Self-imposed evaluation of the Helmholtz Research School MICMoR as a tool for quality assurance and advancement of a structured graduate programme

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EGU General Assembly, Vienna, Austria, 12-17 April 2015
MICMoR at a Glance

- a graduate programme for ~30 doctoral students
- research: climate change in mountain regions, research at Atmosphere – Biosphere – Pedo-/Hydrosphere interfaces
- funded by Helmholtz Association: 01/12-12/17
- based at the Institute of Meteorology & Climate Research (KIT/IMK-IFU), Garmisch-Partenkirchen
- 7 partner institutions in Bavaria
- 04/15: 26 doctoral students, ~ 60 scientists
Aims of Evaluation

= Quality Control

- have original aims been reached?
- are doctoral students & supervisors satisfied?
- needs for further programme development?
  -> focus on recruitment, training, community & networking, supervision, management
  -> carried out by external expert Dr. B. Scholz
Mixed-methods approach

- questionnaires: 15 fellows & 38 supervisors / mentors (09/13)
- interviews: focus groups 1. fellows, 2. supervisors / mentors, 3. Steering Committee, 4. Coordination (12/13-02/14)
- benchmarking: compare with other programmes

Final report presented at workshop with MICMoR stakeholders (11/14)
Results: Recruitment & Fellows

11/2013
15 MICMoR Fellows
- 40% international
- 33% female
- 8 institutions
- 7 disciplines

04/2015
27
- 44% international
- 51% female
- 11 institutions
- 18 disciplines

→ 2012 - 2015: 25 fellowships with supplemental funding
→ 2014 & 2015: 6 fellowships with full stipends
Results: Training

- **Scientific Training**
  - i.e. *Summer Schools & Technical Short Courses*
  - high appreciation by fellows & advisors
  - critical points: only details

- **Professional Skills Training:**
  - i.e. *Research Skills Development, Presentation & Communication, Career & Leadership, Research Funding*
  - high appreciation by fellows

Fellows can shape the programme
→ graduate representative, needs analysis
Results: Community & Networking

- **Research Forum (1-2 days):**
  - The MICMoR Community event, 2 / year, keynote talk & fellows‘ progress reports
    - high appreciation by fellows: present research & get feedback, stimulating atmosphere
    - low attendance by scientists

- **Fellows‘ Retreat (2-3 days):**
  - For fellows only, 1 / year, topics Mentoring, Visibility in Science, Ethics
    - exclusive fellow meeting appreciated
    - important for team-building
Results: International Networking

- **Funds for conferences, workshops & research stay abroad**
  - with application & report
  - popular among fellows & widely used

AGU Fall meeting, C. Weitnauer, San Francisco, USA, 2013

Results: Supervision I

Thesis Advisory Committee
1 supervisor, 2 mentors, different disciplines & institutions, meet 2/y

Supervision Agreement
with PhD outline, work plan, qualification plan

Does it work?
- in place for all fellows, seems to work reasonably well
- fellows: high relevance for qualification & project, appreciate that they are 'urged' to engage external mentors
- supervisors: helpful for doctoral process

→ does not always work well, constant reminding needed
Results: Supervision II

The Supervision Process:
- fellows: high satisfaction with quality, less with frequency

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<th>Frequency of contact</th>
<th>Main supervisor</th>
<th>Additional mentors</th>
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<td>Quality of contact</td>
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- difficult to schedule meetings with 3 'busy' scientists
- unofficial day-to-day advisor important, no official status
Results: Supervision III

Specific Elements:

- fellows encouraged by supervisors?
  - scientific & professional training: 93%
  - conferences: 80%
  - stay abroad: 60%

- agreement with supervisors on achievements?
  - objectives & duration of doctorate: 93%
  - work plan: 60%
  - number publications: 53%
  - number conference presentations: 20%
  - stay abroad: 20%

- fellows receive career advice? 46%
Results: Supervision IV

Recommendations:

→ draft guidelines for committee meetings, include agreements on qualification targets
→ offer career coaching
→ offer mentor coaching

→ supervisors originally reluctant, now: 15 of 34 support idea - „useful for less experienced colleagues“
Summary & Conclusions

Recruitment  high internationality & interdisciplinarity, balanced gender ratio

Training  high quality training

Community & Networking  fellows ↑, scientists ↓  
→ enhance motivation & cooperation among scientist, set up alumni network

Supervision  in place & ± working  
→ include qualification targets, offer career & mentor coaching

Evaluation as valuable tool for quality assurance & advancement