

## **SCIENCE COMMUNICATION PROJECTS**

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### ***Communication Project description from School of Life Sciences, University of Sussex site***

An individual project which has the following defining characteristics:

1. The examination and exploration of the effectiveness of the transmission and communication of biological knowledge [in the broadest possible sense of "biological"] to particular intended audiences or readerships. The context will be the broader aspects of scientific literacy and communication.
2. The Project may either be based upon hypothesis-testing and the collection and analysis of data, or alternatively it will involve production of explanatory science writing, followed by appraisal, feedback and critical assessment for its effectiveness.

#### **Hypothesis-testing Projects:**

These may be based upon a test situation in which the students themselves create written pieces or employ other communication products (e.g. a web-site). Students are responsible for suggesting how evaluative data could be collected, although the final plans for how data will be collected and analysed will be agreed between the student and supervisor. Students are normally expected to undertake their own statistical analysis which should show an understanding of the appropriate statistical techniques and an appreciation of the limitations of interpretation of the data collected.

Data appropriate to the hypothesis being tested may be gathered in a number of different ways:

- \* from questionnaires or interviews designed and carried out by the student
- \* from examination and review, carried out by the student, of literature and of other modes of communication, including the media
- \* from email correspondence with 'professionals' in communication in academic departments and in science journalism
- \* from information in databases which is extracted by the student.

#### **Explanatory science writing Projects.**

The writing exercise will be based upon a review of research literature, possibly supported by direct consultation with researchers and faculty experts in the chosen field. Initial drafts may be appraised and read by such experts, and the student will also conduct their own self-assessment of the activity, and include this in their Report. Development of the text will also include feedback and criticism from the Project Supervisor and fellow Project students, obtained by presenting drafts at meetings with other students that are also undertaking Communication Projects. These explanatory science writing projects must be intellectually rigorous and in some way engage the student in reading the primary literature, whether about science writing or about the biological subject they are writing about.

Both Hypothesis-testing Projects and Explanatory Science Writing Projects must also include the following.

3. Demonstration of knowledge of the background literature relevant to the topic, including both the primary scientific literature in the relevant field of biological science and publications within the field of science communication.

4. Critical discussion of the relevant background literature in the light of the results or experience gained.

5. Critical discussion of the intended aims of various forms of communication, in particular those relating to the 'public understanding of science'

By the end of the project, students who have carried out the required work will have:

1. experienced the research process and reflected self-critically on their own performance and achievement in science communication.

2. generated and tested hypotheses about modes of communication of biological knowledge [in the broadest possible sense of "biological"], or gained direct experience in explanatory scientific writing.

3. collected and analysed data relevant to the hypotheses under test, or sought and received critical appraisal of the effectiveness of their writing style.

4. identified and read relevant literature and critically reviewed this in the light of their own findings or experience, and relating to issues in the 'public understanding of science'.

5. presented their findings both orally and in the form of a report [the Project Report] which may take the form of a portfolio or the critical evaluation of a "product".

***Reference to the site <http://psci-com.org.uk/>***

which offers free access to a searchable catalogue of Internet sites covering public engagement in science, science communication and the interpretation of science in society.

***Internal advertisement at Sussex of one of my own Communication Projects***

Enthusiasm, hyperbole, misunderstanding, over-simplification and subversion may all separately or in combination contribute to messages about research in genetics and development, and can leave the public confused. This Project entails critical review of media 'copy' and articles on a chosen topic, then creating an hypothesis about the best and worst strategies for communicating the concepts, and then testing your ideas on a target audience. The testing of your idea and the analysis of the results are the equivalent of hypothesis generation, experimental design and execution in a laboratory-based Project.

You will need to be fluent in basic IT skills, in writing and analysis, and to be able to take in and organise conflicting views of science and science communication. The Supervisor will be on part-time leave of absence, and is working in this field, and so independence and good IT skills in your Project activity are expected in order to stay in touch.