

Sustaining a Mentoring Programme and Dealing with Invisible Work

A complete mentoring roadmap

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BOOKLET 3 | AT-3 PROGRAMAS DE MENTORIA

EQUAL.STEAM



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Cofinanciado por:

A Complete Mentoring Roadmap
Booklet 2: A Step-by-step Guide to Setting Up a Mentoring Programme in Academia

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“There are persons, who resemble books and who transform us. They take the guise of a golden bridge between yourself and them. I would call them mentors”¹

Executive Summary

The main goal of this booklet is to outline factors to consider and actions to take in order to sustain a mentoring programme. The principal target audience of this booklet is mentoring programme coordinators or individuals exploring how to create an effective mentoring programme and those interested in joining a mentoring programme as a mentor or mentee. The topics covered include the under-representation of women in STEM disciplines; how to make your programme visible; matching mentors and mentees; dealing with the invisible work; tools to sustain the mentoring programme; and good practices. Lastly, it tackles navigating an unnavigable fog and includes suggestions for two introductory group mentoring events (i) faculty and students (mentors) and undergraduate students (mentees); and (ii) senior faculty (mentors) and faculty – junior and mid-level faculty and early-stage researchers (mentees).

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Women are under-represented in STEM disciplines

Women are under-represented in STEM disciplines and make up only 1 in 3 of the Science, Technology, Engineering and Mathematics (STEM) graduates in the EU². Moreover, there is an unmatched shortage of Information and Communication Technologies (ICT) professionals in the EU. Consequently, the ICT sector is repeatedly flagged as an area where this problem is of particular concern in general and concerning the low representation of women. Although women represent 52% of the European population, they only hold 15% of ICT-related jobs. Additionally, women make up only one in six of the ICT specialists in the EU. This under-representation takes place at all levels of the digital economy: in the engineering and physical sciences, but also in the number of women who are employees, corporate leaders and entrepreneurs². In relation to academia, in 2018, the proportion of women among academic staff in the EU in grade C positions stood at 46.6%. This fell to 26.2% of women in grade A positions, demonstrating a clear decline as careers advance and in the highest positions in academia³. Mentoring is especially relevant here given the historical and ongoing low participation of women in STEM disciplines in both academia, more so in senior roles, and industry as it can help to address some of these issues for women (see Booklet 1 for further details on the benefits of mentoring).

Making your programme visible

Institutional support

Once you have set up and established a mentoring programme (outlined in Booklets 1 and 2), it is essential to ensure its success and sustain your mentoring programme. In order to do so, it is vital to secure institutional support, in particular, visible support from senior administration⁴. This may include communicating to academic supervisory bodies, in addition to faculty and students, the value of mentoring and its benefits when implementing a formal programme and sharing sources that provide information about the programme (see Booklet 4 for further details on this topic). Mentoring should become a central value at an institutional level and “both mentors and mentees should be recognized by the administration as doing an extraordinarily important service in promoting success of faculty”⁵.

Fostering a dynamic programme

It is equally important to implement other measures to sustain your mentoring programme, namely communicating through online media such as a webpage, as well as other suitable social media, detailing the programme information and making sure it is easily accessible; ensuring the programme is highly visible on social media by engaging your audience with regular news items; making frequent calls for new mentors and mentees to expand and refresh the programme with new skills; working in partnership and liaising with other organisations and associations with programmes of a similar nature, drawing on one another's strengths and working hand-in-hand to make the most of combining resources; and holding at least four mentoring events per year to demonstrate the programme is active and dynamic.

Mitigating reluctance to change

Furthermore, it is vital to be aware that institutions may show a certain reluctance to change, which is essentially one of the end objectives of mentoring, and as a result a mentoring programme benefits from being collaborative. Support, or at least, alignment with supervisory and research bodies and faculty helps to minimise change that is deemed to be a threat or perceived as unproductive, "thus collaborative negotiation, discussion and conviction are important steps in the creation and sustaining of a mentoring programme"⁶. Therefore, when sending out a call for mentors and mentees, ensure you include all research and teaching faculty, ranging from junior to senior faculty, so that the programme is as inclusive as possible. Encourage everyone to be involved in the programme. Alignment with institutional policies such as gender and equality plans, research bodies or specific gender and career progression related key performance indicators or internal targets, which organisations and intuitions aim to adhere to, can promote your mentoring programme further and ensure its acceptance and continuation. Consider the constructive feedback provided by those taking part in the mentoring programme and adapt it accordingly.

Matching mentors with mentees

Once a sizable pool of mentors has been established, mentor profiles can then be posted on password protected websites and can be viewed by prospective mentees. Next, mentees can select two mentors and are then matched to one accordingly⁵. This matching process is based on a set of common characteristics or similar interests⁷ and relevant experience. Aspects to consider when matching mentors and mentees are, "professional interests, demographics, geographical location, human interest factors (e.g., hobbies, lifestyles), personality, values, and learning orientation"⁸. In particular, concerning formal mentoring programmes, "Potential mentees search for experienced, successful people whom they admire and perceive as good role models. Potential mentors search for talented people" who are willing to be moulded and learn. The overriding idea is that the relationship is fruitful for both parties⁸. The pool of mentors and mentees should be renewed on a regular basis, contributing to expanding and sustaining the programme with new skills and ensuring it remains active.

Cross-gender mentoring

Furthermore, it is worth considering if female mentees should be matched with female mentors. Studies particular to science and engineering⁹ noted, "The male socialization metaphor underpinning most traditional mentoring relationships as focusing on challenging the protégé, posing tasks in order to increase the young person's tolerance to stress... and stressing independence... does not fit the socialization and styles of most women and their orientation to integration rather than separation, interdependence rather than either dependence or independence, and collaborative rather than competitive task engagement." Gibson's study¹⁰ also supports the findings of other gender-related studies suggesting that women experience mentoring differently from men. Therefore, careful consideration should be given to cross-gender mentoring.

Dealing with the invisible work

Keeping track of the mentoring relationship

Invisible work emerges on two levels, the mentoring relationship and the programme itself. It is important to take the time to truly understand if your mentee is progressing as expected. Feedback should be provided, which although may be critical is fundamentally constructive, and allows mentees to nurture their own ideas and develop their studies, research and teaching skills. Above all, during all mentor-mentee contact offer constructive criticism and take the time to reflect on progress made, both accomplishments and lessons learned and areas that need further improvement. Build a relationship based on trust and growth. Guide your mentee onto the right track if needed and celebrate success as it is a great motivator. Mentoring should not be seen as a burden but rather an opportunity, a collaborative process, whereby both parties benefit.

Keeping the programme on its feet

The invisible work on the second level is reflected in the coordination and running of the mentoring programme, which require time and skills and can be easily overlooked. The appointment of a programme coordinator with time specifically allocated to this task is well worth considering. The coordinator can ensure the programme is running smoothly, identify and address any problems that may arise in a timely manner. This can be minimised through regular contact with the programme coordinator, both mentors and mentees should provide regular feedback as to how the programme is going and the coordinator can review and follow up on this feedback if necessary; staying up to date with the current interests of mentor and mentee organisations and helping them to plan their year ahead is a vital step. A specific training session for mentors may be useful here. Complementary material can be provided upon request for a specific group session for mentors. Equal.STEAM, a project of the University of Coimbra, under which these booklets were created, has developed several valuable resources to this end. Coordinators can also play a key role in measuring and

monitoring progress as well as reporting on the results of the SMART measures of success.

In terms of the more administrative aspects, a call for volunteers, with specific tasks such as appointing someone to be a point of contact, dealing with and responding to applications, matching mentors and mentees, organising events including such tasks as reserving rooms and organising refreshments, communication like sending out posts and posting news updates. Data collection in relation to the feedback provided from mentors and mentees and the results of the SMART measures of success. These tasks are valuable skills to highlight on your CV and represent an opportunity for volunteers to gain some practical real-world experience.

Revisiting or ending a mentoring relationship

It is fundamental to ensure that there are mechanisms in place to report if a mentoring relationship is not working well or commitments are not being met due to time constraints¹¹ with sufficient time to rectify the situation. An extensive mentoring pool will enable a new mentor to be assigned if needed. At a later stage, it may be necessary to renegotiate or end a mentoring relationship. This may include redefining goals and expectations or coming to the conclusion that the benefits of the relationship have ended and the initial purpose has been served. Above all, mentoring relationships should come to an end amicably.

Further information

For further information about launching, implementing and sustaining a mentoring programme, the following booklets, available from the same authors, offer A Complete Mentoring Roadmap – Booklet 1: The Basics of Mentoring in Academia; Booklet 2: A Step-by-step Guide to Setting Up a Mentoring Programme in Academia; and Booklet 4: Leveraging Mentoring to Promote Balance in Academia, Industry, Human Resources and the General Community. These booklets include suggestions and an outline for an introductory session, a list of activities for individual and group mentoring activities, ideas for further activities and a checklist for monitoring progress within the selected target groups. Several resources have been developed in the context of the project Equal.STEAM, please take a moment to review them on the project website www.uc.pt/equal.steam/



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Group mentoring sessions to get you started

This section outlines two starting sessions for mentoring (A) faculty or students (mentors) and undergraduate students (mentees); and (B) senior faculty (mentors) and faculty – junior and mid-level faculty and early-stage researchers (mentees).

Group mentoring introductory session for undergraduate students [A]

Time

1½ - 2 hours

Target audience

Faculty or students (mentors)
Undergraduate students (mentees)

Duration

Short-term.

Delivery mode

On-site, group discussion.

Purpose of the exchange

Aspirational mentoring, “which often positions individuals to move toward a career or opportunity to which they aspire”¹⁵.

1. Icebreaker: What is mentoring?

Ask participants to work in pairs (potential mentor and mentee), talk through the questions, and note down answers or keywords. “Food for thought” includes some aspects to consider as you work on task A.

“Food for thought”

Navigating an unnavigable fog and the ship that lights the way

If you are struggling to settle into a new environment or navigate your way through the ins and outs of a department in terms of embarking on a degree programme, career choices and progression or just generally feel that you could benefit from the sound advice and experience of a colleague who has ‘done this all before’, someone you can turn to, then you are not alone. Many people view mentoring as a support system, a valuable tool to guide and challenge them, a friendly face and a human, personal side to what can sometimes seem like an unnavigable fog. Likewise, if you feel you can be the ship that lights the way and provide this valuable support, consider becoming a mentor.

Task A

(20 mins + 10 mins group discussion)

The session leader should ask one or two participants to share their answers and discuss them as a class. The session leader should refer to the answer key.

What does mentoring mean to you?

Have you ever had a mentor (professionally or personally)?

What do you think are some of the benefits of mentoring?

Why are you interested in this topic or participating in this session?

Task B

(15 mins)

Ask participants to choose one or two of these areas - personal/family life, studies/training, academic integration, professional experiences¹². Discuss it with your partner in terms of the following:

Where you come from (history)

Where you are (present)

Where you are headed/hope to go (future)¹²

Consider taking a 15 min break here!

2. As a mentor respond to the following:

(10 mins + 10 mins group discussion)

Outline your **present status**:

- ___ Your current job
- ___ The organisation you work for
- ___ The field or industry you work in

3. As a mentee respond to the following questions:

(10 mins + 10 mins group discussion)

Indicate the **areas in which guidance** is needed in order of priority:

(1 = highest priority and 5 = lowest priority)

- ___ Research skills
- ___ Presentation skills
- ___ Writing skills
- ___ Job search or applications
- ___ Other, please specify: _____

Indicate your **strengths** in order of priority:

(1 = highest priority and 5 = lowest priority)

- ___ Group work
- ___ Research
- ___ Interpretation of data
- ___ Referencing work
- ___ Other, please specify: _____

Indicate your **expectations** for the programme in order of priority:

(1 = highest priority and 5 = lowest priority)

- ___ Study methods
- ___ Research guidance
- ___ Career guidance
- ___ Improved networking
- ___ Other, please specify: _____

Define **career goals** in order of priority:

(1 = highest priority and 5 = lowest priority)

- ___ Work experience e.g., internship
- ___ Volunteer work e.g., internship
- ___ Job market e.g., industry/non-profit organisation
- ___ Further postgraduate studies
- ___ Other, please specify: _____

Mentor and mentee discuss your individual answers together.

The session leader – Ask one or two participants to share their answers and discuss them as a class.

4. Practical decisions to be taken together (mentor-mentee):

(15 mins)

Should the **first meeting** be:

- On-site
- Off-site (distance)
- Other, please specify

- 30 mins
- 45 mins
- 1 hour
- Other, please specify

Don't forget to decide on a date.
We suggest no longer than 2 weeks after the start of the programme.

Subsequent **meetings**:

(with careful consideration given to the mentor's time constraints)

- On-site
- Off-site (distance)
- Other, please specify

- 30 mins
- 45 mins
- 1 hour
- Other, please specify

- Fortnightly
- Once a month
- Every three months
- Other, please specify

How to schedule the **next meeting**?

- Mentee send email with proposed date and time
- Mentor send email with proposed date and time
- Other, please specify

Best way to proceed if **email** remains **unanswered**:

- Resend email after one week
- Send text message after one week
- Other, please specify

Agree on how best to keep a **record** of meetings:

- Mentee writes up summary after meeting, indicating the date of the next meeting and the tasks to be completed before the next meeting for both
- Mentor outlines topic and tasks for next meeting
- Other, please specify

Allow 10 mins for any additional questions.

Group mentoring introductory session for faculty [B]

Time

1½ - 2 hours

Target audience

Senior faculty (mentors)
Faculty – junior and mid-level faculty and early-stage researchers (mentees)

Duration

Long-term.

Delivery mode

On-site, group discussion.

Purpose of the exchange

Transitional i.e., support through mentoring, “when moving from one career stage or placement to another”¹⁷ to which they aspire”¹⁵.

1. Icebreaker: What is mentoring?

Ask participants to work in pairs (potential mentor and mentee), talk through the questions, and note down answers or keywords. “Food for thought” includes some aspects to consider as you work on task A.

“Food for thought”

Navigating an unnavigable fog and the ship that lights the way

If you are struggling to settle into a new environment or navigate your way through the ins and outs of a department in terms of embarking on a degree programme, career choices and progression or just generally feel that you could benefit from the sound advice and experience of a colleague who has ‘done this all before’, someone you can turn to, then you are not alone. Many people view mentoring as a support system, a valuable tool to guide and challenge them, a friendly face and a human, personal side to what can sometimes seem like an unnavigable fog. Likewise, if you feel you can be the ship that lights the way and provide this valuable support, consider becoming a mentor.

Task A

(20 mins + 10 mins group discussion)

The session leader should ask one or two participants to share their answers and discuss them as a class. The session leader should refer to the answer key.

What does mentoring mean to you?

Have you ever had a mentor (professionally or personally)?

What do you think are some of the benefits of mentoring?

Why are you interested in this topic or participating in this session?

Task B

(15 mins)

Ask participants to choose one or two of these areas - personal/family life, studies/training, academic integration, professional experiences¹². Discuss it with your partner in terms of the following:

Where you come from (history)

Where you are (present)

Where you are headed/hope to go (future)¹²

Consider taking a 15 min break here!

2. As a mentor respond to the following:

(10 mins + 10 mins group discussion)

Outline your **present status**:

- ___ Your current job.
- ___ The organisation you work for.
- ___ The field or industry you work in.

3. As a mentee respond to the following questions:

(10 mins + 10 mins group discussion)

Indicate the **areas in which guidance** is needed in order of priority:

(1 = highest priority and 5 = lowest priority)

- ___ Planning and Implementing a research agenda¹¹
- ___ Writing research grants
- ___ How to succeed with research grants¹¹
- ___ Conference presentations⁵ and making the most of discussants' feedback
- ___ Other, please specify: _____

Indicate your **strengths** in order of priority:

(1 = highest priority and 5 = lowest priority)

- ___ Teamwork
- ___ Research
- ___ Teaching
- ___ Leadership
- ___ Management
- ___ Other, please specify: _____

Indicate your **expectations** for the programme in order of priority:

(1 = highest priority and 5 = lowest priority)

- ___ Research guidance
- ___ Teaching guidance
- ___ Career guidance
- ___ Improved networking
- ___ Other, please specify: _____

Define **career goals** in order of priority:

(1 = highest priority and 5 = lowest priority)

- ___ Teaching-oriented career advancement
- ___ Research-oriented career advancement
- ___ Both

- ___ Senior lecturer/researcher
- ___ Professor
- ___ Publications
- ___ Entrepreneurship (own business)
- ___ Services
- ___ Other, please specify: _____

Mentor and mentee discuss your individual answers together.

The session leader – Ask one or two participants to share their answers and discuss them as a class.

4. Practical decisions to be taken together (mentor-mentee):

(15 mins)

Should the **first meeting** be:

- On-site
- Off-site (distance)
- Other, please specify

- 30 mins
- 45 mins
- 1 hour
- Other, please specify

Don't forget to decide on a date.
We suggest no longer than 2 weeks after the start of the programme.

Subsequent **meetings**:

(with careful consideration given to the mentor's time constraints)

- On-site
- Off-site (distance)
- Other, please specify

- 30 mins
- 45 mins
- 1 hour
- Other, please specify

- Fortnightly
- Once a month
- Every three months
- Other, please specify

How to schedule the **next meeting**?

- Mentee send email with proposed date and time
- Mentor send email with proposed date and time
- Other, please specify

Best way to proceed if **email** remains **unanswered**:

- Resend email after one week
- Send text message after one week
- Other, please specify

Agree on how best to keep a **record** of meetings:

- Mentee writes up summary after meeting, indicating the date of the next meeting and the tasks to be completed before the next meeting for both
- Mentor outlines topic and tasks for next meeting
- Other, please specify

Allow 10 mins for any additional questions.

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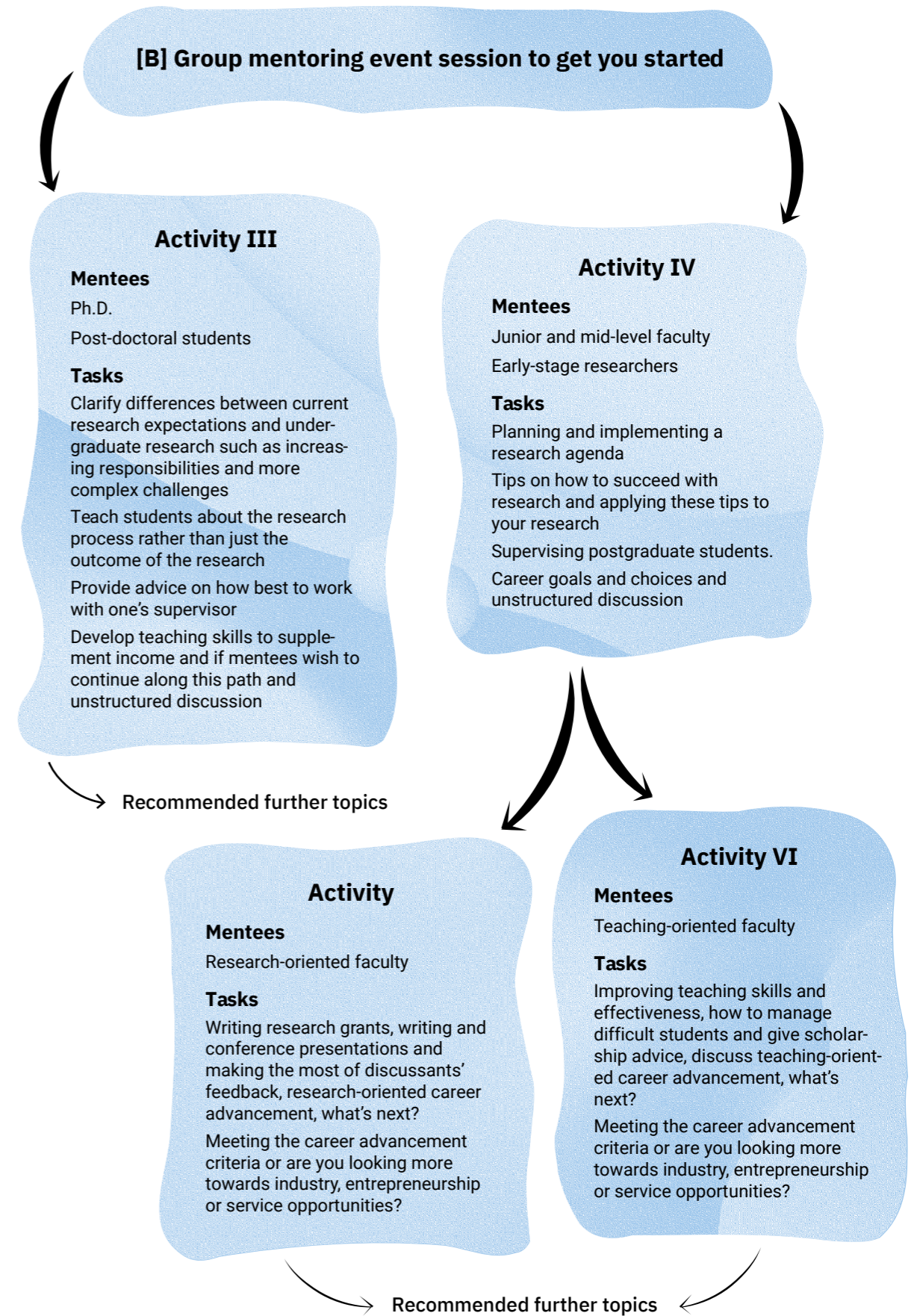
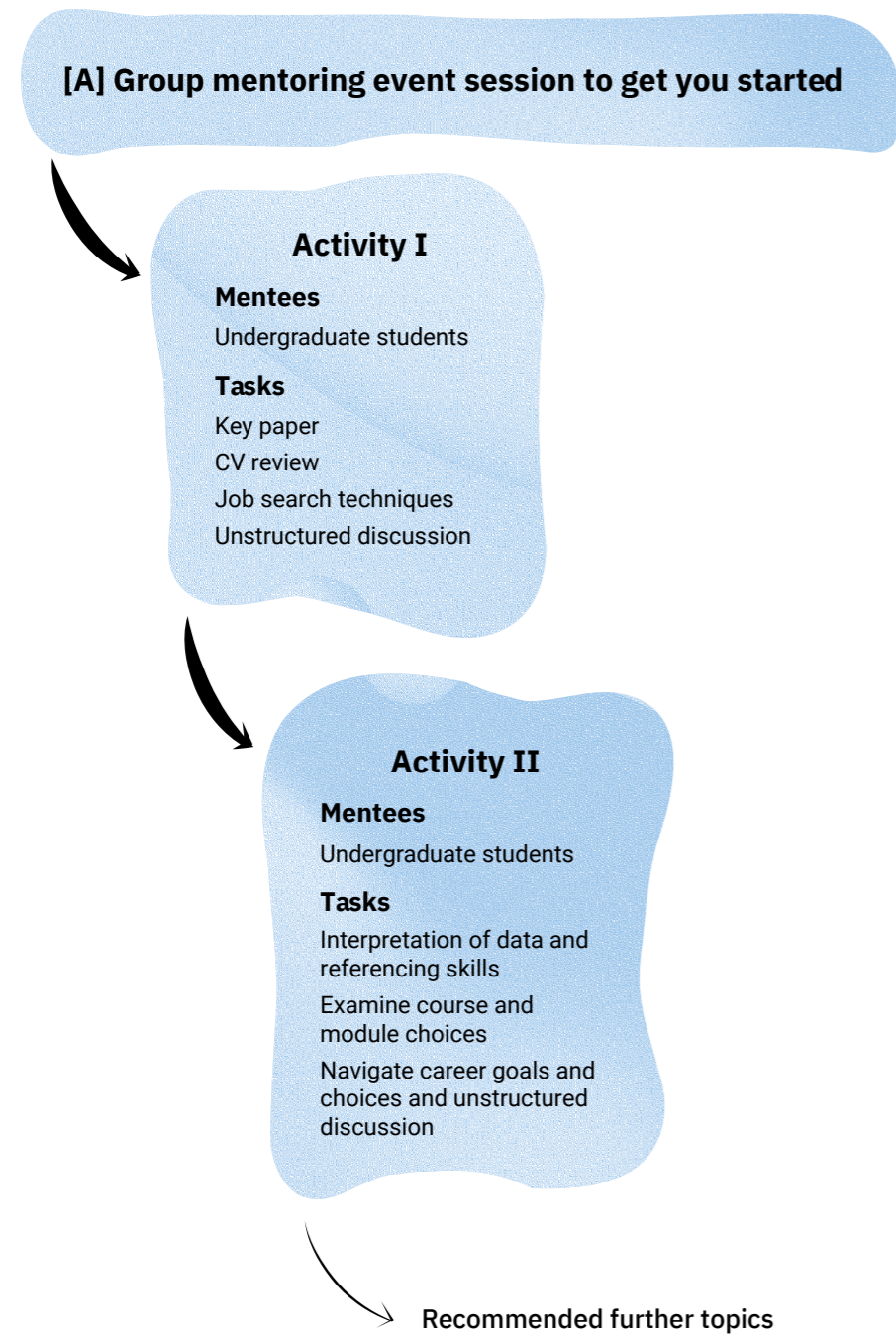


Further activities for students [A] and faculty [B] mentees

The main goal is to provide faculty or students (mentors) with an array of activities to carry out with faculty or students (mentees) according to their career trajectory/ stage within academia, thus ensuring that activities are relevant in terms of skills development and experience. The principal target audience is faculty and students at all levels in line with the role they adopt in the mentoring programmes. The topics covered include six activities for mentors to implement organised by career trajectory/ stage with tasks clearly listed and outlined. Complementary issues to discuss and a list of recommendations for follow-up activities are also detailed.

Firstly, mentors should identify their target audience in terms of mentees and this will indicate which activities will be most appropriate accordingly.

Spidergram



Activity I

Target audience

Faculty or students (mentors)

Undergraduate students (mentees)

Activity I is designed as a follow-up activity to the (A) Group mentoring event, introductory session for faculty or students (mentors) and undergraduate students (mentees).

Tasks for Activity I

Key paper

CV review

Job search techniques¹

Unstructured discussion

Mentor

Select a key paper for the mentee to read in advance²; Review your mentee's CV. Topics you may want to broach include tips for improving their CV and how to ensure it reaches human hands; Suggest several job search techniques; Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses.

Mentee

Write up the summary after the last meeting, indicating the date of the next meeting and the tasks to be completed before the next meeting for both parties; Read and critically analyse the key paper selected by your mentor; Send an updated CV to your mentor; Select two job search techniques and follow up on them.

Outline for Activity I

Time: 1 hour

Delivery mode: one-to-one

Mentor

Use the key paper selected as a basis for discussion; Provide your mentee with feedback on their findings; Provide feedback on areas where your mentee can improve their CV and the job techniques selected. For students considering the field of data science, you can look more closely at ensuring they demonstrate the impact of their work in numbers and do not use overly technical language in their CVs. Other general CV tips include adjusting their CV to the job description so that employees can see

how their skills and experience meet their requirements, only including relevant experience, using an appropriate email address and proofreading their CV to avoid careless mistakes. These are all techniques that will ensure their CV receives the attention it deserves³.

Furthermore, in today's world ensuring that your CV reaches human hands is becoming more and more of an issue as thousands of CVs are filtered through an applicant tracking system (ATS) before reaching their final destination, 98% of Fortune 500 companies use an ATS (Jobscan)⁴ to track and filter applications. This can mean that in some cases your CV may not even reach a person as it does not fit the initial job criteria. Consider some of the following techniques with your mentee such as only applying for positions they are qualified for and carefully considering what the role requires, including the right keywords and contextualising them, do not only list your skills, but also show recruiters how you have used your skills and what the results were, use the correct file type i.e., docx or pdf for example and use a readable format such as chronological or combination, use only simple formatting such as bold, italics and bullets and avoid tables, text boxes, logos, columns, graphics etc., as this will be lost as the ATSs convert documents into text-only files⁵.

Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Ask for feedback from your mentee on some general and course-related issues – How are you doing? How is your family? Are you settling into your new accommodation? Are you settling into your new department? How were your first classes? Are you adjusting to university life? Have you identified any opportunities to be involved with colleagues from your residence/course? What do you do for fun? Is there any information you wish you had known before coming to university? Do you have any regrets about your choice of university and course? What can I do to support or advocate for you⁶?

Mentee

Read and critically analyse the key paper selected by your mentor and present your findings; Discuss and focus on the areas to be improved in your CV; Present the two job search techniques you followed up on; Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Discuss any topics you feel that you particularly need guidance with or indicate where you are experiencing difficulties; Think about what your mentor can do to support or advocate for you.

Activity II

Target audience

Faculty or students (mentors)
Undergraduate students (mentees)

Activity II is designed as a follow-up activity to the (A) Group mentoring event, introductory session for faculty or students (mentors) and undergraduate students (mentees) or Activity I, as outlined above.

Tasks for Activity II

Interpretation of data and referencing skills
Examine course and module choices
Navigate career goals and choices and unstructured discussion

Mentor

Select a skill to develop such as interpretation of data and referencing. Ask your mentee to read a relevant paper and compile a short analysis of the data presented in the paper as well as research and reference two additional papers to complement this area; Consider asking your mentee to use the reference system endorsed by their institution. Ask your mentee to send you the details of the course and specific modules they are doing or plan to complete, in addition to any potential essay or dissertation topics; Ask your mentee to present an outline of their career goals and choices; Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses.

Mentee

Write up the summary after the last meeting, indicating the date of the next meeting and the tasks to be completed before the next meeting for both parties. Read and prepare the analysis of the data presented in the selected paper. Identify two additional papers to complement this area and research and reference them (using the reference system suggested by your mentor); Send the details of the course and specific modules you are doing or plan to complete, in addition to any potential essay or dissertation topics you are considering; Prepare an outline of your career goals and choices.

Outline for Activity II

Time: 1 hour

Delivery mode: one-to-one

Mentor

Provide feedback on the short analysis of the data presented in the selected paper as well as the two additional papers your mentee researched and referenced to complement this area; Discuss and provide guidance concerning your mentee's choice of courses, particularly areas where they are having difficulty selecting the most appropriate modules. This should include course choices best suited to complement areas of study and potential essay or dissertation topics; Provide guidance as to whether these choices are in line with their career goals and choices; Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses; Ask for feedback from your mentee on some general and course-related issues – How are you doing? Are you managing your workload? Are you on track to meet your upcoming deadlines? Are you adjusting to university life? Are you involved in any social organisations or sports clubs? Are you taking care of yourself? What can I do to support or advocate for you⁶?

Mentee

Present your analysis of the data presented in the selected paper and the two additional papers you selected to research and reference; Discuss the course and specific modules you are doing or plan to complete, in addition to any potential essay or dissertation topics you are considering; Present an outline of your career goals and choices. Discuss with your mentor if they are aligned; Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Discuss any topics you feel that you particularly need guidance with or indicate where you are experiencing difficulties; Think about what your mentor can do to support or advocate for you⁶.

Mentor

Recommended further topics to develop with your mentee following activities I and/or II include study methods and habits, managing your time, how to develop hard (e.g., IT skills) and soft skills (e.g., methods to enhance critical thinking), career guidance including the value of complementary activities such as internships and/or voluntary work and the path ahead that is towards the job market or further postgraduate studies.

Above all during all mentor-mentee contact offer constructive criticism, take the time to reflect on progress made, both accomplishments, lessons learnt and areas that need further improvement. Build a mutually beneficial relationship based on trust and growth.

Activity III

Target audience

Faculty (mentors)
Ph.D. and post-doctoral students (mentees)

Activity II is designed as a follow-up activity to the (A) Group mentoring event, introductory session for faculty or students (mentors) and undergraduate students (mentees) or Activity I, as outlined above.

Tasks for Activity III

Clarify differences between current research expectations and undergraduate research⁷ such as increasing responsibilities and more complex challenges

Teach students about the research process rather than just the outcome of the research⁷

Provide advice on how best to work with one's supervisor²

Develop teaching skills to supplement income and if mentees wish to continue along this path² and unstructured discussion

Mentor

Ask your mentee to outline the differences between current research expectations and undergraduate research. Give them a more complex research challenge to accompany this task whilst also focusing on the research process rather than the research outcome; Provide advice on how to best work with one's supervisor, first-hand experience can be useful here. Ask your mentee to choose a relevant topic and create a lesson plan emphasising the importance of effective teaching skills. Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses.

Mentee

Write up the summary after your last meeting, indicating the date of the next meeting and the tasks to be completed before the next meeting for both parties; Outline the differences between current research expectations in comparison to undergraduate research applied to a more complex research challenge assigned by your mentor at the same time as focusing on the research process rather than the outcome; Think about and note down ways on how to best work with your supervisor, specific examples may be useful here. Choose a relevant topic and create a lesson plan which demonstrates effective teaching skills.

Outline for Activity III

Time: 1 hour

Delivery mode: one-to-one

Mentor

Provide feedback concerning the differences presented by your mentee between current research expectations and undergraduate research as well as the more complex research challenge carried out to accompany this task; Discuss the importance of the research process rather than the research outcome and some of the difficulties encountered in relation to the previous task; Provide advice on how to best work with one's supervisor, first-hand experience can be useful here. Discuss your mentee's lesson plan considering the importance of effective teaching skills. Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Ask for feedback from your mentee on some general and course-related issues – How are you doing? How is your family? Are you settling into your new department/role? How were the first classes you taught? Are you managing to balance work responsibilities with personal/family commitments? Are you taking care of your wellness?⁸ Provide encouragement and emotional support concerning any difficult issues⁹.

Mentee

Present the differences between current research expectations and undergraduate research applied to the more complex research challenge assigned by your mentor whilst also focusing on the research process rather than the research outcome; Discuss the ways you can best work with your supervisor, specific examples may be useful here. Present and discuss your lesson plan with your mentor. Outline how it demonstrates effective teaching skills and discuss some of the difficulties encountered. Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Discuss any topics you feel that you particularly need guidance with or indicate where you are experiencing difficulties; Think about what your mentor can do to support or advocate for you⁶.

Mentor

Recommended further topics to develop include research and presentation skills²; Explore career opportunities within or outside academia; Exposure and socialising with experts in their field^{7 10}; Encourage students to disseminate their work taking advantage of research publication and presentation opportunities⁷.

Activity IV

Target audience

Senior faculty (mentors)
Faculty – junior and mid-level faculty and early-stage researchers (mentees)

Activity IV is designed as a follow-up activity to the (B) Group mentoring event, introductory session for senior faculty (mentors) and faculty – junior and mid-level faculty and early-stage researchers (mentees).

Tasks for Activity IV

Planning and implementing a research agenda¹¹

Tips on how to succeed with research and applying these tips to your research¹¹

Supervising postgraduate students

Career goals and choices and unstructured discussion

Mentor

Ask your mentee to plan and present their research agenda for the year ahead and include steps on how they intend to implement this agenda; Include tips on how to succeed with research and how to apply these tips to your research; What is the best way to supervise postgraduate students – include some suggestions on how to deal with difficult students; Career goals and choices – help your mentee to understand and navigate university politics¹¹; Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses.

Mentee

Write up the summary after the last meeting, indicating the date of the next meeting and the tasks to be completed before the next meeting for both parties. Write a plan and present your research agenda for the year ahead and include steps on how you intend to implement this agenda; Demonstrate how you can apply the tips on how to succeed with research from your mentor to the topic you have researched; Discuss any difficulties you have come across when supervising postgraduate students; Outline your career goals and choices for the year ahead.

Outline for Activity IV

Time: 1 hour

Delivery mode: one-to-one

Mentor

Provide feedback on how to improve their research agenda (plan and implementation); Include tips on how to succeed with research and provide feedback on the research topic your mentee has chosen and how to apply these tips further; Discuss the best way to supervise postgraduate students – include suggestions on how to deal with difficult students; Career goals and choices – help your mentee to understand and navigate university politics; Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Ask for feedback from your mentee on some general and course-related issues – How are you doing? How is your family? Are you settling into your new department? How were your first classes you taught? Are you managing to balance work responsibilities with personal/family commitments? Are you taking care of your wellness?⁸ Provide encouragement and emotional support concerning any difficult issues⁹.

Mentee

Present your research agenda plan for the year ahead and demonstrate how you intend to implement this agenda; Discuss with your mentor the topic you have chosen to research and how you can apply their research tips to make it more effective; Discuss any difficulties you have come across when supervising postgraduate students and strategize with your mentor how to get the most out of your students; Outline your career goals and choices for the year ahead. Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics – Discuss any topics you feel that you particularly need guidance with or indicate where you are experiencing difficulties; Think about what your mentor can do to support or advocate for you⁶.

Activity V

Target audience

Senior faculty or highly experienced experts (mentors)
Research-oriented faculty i.e., from researcher to senior researcher (mentees)

Activity V is designed as a follow-up activity to the (B) Group mentoring event, introductory session or Activity IV, as outlined above.

Brief outline of tasks for Activity V

Provide guidance with writing research grants, writing and conference presentations⁹ and making the most of discussants' feedback⁹; Discuss research-oriented career advancement such as navigating university and department politics⁹; What's next, senior lecturer/researcher or professor? How to ensure you meet the career advancement criteria in terms of publications or experience or are you looking more towards industry, entrepreneurship (own business) or service opportunities and how to do this? Select one of the above paths to discuss in-depth. Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Ask for feedback from your mentee on some general and course-related issues – How are you doing? How is your family? How well are you integrated into your department? Do you feel you are appreciated and heard by your department? Are you managing to balance work responsibilities with personal/family commitments?

Activity VI

Target audience

Senior faculty or highly experienced experts (mentors)
Teaching-oriented faculty i.e., from lecturer to senior lecturer, lecturer to professor, professor to associate professor (mentees)

Activity VI is designed as a follow-up activity to the (B) Group mentoring event, introductory session or Activity IV and V, as appropriate and outlined above.

Brief outline of tasks for Activity VI

Improving teaching skills and effectiveness; How to manage difficult students and give scholarship advice⁹; Discuss teaching-oriented career advancement such as navigating university and department politics⁹; What's next, senior lecturer or professor? How to ensure you meet the career advancement criteria in terms of publications or experience or are you looking more towards industry, entrepreneurship (own business) or service opportunities and how to do this? Select one of the above to discuss in-depth. Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Ask for feedback from your mentee on some general and course-related issues – How are you doing? How is your family? How well are you integrated into your department? Do you feel you are appreciated and heard by your department? Are you managing to balance work responsibilities with personal/family commitments?

Mentor

Recommended further topics to develop following Activities V and VI include teamwork and leadership tips; How and where to network successfully and participation in networking conferences. Leave time for unstructured discussion during your mentor-mentee contact hours as the programme progresses. You may want to consider some of the following topics: Ask for feedback from your mentee on some general and course-related issues – Discuss any networking events you could attend together? Are you taking care of your wellness?⁸ Provide encouragement and emotional support concerning any difficult issues⁹.

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A session for mentors

The main goal is to help mentors/potential mentors understand if being a mentor is the right role for them and how as a mentor you can help, support or improve the skills of a colleague. The principal target audience is mentoring programme coordinators, faculty or students at all levels in their roles as mentors/potential mentors. The topics covered include four main tasks to help you decide if being a mentor is the right role for you. The tasks are designed to facilitate a better understanding of mentoring, the role mentors can play, what makes a good mentor, identifying your strengths as a mentor and the areas you can help to develop.

Group mentoring event for mentors [C]

Time

1½ - 2 hours

Target audience

Mentoring programme coordinators
Faculty or students at all levels in their roles as mentors/potential mentors.

Delivery mode

On-site, group discussion.

Task 1

Session leader - Ask participants to work in pairs, talk through the questions below and note down answers or keywords. Then discuss the answers as a group. Ask participants to consider the definition of mentoring provided below, "Food for thought" and the "flight analogy for mentoring relationships" as you work on task¹.

1. Icebreaker

Am I in the right place? Am I the right person? Should I be a mentor? Think back to when you started your academic journey and how you felt, some of the difficulties you came across and the questions or support you wish you had been able to ask for – you can make a difference and be that person TODAY!

Although a multitude of mentoring definitions exists in the scientific literature, Cuerrier¹ explains: "Mentoring is a form of voluntary help, which is not necessarily gratis, which favours development and learning, based on an interpersonal relationship of assistance and of exchanges in which an experienced person invests their acquired wisdom and their expertise, in order to favour the development of another person, who has to attain some competences and professional objectives"².

"Food for thought"

Navigating an unnavigable fog and the ship that lights the way

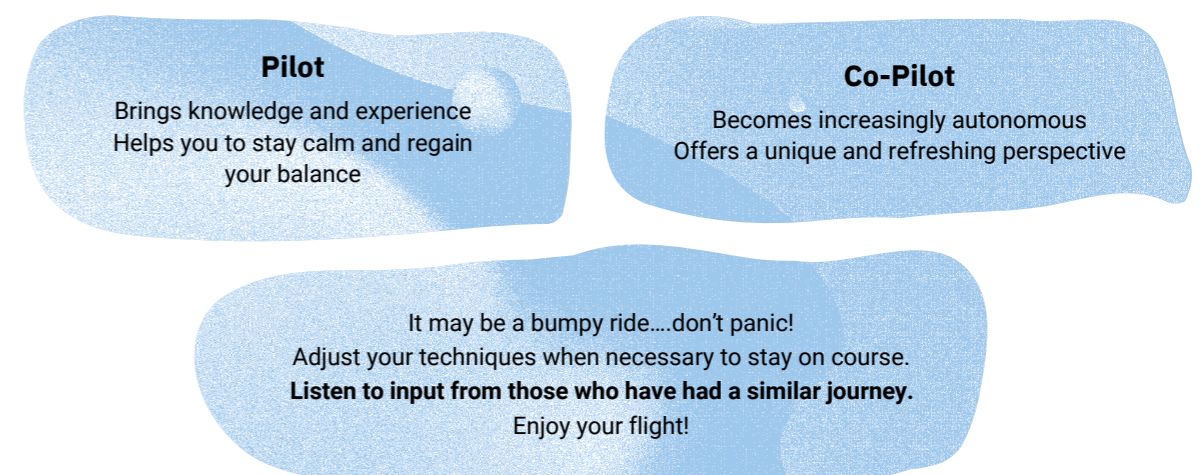
If you feel you can be the ship that lights the way and provide valuable support in its many different forms to a colleague, then you should consider becoming a mentor. In particular, if you know a colleague who is struggling to settle into a new environment or to navigate their way through the ins and outs of a department in terms of embarking on a degree programme, career choices and progression or just generally feel that they could benefit from the sound advice and experience of a colleague who has 'done this all before', someone they can turn to, then they are not alone. Many people view mentoring as a support system, a valuable tool to guide and challenge them, a friendly face and a human, personal side to what can sometimes seem like an unnavigable fog.

Take a look at this flight analogy for mentoring relationships³ - Hop aboard! You're about to take off...

Imagine the following scenario – you are learning how to fly a plane. The two of you, the **pilot (mentor)** and the **co-pilot (mentee)**, are sitting in the cockpit, with your seat belt fastened, about to take off. You have to work together to draft a flight plan and reach an agreed-upon destination (complete your undergraduate degree, be awarded a research grant, have your paper published or be promoted to senior lecturer). The relationship required to reach your final destination involves trust, respect, and shared responsibility for success. The **pilot** brings their **knowledge and experience** to the table, encouraging the co-pilot to become increasingly autonomous, while the co-pilot also has their own unique, often refreshing, perspective and goals. At times, the ride can get a little bumpy, as you grip the seat handles tightly, knuckles turning whiter as the plane gathers speed. You might panic, if you lose sight of your destination and get a little lost on the way. This is where the **pilot's guidance is so valuable as they help you to stay calm and regain your balance**. As the flight conditions change over the course of the journey, so too do the pilot and co-pilot, and you adjust your flying techniques to stay on course, as effective skills developed through training and experience enable you to **learn from one another**. At various times, you receive important information from the control tower (e.g., institutional leaders, heads of department, fellow faculty members and programme leaders), which can help you stay your course or change direction if needed. They might also put you in **contact with other pilots who have recently navigated a similar storm** (extending your network) or offer a layover on a beautiful island (professional development opportunities). **Your collaboration will be highly valued as you both have a successful journey**. Welcome! You have reached your final destination and the weather outside is a pleasant 25 degrees....

The Co-Pilot Relationship⁴

What contributes to a successful journey and a safe arrival at your destination for both of you? Trust, respect and **shared responsibility for success**.



Task 2

Session leader - Ask participants to work in pairs, talk through the question below and note down answers or keywords. Then discuss your answers as a group. "Tips about what makes a good mentor" includes some aspects to consider as you work on task 2.

2. What makes a good mentor?

Tips about what makes a good mentor⁵

Ensure that you are available for regular meetings.

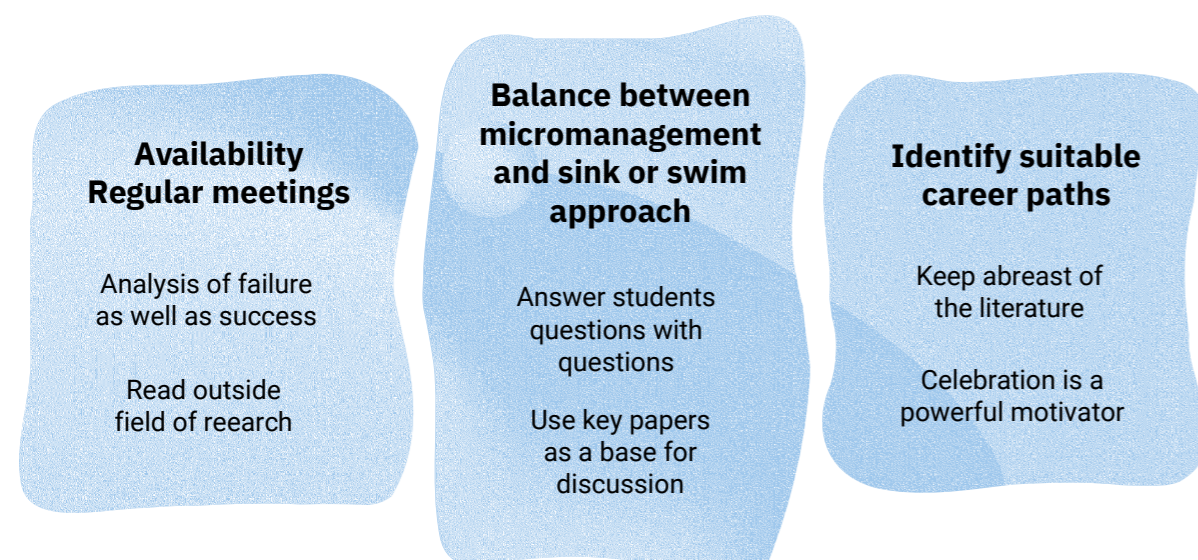
Analyse both failure and success; do not be limited by your area of research, read outside it.

Strike a balance between micromanaging your mentee and adopting a sink or swim approach, that is providing them with too much or very little structured help.

Use key papers to provoke discussions, ensuring you keep abreast of key literature, which is equally useful for your mentee.

Identify a suitable career path, whether it is to continue within academia or explore an alternative path like industry or entrepreneurship.

Celebrate accomplishments as this helps to sustain motivation levels and make the small steps count.



Infographic 1 - Some tips that will help you to become a good mentor

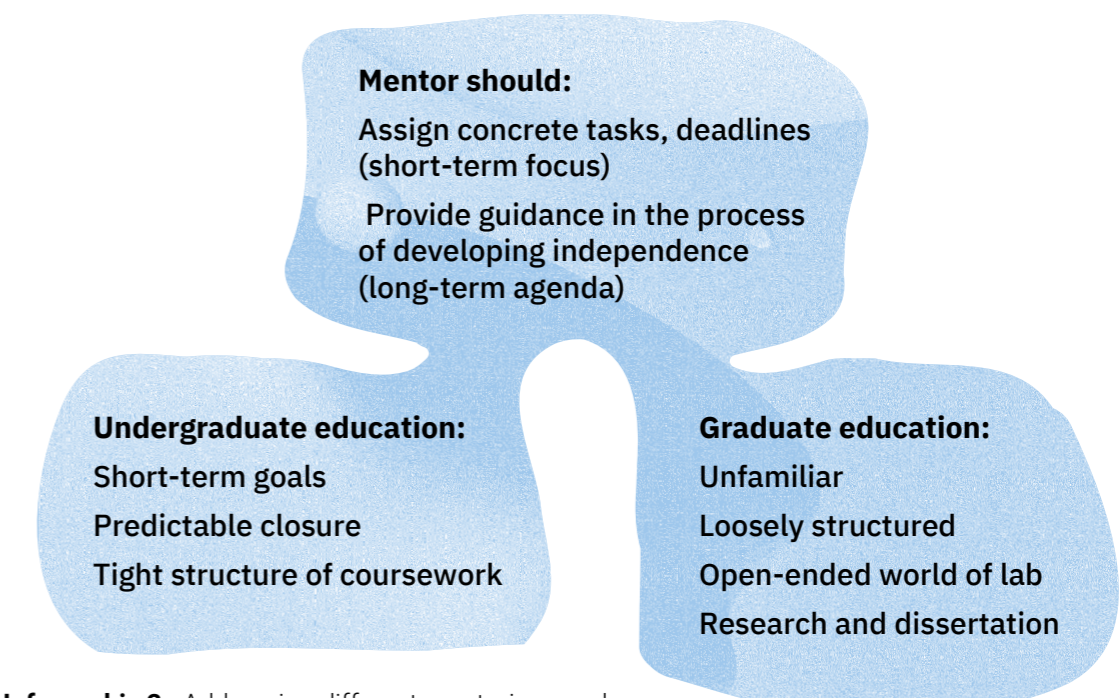
Task 3

Session leader - Ask participants to work in pairs, talk through the questions below and note down answers or keywords. Then discuss your answers as a group. Ask participants to consider some of the following areas outlined below when analysing if they can provide help, support or improve the skills of a colleague. The target groups of mentees are organised by career trajectory/stage that is undergraduate students, graduate students, Ph.D. students, postdoc or assistant professors and senior faculty transitioning from university to the workplace. Develop a yearly plan based on your strengths – where can you most help your mentee?

3. What are my best skills/strengths? Develop a yearly plan based on your strengths.

Within academia different career stages such as undergraduate students, graduate students, Ph.D. students, postdoc or assistant professors and senior faculty lead to the need to address different mentoring needs. When it comes to mentoring **undergraduate students**, Shelito et al.⁶ and Temple et al. (2010)⁷ identified several best practices, crucial factors for successful mentoring and some of the common challenges encountered as outlined in the University of Oregon's Mentoring Undergraduate Students⁸, which include, "**communication, establishing expectations, planning and soft skills**". These are some of the areas **mentors** can consider providing support when it comes to mentoring **undergraduate students**.

An alternative approach is needed for mentoring graduate students as mentors play a different role. Initially, the most challenging step is the transition from the requirements of undergraduate to graduate education and mentoring support should be adapted accordingly as depicted in infographic 2⁹.



Infographic 2 - Addressing different mentoring needs

For Ph.D. students, at the onset, mentoring issues may be more channelled towards developing research and presentation skills, as well as how to work best with one's supervisor. As a Ph.D. student is finalising their work, mentoring concerns may be more directed to the options available after completing their Ph.D., that is, whether to remain in academia or look to other fields of work like industry.

Further along the academic career ladder, such as postdocs or assistant professor mentoring can support junior faculty to obtain and develop the key skills necessary to be successful academically, namely scholarly independence, educational skills, and preparation for academic advancement, in addition to facilitating constructive professional relationships and networks within the institution and beyond, essential for career development.^{10 11 12 13}

At a later stage, when transitioning from university to the workplace, mentoring may be more concerned with career prospects, work-life balance, meeting both teaching and research commitments and developing skills for leadership roles. Mentoring colleagues at a more advanced career stage may involve developing other skills in areas like management, strategy, how to handle a group, and possibly new issues that arise in relation to work-life balance.

Task 4

Session leader - Ask participants to work in pairs, talk through the question below and note down answers or keywords. Then discuss the answers as a group. Ask participants to consider the "Best practices" and "Adopting soft skills and mindful qualities" outlined below as they analyse task 4.

4. How can I make myself a better mentor?

Good practices

Make **needs and objectives** clear from the outset so that expectations are explicit for both parties.

Determine realistically how much time you can dedicate to this activity - outline how many times you intend to meet over a given period, for how long and the most suitable format. Clear expectations lead to less disappointment.

Plan the topics you want to discuss in advance, you cannot address all issues at once. Give your relationship time to grow.

Share your experiences and be ready to **learn from one another**. Remember your mentor is a partner for change.

Act if you need external support - if issues arise in the mentoring relationship and you need external support, contact the programme coordinator¹⁴.

Respect boundaries such as time-constraints, confidentiality and the professional limits of the mentoring relationship¹⁵.

Communicate as mentoring is not only about speaking, but equally about listening. Ask questions that are thought-provoking, give your mentee the space they need to think, to answer. Listen for information and understanding, "**Hear what is said and unsaid**"¹⁶.

Adopt soft skills and mindful qualities

Soft skills that are all-encompassing and can be applied to group or individual mentoring programmes accordingly are also important for a mentor to adopt. They help to ensure that mentees benefit as much as possible from the mentoring programme. We would like to be a part of this fruitful experience and network.

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Checklists to track and monitor progress

The main goal is to provide a checklist to monitor the progress and success of the mentoring programmes within the selected target groups. The principal target audience is mentoring programme coordinators, faculty or students at all levels in their roles as mentors. The topics covered include tools to sustain the mentoring programme, a checklist and indicators (SMART measures of success) to monitor the overall and general progress of the mentoring programme vis-à-vis levels of success, key strengths and areas of improvement for the two main target groups (undergraduate and postgraduate students; and faculty following a teaching and research career within academia). This information and feedback can also be gathered to inform future decision making.

Tools to sustain the mentoring programme

Tools to monitor and evaluate mentoring programmes should also be used throughout the duration of the programme, namely annual reports, or more regular feedback whereby both parties provide some feedback and detail their exchanges or the support they found useful¹. This follow-up and continued activity should include keeping a record of the meetings. Written records allow progress and achievement of objectives to be reviewed, as well as a useful way to provide feedback².

Measuring progress

It is essential to have a checklist and indicators, as detailed below under the SMART measures of success³, to monitor the overall and general progress of the mentoring programme vis-à-vis levels of success, key strengths and areas of improvement for the two main target groups (undergraduate and postgraduate students; and faculty following a teaching and research career within academia). This information and feedback can be gathered periodically as the programme continues or at the end of a semester/academic year, as deemed appropriate and used to inform future decision making.

SMART measures of success³

The success of the mentoring programme can be assessed using specific, measurable, ambitious but attainable, relevant and timed (SMART) measures, in terms of number and percentage of:

Undergraduate and graduate students¹

Overall indicators useful to help assess the success of the mentoring programme:

Students and new students who **participated** in the programme

Mentees **retained** from one semester to the next (short-term programmes); and from one year to the next year of study (long-term programmes)

Level of **satisfaction** with the programme

General checklist and/or indicators useful to help identify key strengths and areas of improvement:

Participants who indicated that the mentoring programme cultivated “a sense of belonging” to the university;

Participants who indicated a good match between themselves and their mentor;

Participants who indicated that the number of mentor-mentee meetings/exchanges met their needs;

Participants who indicated that the mentoring programme helped them to develop their skills in any of the following areas: research skills, presentation skills, writing skills, CV review, job search⁴ or applications, and/or other, please specify;

Participants who indicated that the mentoring programme helped them to strengthen any of the following areas: group work, research, interpretation of data, referencing, and/or other, please specify;

Participants who indicated that the mentoring programme helped them to navigate module and course choices: course modules best suited to complement areas of study and dissertation topics, courses best suited to complement areas of study and dissertation topics, and/or other, please specify;

Participants who indicated that the mentoring programme helped them to achieve study goals: develop good study methods and habits, manage your time, develop soft skills e.g., enhance critical thinking and problem-solving skills, develop hard skills e.g., IT skills, and/or other, please specify;

Participants who indicated that the mentoring programme helped them to navigate career goals and choices: work experience e.g., internship, volunteer work e.g., internship, job market e.g., industry/non-profit organisation, further postgraduate studies, networking, and/or other, please specify;

Participants who indicated that the mentoring programme helped them to develop soft skills such as determination to overcome obstacles, inspire others, build self-confidence, increase motivation, boost self-esteem, in addition to support with settling into university life, and/or other, please specify.

¹Please note: this checklist corresponds to (A) Group mentoring event, introductory session as well as Activities I and II.

Faculty (teaching and/or research careers)²

Overall indicators useful to help assess the success of the mentoring programme:

Faculty and new faculty who **participated** in the programme

Mentees **retained** from one year to the next year of research/teaching (long-term programmes)

Level of **satisfaction** with the programme

General checklist and/or indicators useful to help identify key strengths and areas of improvement:

Participants who indicated that the mentoring programme cultivated “a sense of belonging” to the university

Participants who indicated a good match between themselves and their mentor

Participants who indicated that the number of mentor-mentee meetings/exchanges met their needs

Participants who indicated that the mentoring programme helped them in any of the following areas: clarifying differences between current research expectations and undergraduate research⁵, teaching students about the research process rather than just the outcome of the research⁵, planning and implementing a research agenda¹, writing research grants, how to succeed with research grants¹, conference presentations⁶ and making the most of discussants’ feedback, navigating the politics of the university and department⁶ and/or other, please specify

Participants who indicated that the mentoring programme helped them to develop their teaching skills in any of the following areas: improving teaching skills and effectiveness, increased teaching effectiveness, how to manage difficult students, how to give scholarship advice, navigating the politics of the university and department¹, and/or other, please specify

Participants who indicated that the mentoring programme helped them to develop their strengths in any of the following areas: teamwork, research, teaching, leadership, management, and/or other, please specify

Participants who indicated that the mentoring programme helped them to facilitate networking and participation in networking conferences, and/or other, please specify

Participants who indicated that the mentoring programme helped them to achieve their work goals in any of the following areas: time management/prioritising, how to reconcile work and family/personal life, wellness², emotional support⁶, and/or other, please specify

Participants who indicated that the mentoring programme helped them to plan and implement their career goals in any of the following areas: teaching-oriented career advancement, research-oriented career advancement, both, senior lecturer/researcher, professor, publications, industry, entrepreneurship (own business), services, and/or other, please specify

Participants who indicated that the mentoring programme helped them to develop soft skills such as balancing work responsibilities with personal/family commitments, wellness² and managing time and flexibility, encouragement and emotional support⁶

²Please note: this checklist corresponds to (3.B) Group mentoring event, introductory session as well as Activities III, IV, V and IV.

[3.D] Bibliography

1. Fountain, J. & Newcomer, K. E. Developing and Sustaining Effective Faculty Mentoring Programs. *J. Public Aff. Educ.* 483–506 (2016).
2. INSPIRA. Guia INSPIRA - Programa de Mentoria para Reter o Talento Feminino na Informatica. (2022).
3. University Mosaic Mentoring Program. <https://www.salisbury.edu/administration/academic-affairs/mosaic-mentoring/>. (2023).
4. Alumni as Mentors programme | Careers and Employment. Victoria University of Wellington (2018) <https://www.wgtn.ac.nz/careers/employment/alumni-as-mentors>.
5. University of Oregon. Mentoring Undergraduate Students | Research and Innovation. University of Oregon - Office of the Vice President for Research and Innovation <https://research.uoregon.edu/plan/undergraduate-research/resources/mentoring-undergraduate-students> (2023).
6. Bean, N. M., Lucas, L. & Hyers, L. L. Mentoring in Higher Education Should be the Norm to Assure Success: Lessons Learned from the Faculty Mentoring Program, West Chester University, 2008–2011, *Mentor. Tutoring: Partnership. Learn.* 22, 56–73 (2014).