The experience and confidence of researchers in conducting cross-disciplinary research

---Survey findings from the IMPALA-MUDI research project

Yan Ding, Justin Pulford, Imelda Bates
Centre for Capacity Research, Liverpool School of Tropical Medicine, UK
SciTS 2019 Conference, Lansing, 21 May 2019
Work though the talk

• Background
  – The IMPALA programme & MUDI research project
  – Why the survey?

• Methods
  – Survey development
  – Data analysis

• Findings

• Discussions
Background
The IMPALA Programme, MUDI research project

Policy Research

Capacity Research

Multiple Disciplines: cross-cutting capacity development project (MUDI research project)

1. Clinical & Public Health

2. Health Economics & Modelling

3. Applied Social Science

4. Health Systems

5. Policy Delivery & Impact

Post-doc led project 1

Post-doc led project 2
Aims to:
1. explore researchers’ previous experience and confidence in conducting cross-disciplinary research; and
2. identify actions for further improvement on cross-disciplinary research experience and confidence.
Methods
Content of the survey

1. Personal information
2. Previous research experience in conducting cross-disciplinary research
3. Self-assessment of confidence in conducting cross-disciplinary research

Based on **required competencies from literature** in conducting cross-disciplinary research

* e.g.: able to seek an exchange of theories, concepts, and approaches with those from other disciplines
Structure of the survey questions

Qs on previous research experience in conducting cross-disciplinary research

“yes-no” answers

Did you have previous experience in...

- creating a network for further collaborations?
- modifying your own perspectives on research questions as a result of interactions with colleagues from fields other than your own?

Qs on self-assessment of confidence in conducting cross-disciplinary research

a 5-point scale ranging from extremely confident (=5) to extremely unconfident (=1)

(Adapted from Hall, K.L., et al., 2012)
Data analysis

% of those who had previous experience in conducting cross-disciplinary research

% of those who were “extremely confident”/“confident” in conducting cross-disciplinary research

A. Data were stratified by academic rank:
   • Professors
   • Senior researchers
   • Early career researchers

B. Data were stratified by primary academic discipline:
   • Medicine/Clinical Sciences
   • Humanities & Social Sciences
   • Others
Findings
## Researcher respondents’ characteristics (43/58)

<table>
<thead>
<tr>
<th>Items</th>
<th>Option</th>
<th>N=43</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Rank</strong></td>
<td><strong>Professor</strong></td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td><strong>Senior researchers</strong> (including readers, associate professors, senior</td>
<td>17</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>lecturers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Early career researchers</strong> (including assistant professors, lecturers,</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>research fellows, post-docs, research assistants and PhD students)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Primary Academic Discipline</strong></td>
<td><strong>Medicine &amp; Clinical Sciences</strong></td>
<td>28</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td><strong>Humanities &amp; Social Sciences</strong></td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td><strong>Others</strong></td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td><strong>Received academic degrees in more than one discipline</strong></td>
<td><strong>Yes</strong></td>
<td>24</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td><strong>No</strong></td>
<td>19</td>
<td>44</td>
</tr>
<tr>
<td><strong>Self-assessed professional background</strong></td>
<td><strong>Multi-disciplinary</strong></td>
<td>32</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td><strong>Uni-disciplinary</strong></td>
<td>11</td>
<td>26</td>
</tr>
</tbody>
</table>
Researchers’ previous experience by academic rank

Cross-disciplinary research phases

- Development phase
- Conceptualization phase
- Implementation phase
- Translation phase
- Cross-cutting

% with previous experience

- Professors (n=8)
- Senior researchers (n=17)
- Early career researchers (n=18)
- Overall (n=43)
Researchers’ confidence by academic rank

Cross-disciplinary research phases

% of "extremely confident" or "confident"

- Development phase
- Conceptualization phase
- Implementation phase
- Translation phase
- Cross-cutting

Professors (n=8)  Senior researchers (n=17)  Early career researchers (n=18)  Overall (n=43)
Researchers’ previous experience by primary academic field
Researchers’ confidence by primary academic field
To summarize

Experience in conducting cross-disciplinary research

Confidence in conducting cross-disciplinary research

Experience by research phases

Academic Rank

Disciplinary Background
Discussion points

survey objectives ↔ main findings
1. Early career researchers’ experience and confidence in conducting cross-disciplinary research

2. Identify disciplinary strong points & cross-fertilization

3. Translational research experience

Experience at each research phase:

- Development phase
- Conceptualization phase
- Implementation phase
- Translation phase

Experience in conducting cross-disciplinary research

Confidence in conducting cross-disciplinary research

Academic Rank

Disciplinary Background
Suggested actions for the improvement of IMPALA programme

• **Increase IMPALA researchers’ translational skills** such as writing-up technical outputs/publications from multidisciplinary research projects and disseminating multidisciplinary research results to peers, practitioners, the public and policy makers.

• **Create opportunities for networking and cross-fertilization** among IMPALA researchers, especially for early career researchers.
Thank you very much for your time.

Feel free to contact me regarding fostering cross-disciplinary research (yan.ding@lstmed.ac.uk).