

Program of a One-day Workshop on Interdisciplinary Research by Edward Potworowski

Interdisciplinary (ID), or problem-oriented research has been recognised as the privileged approach to tackle complex problems. Large granting agencies and multinational corporations have already earmarked a considerable proportion of their research resources to this approach.

One of the reasons why this type of research is more productive than the traditional disciplinary approach is that innovative, original solutions to real problems often come from a wide variety of sources, some of which are not immediately obvious to a specialist working within a single discipline. A case in point is the story of the Australian entomologist who was interested in the sociology of ants. He talked about his work to civil engineers, and, after some initial mistrust, they successfully developed an unusual but eminently practical model for the rapid evacuation of buildings in an emergency.

Interdisciplinary Grantsmanship is not a simple endeavour. One of the major challenges for investigators from various disciplines is the difficulty to communicate in a meaningful and creative way, both during the initial phase of writing the grant proposal and subsequently in managing the interdisciplinary project. This is the main focus of our workshop.

In our one-day interactive workshop directed primarily to independent researchers, participants will learn to think in a non-linear fashion, and to widen their scientific horizons beyond their own discipline. By looking farther than the obvious and facile protocols, they will be able propose to granting agencies bold, original and creative solutions to real problems.

The workshop takes approximately 8hrs from start to finish. The breaks and the working lunch are periods of time to be used by the participants to get acquainted, to discuss, to network and to exchange ideas for potential projects in a relaxed atmosphere favourable to non-linear thinking.



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Workshop schedule (times are approximate and depend on the degree of interaction)

9:00 -10:15 **Session 1 (lecture with slides)** : General principles of scientific communication, and their application to writing grant applications. Why scientific texts, particularly ID texts, should be written in a simple and pleasant style. Milestones and deliverables Specifics of ID grant applications. Grant evaluation criteria. The objectives of the granting agency and of the reviewer. Strategies for presenting a project.

10:15-10:30 **Coffee break and informal discussion** (with the possibility of taking coffee back to session 2)

10:30 - **Session 2 (lecture with slides)**: Group dynamics applied to an ID scientific context: Writing and ID grant and managing an ID project.. Examples of ID projects taken from past workshops and from real cases will be discussed. The principles of psychologist Edward de Bono, and of cognitive scientist Keith Sawyer will be presented for use in the Group Genius exercise.

11:30 – **Session 3 (the fishbowl exercise)**: Participants are divided in two groups, and sit in concentric circles. The group in the inner circle has 20 minutes to start elaborating a project (topic submitted by instructor). The group in the outer circle observes the application of the principles presented in session 2. There is a 10 min discussion and the groups switch. The objective of this exercise is to make sure that participants can remember and understand the knowledge presented in sessions 1 and 2, that they can apply this knowledge to a new situation and analyse how and to what extent, the methods of group dynamics are applied to a concrete interdisciplinary context. The participants will be asked to evaluate the performance of their own group, and that of the other group. This exercise gives participants the confidence to exchange ideas freely with colleagues of other disciplines.

12:45 – **Session 4 (Working Lunch)** during which the participants of each group will be seated at a separate table. They will present their interests and their potential contribution to a collaborative project. The participants will choose group leaders at that time.

14:00 – **Session 5 „Group genius” exercise**. At this stage, the participants know each other and have worked together during the Fishbowl exercise. They now have 90 minutes to create a project together and present it in the form of an abstract (an innovation), which they will e-mail to all their colleagues. The emphasis will be placed not so much on the discussion methodology (which will have been mastered during the fishbowl exercise) but mainly on the quality of the interaction, the originality of the concepts, their integration into a project, and the interdisciplinary blending within the project.

15:45 –**Session 6: Presentation of the projects over coffee**. Each group presents its project orally and a critical evaluation follows.

17:00 - **End of workshop**



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