



Collaborative  
research activities

# Collaboration in academic context

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- a partnership between two academic faculty members who are pursuing mutually interesting and beneficial research
- involve researchers of differing stature, funding status, and types of organizations
- involves several people from the research groups: principal investigators (PIs), post-doctoral fellows, research staff members, graduate students, and/or undergraduate students

# Motivations

Determinants	Justification
structural	preferences by funding sources
changes in research paradigms	demand for expanded capacity
	an opportunity to learn about other disciplines
enhanced efficiency	division of labor
	ability to share resources
	risk management
relationships	demonstrate collegiality
	lending credibility
technology	advances in communication

# Examples

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1. Members of 2 research groups in different departments of the same institution work together on a project.
  - No external funding is involved,
  - The work is divided reasonably equally between the two groups.
  - All those involved meet together regularly to review their progress and plan for publication of their results.
2. A researcher from a private company works with the research group of an academic faculty member for several months.
  - the non-academic researcher pursues his own project while learning about current techniques and research questions from the graduate students in the group.
3. In order to complete a large data collection for which a senior researcher has received funding, the researcher organizes a collaboration with junior faculty members at other institutions

# Examples

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- A graduate student travels to another institution and participates in the research of the other research group.
- A researcher contacts another researcher met at a conference. They agree to each carry out their own research, and then combine their results for publication.
- To gain a more global perspective of their activity, a collaboration among a small number of research groups from several countries is established.
  - All research groups independently apply for their own funding or to the multi-national structure (like European Commission)
  - The collaborators agree to share the results.

# Benefits of collaboration for individuals (1 / 3)

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1. Higher impact of publications: there is a direct correlation between the number of authors and impact factor.
2. Encourages greater creativity.
3. Future: those you collaborate with today will think of you tomorrow when they are putting together a grant proposal.
4. Less work: done well, collaboration means less work for everyone without compromising on results.
5. Criticism: collaborators are more likely to show the reality; debating ideas is also important for creativity
6. Ability to bring more experience: tapping into the distributed intelligence of a group increases the chances of solving problems more efficiently.

## Benefits of collaboration for individuals (2/3)

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7. Efficient learning: Seeing how a team of experts solves a problem is the best learning that there is.
8. Wider array of techniques: a collaboration across lab groups, departments or institutions widens the access to a greater number of techniques used for research.
9. Deeper research: in a collaboration you are forced to do more with your research.
10. Funding: Getting funding in EU it is typically much easier in the context of a collaboration.
11. Increased number of publications: the deeper the research the more publications.
12. Better and more concrete networks built through collaborations.

## Benefits of collaboration for individuals (3/3)

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13. Higher likelihood of becoming commercial.
14. Knowledge of what others are doing: in particular by simply talking with a fellow team member on the research project.
15. Less risk: there are many more degrees of freedom with a collaborative network than there are with a single lab following a single line of research.
16. Agility: it is far more likely that you can exploit an unexpected finding in the setting of a collaboration.
17. Early adopters: your collaboration partners are almost by definition your early adopters for your novel approach, new technology, or new hypothesis.
18. Impressing investors and funding agencies.



# Multi-institutional collaborations

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1. Cooperation with universities
2. Cooperation between universities and industry
3. Cooperation between non-profit organisations

# When written agreements should exist?

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- Unwritten:
  - Common understanding in issues related to authorship and credit or research accountability
- Written:
  - Intellectual property rights
  - Use of data
  - Data retention and preservation

# Basic types of agreements

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- **Subawards:** between an institution that has a sponsored agreement (prime awardee) and another institution (subrecipient) to which it transfers a portion of the work
- **Teaming agreement:** At the time a proposal for funding is submitted to an external sponsor, the collaborating institutions may execute a teaming agreement to indicate general agreement on the nature of the working relationship.
- **Collaboration Agreements:** Are executed between institutions irrespective of whether sponsored funding is anticipated.
- **Intellectual Property (IP) Agreements:** Are written to cover inventions or other discoveries that may result from a collaboration
  - can cover also copyrights or license rights between the parties;
  - the basic issue covered is ownership of the intellectual property (i.e. who owns what, and under what conditions).
  - can cover provisions on sharing costs and income related to the protection and licensing of intellectual property.

# Other types of agreements

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- **Data Sharing Plans:** contain information concerning the means by which data developed under a sponsored project will be made available to others requesting access.
- **Material Transfer Agreements:** covers situations in which one collaborator owns research materials and has received a request from another collaborator for samples of the material.
- **Facility Use Agreements:** Executed when a researcher from one institution wishes to use a piece of equipment or a laboratory at another institution,
  - The provisions cover insurance and liability issues, the cost of access, the ownership of IP and any limitations or restrictions that may be imposed on the visiting researcher.

# 7 Domains for Building Collaborative Research

Domain	Definition	Implications for Collaboration
Shared Goals	Existence of common objectives and/or collaborative activities that contribute to sustaining the partnership	Project remains focused and partners share successes and failures
Attitudes and Culture Supporting Collaboration	Attitudes and organizational cultures that encourage and support community-engaged research	Increases desired outcomes and sustained collaboration Acknowledges potential negative experiences from collaboration in the past
Institutional Factors	Factors that exist in academic/CBO systems that encourage or hinder collaborative research	Challenges at the institutional level are recognized and addressed when feasible early in the research process
Mutual Respect	Established rapport or sense of trust	Limits conflict by providing tangible benefits to each partner
Human and Fiscal Resources	The staff, monies, and space to carry out the research	Allocation of monies and resources impact partner equity and ability to carry out research tasks
Research Skills	A set of skills require to carry out research, such as study design, instrument development, data analysis	Enhances partner equity and increases likelihood for future collaboration
Partnering skills	A set of skills required to effectively work with others, such as communication, dependability, and transparency	Opens channels of communication and builds trust among partners