Inquiry in Psychology  
Psychology 4J3  
2003-2004, Term 1

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**Normal meeting times**  
Mondays  9:30-11:20 A.M.  
Thursdays  10:30-11:20 A.M.  
Occasionally:  Tuesday, 1:30-2:20 P.M.  
Daphne and Lisa will also normally be available for consultation during this time.

**Goals:**  The purpose of this course is to improve students’ skills at inquiry in the context of questions drawn from experimental psychology. The philosophy and goals are the same as those we have for any student (graduate or undergraduate) and for ourselves. Inquiry is a process of critical thinking rather than a discreet entity with rigid boundaries. It entails the development of *skills in two contexts:*

*in the context of a body of knowledge  
in the context of personal growth (evaluation of ourselves and our peers)*

At McMaster, we have defined the skills to include the following:

**PROBLEM IDENTIFICATION**  
The ability to ask good questions

**PROBLEM SOLVING**  
The ability to determine what needs to be learned in order to answer those questions  
The ability to identify appropriate resources for learning  
The ability to use resources effectively

**PEER PERSUASION**  
The ability to report on and discuss what was learned

**TRANSLATION.........**

1. Setting priorities and managing time; staying on track
2. Posing a good question and refining it.
3. Identifying sources of information
   a. Finding information in the library
   b. Finding information through on-line indices
   c. Finding information on the web
   d. Finding and interviewing experts
4. Evaluating information for relevance and validity:
   a. On a website
   b. In a journal
   c. In a book
   d. From E-mail (including Learnlink)
   e. From an expert
   f. In a presentation
5. Integrating information
6. Using information to address a question; recognizing limitations in the “answer” and remaining questions
7. Presenting the “answer” persuasively and appropriately
   a. Orally
   b. In writing
8. Working with another person and a group
   a. Identifying individuals’ strengths
   b. Dividing responsibility
   c. Following through
   d. Providing feedback
   e. Dealing with problems in the group’s functioning
9. Evaluating your strengths and weaknesses in each area

**Structure:**

**Group Projects.** You will have a chance to work on two projects during the term: a short project triggered by a video on synesthesia and a major project triggered by something at the McMaster Museum of Art. Each project will involve the definition of a question in collaboration with 2-4 peers, researching the answer, and presenting your findings to the class in written and oral formats. Each group is responsible for preparing a concise written report for the class to read in advance of the presentation and for being prepared to answer questions from other students (and the instructor). In addition to your own reports, you will be responsible for critically evaluating the reports and presentations of other groups.

**Group work:** Each group is free to organize itself as it thinks best (e.g., dividing responsibility, working together, working in sub-groups), but must file progress reports on how it is functioning and on the knowledge it has gained. A written report for the class is due in advance of the oral presentations. I will comment on the progress reports and am available to be consulted as often as each group (or group member) likes on any topic (e.g., how to understand a difficult article, where to find information about a topic, how to search the web, etc.). But you are also free to consult other experts on campus or
through the Internet. We will have some class sessions to get each project started, for benchmarking, and for presentations (see tentative schedule), but during most of the class times, groups may plan working meetings in seminar rooms I have arranged. Although you may meet at other times and in other places, you should plan on meeting regularly in the designated place so that Lisa and I can drop by to see how the work is going. We will also use Learnlink to communicate with each other about the projects (see below).

**Individual Paper.** You are responsible for writing an individual research paper on a sub-topic of the group project. The final paper is due November 27th and is limited to 5 pages, plus references. The paper should describe the research question and what the literature in experimental psychology indicates is a probable answer. It should describe the experimental evidence succinctly, with references. It should also point out limitations in the evidence and remaining questions.

**Major project.** You may ask any question that is relevant to a holding or holdings in the art gallery and experimental psychology. For example: why do the unrealistic colours in the painting by … appear so natural? Why did the painting by …. elicit angry reactions when it was first displayed in Paris but subsequently become famous? Your next job is to play detective—to search for answers in experimental psychology. For my first example, you could look at how colour is processed by the brain, perception experiments on familiar colours and colour contrast, how the brain interprets two-dimensional coloured images, etc., etc. For my second example, you could look at social influence and persuasion, the effects of familiarity, etc., etc. A textbook on perception or neuroscience will be a good place to start, but from there you need to move into the experimental literature so that you know the experimental evidence to back up what you found in the textbooks. You may also consult experts on campus or via the internet. And, of course, Lisa and I am available to help. This is a hard assignment that will be frustrating at times, but also allow you to use your creative problem-solving abilities.

The first project on synesthesia will allow you to practice these skills while working with a different group on a smaller question.

**Rough Schedule (any of these dates may change, but the due dates for the individual papers will not be moved earlier):**

**September 4-11** Introduction of course and class members, benchmarking 1, video on synesthesia

**September 15-October 6. Project 1 on synesthesia**

We will practice all the skills involved in inquiry through a small-scale question related to synesthesia. You will work on the question with 2-4 peers. You have only two weeks to refine the question, do the research, and prepare your report. Try to think of a small question, so that you can do an adequate job of researching it and understanding the experimental evidence.

**September 18, 22, 25, 29.** Working sessions in seminar rooms I have reserved in
the Psychology Building (no classes)

September 16. Progress report due (covering question, research strategy, and group dynamics).

September 23. Draft of final report due.

September 30. Final report due. This should be a concise background report to prepare the class for your oral presentation. It should be well-integrated, with convincing arguments and references to experimental evidence. Limit: 2 pages, plus references. You are expected to have done the research for a longer report and will have the additional challenge of stating the arguments and evidence concisely.

October 2, 6, 7. Oral presentations (25 minutes/group). The group will control the first 10 minutes of the session and will be expected to lead a discussion during the second 10 minutes; we will take 5 minutes for evaluation.


October 12. Thanksgiving. No class.

October 16-November 20. Major project.


October 20. Working session for groups in seminar rooms I have reserved in the Psychology Building.

October 23. Class meeting for brainstorming.

October 27-November 20. Working sessions for groups (no classes)

October 29. Progress report due (covering question, research strategy, and group dynamics)

November 11 Draft of final report due.

November 19, Final report due. Should be well-integrated, with convincing arguments and references to experimental evidence. Limit: 5 pages plus references.

November 24, 25, December 1, and extra sessions as needed. Oral presentations (50 minutes/group). The group will control the first 20 minutes of the session and will be expected to lead a discussion during the second 20 minutes; we will take 10 minutes for evaluation. Each student will be expected to “present” in one session and to participate in 2 of the other sessions. Participation includes reading the background report before the class and joining in the discussion.

November 27. Benchmarking 2.

Self-evaluation and interview with the instructor:

October 10-19

After December 2

Individual paper.

Final paper due November 27

Evaluation:
There will be many sources of information for the evaluation but at some point this will be translated into a grade using the following criteria:

A... has attained a high level of competency in all of the stated skill areas. This competency would allow the student to complete excellent inquiry projects in any area of psychology. This would be recognizable by any facilitator and the peer group.

B... has attained a high level of competency in many (but not all) of the stated skill areas. This competency allows the completion of good inquiry projects. The student is aware of any remaining area of weakness, has shown improvement in that area, has developed strategies for minimizing its adverse effects, and has a plan of action for eliminating the weakness.

C... has attained a moderate level of competency in some of the stated skill areas or has attained a low level of competency in all of the skill areas. The student will recognize the deficiencies or concerns and will have discussed a plan of action to deal with the concerns.

The evidence will come from a variety of sources, including self- and peer evaluations, personal interviews with the instructor, benchmarking exercises, presentations, participation in discussions, written summaries, and the individual paper. The rough weighting will be:

- 67% contribution to group inquiry
- 33% individual paper

**Learnlink:** We will use Learnlink as a communication platform outside class time. Through Learnlink you will be able to read announcements about the class, communicate with your group members, post summaries of your progress, fill out self-evaluation forms, see what other students are doing, and help each other to learn. In other words, Learnlink will allow you to be more in touch with me and with your fellow students.