

Scoping the Training Agenda for RELU

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1.0 Introduction

Objectives

- To help RELU provide a stable basis for younger researchers to continue interdisciplinary careers within and outside of academia
- To identify for the RELU programme: training needs, needs for capacity-building; and relationship of these to career needs of, in particular, younger RELU researchers
- To help generate preliminary insights as to practical/tactical advice and lessons learned, covering issues such as publication strategies, training needs and career tracks.

Participants

The workshop facilitators, Lyall and Meagher, have each analysed and worked in interdisciplinary projects/situations. Together, they recently evaluated the ESRC/NERC interdisciplinary PhD studentship scheme and the Scottish Higher Education Funding Council's Research Development Grant Scheme (involving interdisciplinary centres). As well as principal investigators, the workshop participants included two visitors from overseas, one postgraduate student, two postdoctoral research associates and several "external stakeholders" making a total of 14. Half the group had been interdisciplinary for 10 years or more.

2.0 Providing advice to RELU

The workshop discussion covered the following issues:

- Challenges and issues for interdisciplinary careers inside and outside of academia
- Day to day training needs (regarding interdisciplinarity)
 - Specific methodologies
 - Strategies/Advice (especially for junior researchers)
 - Communication (e.g., ESRC booklets, media training)
 - Experiential learning
 - Practical skills

Capacity building needed to ensure interdisciplinary careers

Challenges and Issues for Interdisciplinary Careers

Being among the "interdisciplinary homeless" is a key challenge for individuals pursuing academic careers. If someone is without conventional disciplinary qualifications, capturing funding and securing posts can be a problem. This is in part because conventionally expected outputs, such as publications in monodisciplinary star journals, may not be met. There are tradeoffs between being monodisciplinary and interdisciplinary (ID), not least in time and energy, with ID work requiring more of both.

Although some junior researchers (such as many of the ESRC/NERC interdisciplinary PhD students) are genuinely hybrid, very often interdisciplinarity is at one end of a spectrum that some people journey to over the course of their careers. It may be that a savvy publication strategy would follow this spectrum, from monodisciplinarity to interdisciplinarity. While ID individuals are sometimes valued for their ability to play a generalist, broker role, other times they may feel that they are regarded as over-simplifiers or outsiders.

Interestingly, non-academic careers may benefit from interdisciplinarity, since the ability to communicate across disciplines in tackling applied challenges is becoming increasingly recognised as valuable.

Training Needs

Specific methodologies for which training would be helpful include refresher courses (e.g. in quantitative social research), depending on a person's background and direction of interdisciplinary movement. A widespread need is for research design training that helps individuals to mix qualitative and quantitative approaches. RELU could conceivably play a role in the development of briefing notes or "mugs' guides", in modelling, or in social research methods, for example, so that an individual involved in ID work can appreciate what is being done by others, and why, thus gaining confidence in their ability to participate. An important breakthrough is to understand why collaborators from other disciplines find something fascinating.

Advice on Strategies is an important sort of "training" that can be conducted by mentors, from within one's institution or from the broader community, or by peers. There might be a role for RELU in matchmaking mentors, whether senior or peer group. Not only the young need training; funders, agenda-setters and reviewers need to gain appreciation of ID, as well.

Communication training would be particularly helpful for reaching stakeholders. While not everyone may be good at speaking to stakeholders, there is a sense in which researchers have an obligation to society to explain what they are doing (and in many ID initiatives, the problems tackled are likely to be somewhat applied and thus of potential interest to stakeholders). More generally, people need to learn to target their language to different audiences, based on an understanding that different people learn and communicate in different ways, so that it is possible to communicate with them strategically.

Experiential learning is very important at every stage, though while younger researchers can learn from mistakes, older researchers will have different attitudes toward risk and need to be handled with more sensitivity. RELU might play a role in facilitating peer learning drawn from experience, by giving RAs from the different projects the opportunity to get together (also community-building).

Practical skills training in some forms may be particularly useful in ID work, as science has matured to more team-working. RELU might bring in external trainers to develop skills in facilitation, stakeholder engagement and dispute resolution.

Capacity-building

Since many ID students will leave academia, involving practitioners in work with students will enhance their experience base. RELU's work shadowing scheme helps to build mutual respect and understanding of contexts beyond academia. If academics move to mid-career changes, a 6-month sabbatical could make it possible to learn new ID skills, a new language and so on. There is a need to move on to an appreciation for ID work even among mainstream colleagues. In ID teams, the development over time of mutual understanding is needed so that interactions between scientists and social scientists are genuine and therefore far more productive.

Community-building at various levels is important for ID capacity-building. MISTRA, in Sweden, for instance, has a management programme for research managers that involves peer learning for programme directors and for senior researchers. RELU could play a role in helping to build the sort of community for its junior researchers that many of the ESRC/NERC interdisciplinary PhD students hope to have. RELU could also provide training for academics on ID supervising committees and for external examiners.

For RELU, a constant tension is to deliver everything as simultaneously ID and cutting-edge in each participating field. As a pioneering initiative, it can pass on a legacy of lessons learned to Research Councils and others, helping in this way to embed changes of culture favouring interdisciplinary research.

3.0 Recommendations

Based on the workshop findings and our experience of evaluating the ESRC-NERC interdisciplinary studentship scheme, we would recommend that the programme directors consider the following actions when developing the RELU training programme:

1. Project teams should be encouraged to develop publications strategies which lead to portfolios incorporating both publications in single-discipline and also interdisciplinary journals
2. Opportunities should be made available, at the individual partner institution level, collectively via the RELU programme office, or through training events offered by Research Councils, for refresher courses in a range of qualitative and quantitative research methodologies
3. Related to this, short four-page introductory booklets addressing different research methods and approaches appropriate to the RELU community could be produced to facilitate interdisciplinary understanding (these could be produced by graduate students or RAs as an output from one of the community building activities described under point 6 below)

4. Consideration should be given to offering mentoring opportunities (either with senior colleagues or peers) to give junior staff an opportunity to share experiences, career development plans, etc
5. Training in communication and interpersonal skills (e.g. facilitation, stakeholder engagement and dispute resolution) can be particularly valuable for interdisciplinary researchers
6. A range of other community building activities could be considered such as
 - a. participation of RELU postgraduate students in the pilot ESRC-NERC interdisciplinary summer school currently under discussion
 - b. a similar residential event for RELU research associates (including training elements and lively sessions, for example, sharing issues or the joint production of accessible research methods booklets)
 - c. training for RELU researchers on supervising and examining interdisciplinary PhDs
 - d. further exploration and benchmarking of the MISTRA training programme for interdisciplinary researchers in Sweden
 - e. Facilitated self-evaluation assisting RELU participants at all levels to capture ID lessons learned by the innovative programme.