for a student who has learned the original task. Present both your measure of future learning, a summary of the materials used for the future learning (a brief outline is fine), and the protocol used to engage the student in the future learning. Justify that your PFL task genuinely measures different knowledge from the original domain or task, but can be succeed on by a student who has completed your original task, after seeing the new learning materials. Justify why robust learning on the original task will lead to better results than will be obtained by a student who learned the original task shallowly. For instance, if two students both get 100% on the post-test, but one has deeper learning than the other in some fashion, why might the student with deeper learning do better on the preparation for future learning task?

**Grading Rubric:** Hand-ins will be graded on the basis of:

1. Appropriate choice and design of pre-test and post-test
2. Appropriate transfer test and justification
3. Appropriate PFL study and test
4. Quality of discussion of how performance on transfer test and PFL task are benefitted by robust learning on original task