SEEDS “You Choose” Award REPORT

Team Science Seminar Series
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Scope
Further afield and wider interactions are being encouraged by funding agencies and university administration, but the faculty academics and graduate students who are expected to work in these disparate teams are often ill equipped to cope with the dynamics of setting up cross-disciplinary teams and of making them successful. The objective of the proposed seminar series was to introduce the Science of Team Science (SciTS) to the University of Miami (UM) community with the aim of using it as a tool to facilitate and increase cross-disciplinary collaborations here.

Activities
With the help of Marisa Hightower at the SEEDS office, I organized four seminars, two by internal and two by external speakers. Here I present the details of each seminar, with its strengths, weaknesses, and the outcomes from the perspective of my career. Broader outcomes are discussed in the summary section below.

Is Your Team a Salad or a Smoothie? The Facts of Scientific Teamwork
Stefan Wuchty, PhD, and Sawsan Khuri, PhD, Dept. Computer Science, UM
This seminar was designed to introduce the topic and pave the way for the next three seminars.
  • Strengths: Several of the attendees were not aware of the topic before this talk, there was good discussion and interaction with attendees afterwards.
  • Weaknesses: Some attendees were expecting a “how to” session on scientific teamwork, and had not understood that this talk was setting the stage for the next three seminars.
  • Outcome: An attendee approached me to co-PI an education-focus NSF grant. Reviews were good but we were not funded, and are submitting a revised version this year.

Managing Teamwork During Complex Collaborations
Stephen Fiore, PhD, Director, Cognitive Science Lab., Associate Professor of Cognitive Sciences, University of Central Florida
April 8th, 2014.
The main purpose of this seminar was to provide “how-to” pointers on cross-disciplinary collaborations, and the pitfalls that might arise in a team of mixed agendas.
  • Strengths: Dr. Fiore’s insights sparked a lively discussion, audience participation was excellent and everyone agreed that funding and promotion issues were lagging behind the current realities of scientific research. Separate discussions I had with Dr. Fiore were invaluable in focusing me on some of the main topics that still need to be addressed in this domain, both on the education and the research fronts.
  • Weaknesses: I allowed the audience discussions to take over and did not step in to have the speaker finish his talk before time ran out. Valuable lesson learnt.
• Outcome: I have a research proposal ready for a computationally savvy student and the right funding opportunity to arise. The aim is to conduct a culturomics analysis of academic publishing records to gain a deeper understanding of disciplinary cultures and to possibly enable the prediction of the success of teams. In particular, the questions I would like to answer include the geography of collaborations in different disciplines, gender bias in certain disciplines, and the landscape of citations in certain disciplines. I would value any guidance as to which funding agencies to target for this type of research.

Climbing Everest: Expedition Behavior as a Model for Leadership in Research Teams
Richard Bookman, PhD, UM.
October 14th, 2014
Dr. Bookman’s seminar was aimed at providing us with a framework that describes every member as a leader in a cross-disciplinary scientific team.
• Strengths: Dr. Bookman is an engaging and clear speaker; his presentation and the discussions with the audience afterwards were excellent.
• Weaknesses: None with the seminar itself. By now, however, it was clear that the target audience had not fully grasped that this was a cohesive seminar series, and many of the audience claimed not to have been aware of the previous two seminars, despite the fact that the exact same publicity avenues were used for all the seminars. This highlights the usual problem of “perceived relevance”, the solution for which involves customized publicity blasts to specific groups, and is beyond the scope of this report.
• Outcome: I live-tweeted his talk and gained a few new followers because of it. I will also be using some of the NOLS material, with due credits, in my next Team Science workshop or course.

Team Based Science: Strategies for Success, Practical Tools and Future Directions
Amanda Vogel, PhD, MPH, National Cancer Institute, Behavioral Research Program, NIH
December 9th, 2014
The main purpose of this seminar was to highlight how the NCI has used SciTS findings to encourage and develop cross-disciplinary teamwork, and to introduce the audience to the Team Science Toolkit (https://www.teamsciencetoolkit.cancer.gov).
• Strengths: This talk attracted a wide audience of students and faculty from several areas of UM including the medical campus. Most of the audience did not know about the Toolkit, enjoyed the talk, and participated in a good discussion afterwards.
• Weaknesses: None with the seminar itself.
• Outcome: Dr. Vogel invited me to write a blog for the Team Science Toolkit on training undergraduates in team science, and encouraged me to submit a paper to the next SciTS conference on Core Competencies in Team Science (paper now under review). I made sure that Dr. Vogel met with Dr. Kerry Bernstein, Program Director for Cancer Biology at UM, and there will be further interactions between us all as a result.

Summary
Overall, this was a successful seminar series and did serve to raise awareness of Team Science at the University of Miami. It would be difficult to measure whether there is more cross-disciplinary collaboration at UM because of this seminar series, but I think it could only have helped and encouraged those who were curious about it. At a different event, I met someone
who had not attended any of the seminars but felt they appreciated the fact that there was help at UM in this domain as and when they embark on wider reaching collaborative projects. I am being invited to more events and workshops because of this exposure, and am grateful to have had the opportunity to bring greats such as Drs. Fiore and Vogel to UM.

The main challenges faced were in scheduling the talks in order to enable us to attract large audiences. This made it necessary to span the seminars across two semesters, which caused a break in the flow. Attendance is an age-old problem in planning a seminar series, so it is inconclusive whether spanning two semesters actually did help attract more people, or whether the same numbers would have attended regardless. It may have been an idea to schedule these seminars within the scope of a Department’s already existing seminar series, for example, thus encouraging participation by including different departments in the events.

Looking forward, ideally one could establish a program which runs half-day workshops once a semester on scientific teamwork, for both graduate students and faculty together. These workshops can include a keynote speaker, hands-on exercises and real-life scenarios, and maybe end with an informal panel discussion that is framed around, but not limited to, previously submitted questions. Focusing on team dynamics and conflict resolution in particular, these workshops could be very helpful to junior faculty, postdocs, and graduate students embarking on an academic career. I would be interested in exploring this further, but am not sure whether I would be allowed to apply for another SEEDS Award?

Thank you for the opportunity to host a Team Science seminar series. I am very pleased with the outcomes, with the lessons learnt, and with the scope of what might be done next. I would value any feedback, and look forward to attending many more SEEDS events in future.