

YUFE Postdoctoral Training & Development Scheme

Maastricht University, University of Antwerp, University of Sorbonne Nouvelle

Summary

As postdoctoral researchers are key players within the YUFE universities, providing dedicated support and training opportunities for this target group is essential. Topics such as leadership, career development, grant writing, communication, intercultural awareness and project management have been highlighted as priorities. In an international context, postdoctoral researchers prefer hands-on online training, where they can benefit from working on their own materials, as opposed to theoretical seminars that offer little opportunity to apply their new skills in context. As such, networking with peers and informal learning possibilities (an alternative approach to long term learning) can help further develop these thematic academic and professional skill sets.

Supporting the professional development of postdoctoral researchers is essential to develop their skills and increase their employability within their current appointment and beyond. Apart from training and informal learning opportunities, guidance by their supervisor (principal investigator - PI) or another mentor is essential for further growth. On top of training and informal learning opportunities, and guiding by a scientific supervisor, the YUFE postdoctoral vision includes an optional mentorship program and several tools to support the target groups with their personal and professional development.

Within YUFE, 10 European universities have been working together on a YUFE approach to postdoctoral training. A first step was creating this vision text on the YUFE Postdoctoral Training & Development Scheme. It is based on brainstorm sessions with experts from the YUFE universities and the input of a focus group with postdoctoral researchers from different YUFE partners. The current next step to this initiative is to translate this vision into concrete training activities and tools that will target postdoctoral researchers within the YUFE Alliance¹.

¹ In parallel, the YUFE universities, under the lead of the University of Antwerp, are running YUFE4Postdocs, a large scale MSCA Cofunded training program for 55 postdoctoral researchers that were attracted to the YUFE universities following two competitive calls in 2023. Those “YUFE4Postdocs postdocs” will be frontrunners in the new approach towards postdoctoral training, becoming future-proof researchers whilst undertaking societal relevant research around urban challenges and opportunities in connection with societal stakeholders.

European background

Postdoctoral researchers at European universities play a crucial role in research, education, and societal outreach. In the first years after obtaining their doctorate, researchers develop autonomy, along with creative and innovative research ideas. Postdoctoral researchers are of great importance for a balanced demographic at the university. They consolidate knowledge. For junior PhD candidates, postdoctoral researchers often serve as role models and intermediaries. By taking on tasks that enrich their own CVs, they also contribute to a more balanced distribution of the overall workload, creating a win-win scenario.

To define the target group of postdoctoral researchers, we rely on the working definition as proposed by the European University Association – Council for Doctoral Education (EUA-CDE) Thematic Peer Group working in 2023 on Postdoctoral researchers at European universities:

“A postdoctoral researcher is someone holding a doctoral degree, whose primary activity is conducting research and who is in a transition phase towards a long-term career path inside or beyond academia.”¹

In addition, the postdoctoral position is considered a transitional, temporary or limited-term appointment, which serves as a period of professional training and development.

To sustain and reinforce postdoctoral positions, universities rely on a broad variety of structures and often there are no support systems that are dedicated exclusively to postdoctoral researchers: sometimes there is a link to graduate and doctoral schools, sometimes to human resources (HR) departments and sometimes dedicated structures are in place. Elements that can facilitate the support of postdoctoral researchers include training on transferable and research skills, career development, support for grant writing and financial support via internal research funding schemes.

The EUA-CDE Thematic Peer Group report¹ focuses on four important areas of institutional support for postdoctoral researchers: career development, training, funding support, and support for postdoctoral researchers with childcare responsibilities. However, between European universities there are large differences in the level of support. In this report many examples of best practices can be found.

The ‘ResearchComp², the European Competence Framework for Researchers, is a useful tool to open the discussion on necessary skills. This framework simultaneously helps researchers to assess and develop their own transversal skills, and enables higher education institutions and training providers to adapt their offer to researchers. It can also be used to help employers becoming aware of researchers’ wide sets of competences. By supporting the development of researchers’ transversal skills, this framework fosters intersectoral careers.

YUFE approach to postdoctoral training

The YUFE partners aim to identify and support postdoctoral researchers in their needs. Within YUFE, postdoctoral researchers are recognised as a distinct and crucial target group.

Society increasingly requires critical and creative thinkers, especially in the light of recent systemic changes such as advancements in artificial intelligence, political developments, and climate change. Continued investment in basic research, alongside fostering a strong academic culture, is vital for generating new knowledge and ensuring that future challenges can be approached with the depth and innovation as needed. Postdoctoral researchers are crucial members of our academic institutions and are recognized as promising intellectuals, who have demonstrated their academic excellence by earning a PhD. This achievement reflects not only their scientific ability to navigate challenges but also their capacity to develop a personal toolkit for managing unexpected events, problems, and crises. Additionally, they have refined the skill of balancing multiple commitments effectively.

Supporting postdoctoral researchers is a top priority for the YUFE partners. This support focuses on research activities, teaching skills, communication abilities, valorisation of their work, professional development and work-life balance. The YUFE partners recognize the crucial importance of assisting this target group in these key areas.

YUFE's Postdoctoral Training & Development Scheme will be largely based on a learning-by-doing approach and will support postdoctoral researchers in their research by facilitating stakeholder interactions during several phases of the research process. Within YUFE the aim is to simultaneously create a hands-on training and (career) development programme for postdoctoral researchers and support them as they engage with stakeholders and peers.

In the first months of 2024, intensive brainstorm sessions were organised with different YUFE experts on the topic of support and training needs of postdoctoral researchers. These groups of experts included individuals responsible for various roles at their YUFE universities, such as research support, doctoral schools, postdoctoral support, and Human Resources (HR). Additionally, postdoctoral researchers were consulted as well. A lot of the experts are also involved in implementing the DIOSI (Developing and Implementing hands-on training on Open Science and Open Innovation for Early Career Researchers) model³ at their universities in a pilot project on doctoral learning. The underlaying principles of the DIOSI model are indeed not only valid for doctoral researchers, but also for postdoctoral researchers. The brainstorm sessions were discussed and formalized by the team in charge of the postdoctoral training programme. It was decided to create a focus group across YUFE partners in order to determine its key elements and the range of training modules and formats that were proposed.

On June 19, 2024, a focus group was organized to gather insights from a diverse group of postdoctoral researchers. These researchers, affiliated with different YUFE universities, work across various scientific fields. The session was facilitated by three experts from YUFE

universities.

After round table type introductions of the participants, several open-ended prompt questions were asked. All participants were encouraged to give their input on these questions:

1. What kind of skill were you good at when you finished your PhD? What was missing from your toolbox?
2. What kind of personal/professional/academic aspects do you think you need to develop for success in the future of your career?
3. What kind of support do you need for your current/future success?
4. How much time do you have for this?
5. What do you expect of the training in the YUFE context?
6. How do we effectively reach your peers to get you interested, to keep you informed and so on?

In response to these questions several themes repeatedly emerged and will be discussed in detail in the following section. Additionally, suggestions regarding efficiently reaching the postdoctoral researchers were made which ranged from direct emails to using LinkedIn for advertising events. The postdoctoral researchers underlined that an initial call for participation needs to be done ideally several months in advance and that sending out multiple reminders is the best approach. They prefer online trainings and stressed that good course titles and descriptions are essential. They also expressed the need for hands-on training in which they can work on their own materials instead of learning only theoretical concepts.

YUFE Postdoctoral Training & Development Scheme

The YUFE Postdoctoral Training & Development Scheme will focus on topics that are relevant to postdoctoral researchers, based on the gathered input. It is important to offer a wide range of courses that postdoctoral researchers can choose from, allowing them to select themes that are relevant to their personal and professional development. This course offer could be supplemented with informal learning and networking opportunities to promote the benefits of being part of a European university association. Support to guide (career) development and for grant writing are also key areas which universities should invest in.

Training

Table 1 summarizes the most important training needs of postdoctoral researchers. This summary is based on insights from the Focus Group discussion with postdoctoral researchers from various YUFE universities, discussions with experts and the most popular training topics identified in the EUA-CDE Thematic Peer Group report¹.

Topic	EUA-CDE Thematic Peer Group	YUFE experts	YUFE Focus Group postdoctoral researchers
Grant writing	x	x	x
(International) career development, with focus on intercultural awareness	x	x	x
Leadership	x	x	x
Communication: scientific and public	x	x	x
Open science	x	x	
Entrepreneurship	x	x	
Project management	x		x
Research ethics & integrity		x	
Equity, diversity & inclusivity		x	
Sustainable research		x	
Interdisciplinary research collaborations		x	
Teaching and pedagogy			x
Language (English and local language)			x

Table 1 Training needs of postdoctoral researchers

The first four topics (grant writing, career management, leadership and communication) in Table 1 are highlighted as crucial to provide to postdoctoral researchers. Topics such as open science, research ethics and integrity, project management and entrepreneurship also have added value for postdoctoral researchers and early career researchers in general. Learning how to engage with stakeholders to conduct community-engaged research is a topic that can be covered both within communication training and entrepreneurial training. On top of these themes, within YUFE it is essential to offer training related to equity, diversity & inclusivity, as well as eco-responsible research in line with YUFE's key values.

The focus group also identified a need for training in teaching and language skills, including both English and the local language. While the general approaches to these topics can be taught online, it is preferred that interactive, onsite training are organized at the individual universities.

After setting up a training programme for postdoctoral researchers, it is recommended to regularly evaluate the course offer, based on evolving insights and needs, possibly also with content specific courses with a general applicability (e.g., the influence of Artificial Intelligence on research).

Part of these learning opportunities are already available to postdoctoral researchers within some universities, but in most universities, there is not yet a dedicated course offer for postdoctoral researchers. Organising trainings in a YUFE context can therefore create an added value for all postdoctoral researchers: apart from the intercultural exchange, additional

training opportunities become available on top of the local training offer. Trainings can be offered in different formats, ranging from short online workshops to intensive training programmes or informal learning sessions.

Informal learning & networking

From the focus group discussion, it was clear that postdoctoral researchers want to gain advantage from networking opportunities and prefer hands-on (online) training, where they can benefit from working on their own materials, instead of theoretical seminars. Therefore, hands-on and more informal learning approaches need to be explored besides dedicated workshops. Postdoctoral researchers could for example be involved in taking the lead in informal peer learning sessions, amongst themselves, or by organising such sessions for doctoral candidates. In this context, being part of a European university alliance, such as YUFE, is an important asset: by facilitating such informal peer learning sessions on the YUFE level, international networking opportunities will be utilized, which can increase the intercultural awareness, international research opportunities and empowerment of the postdoctoral researchers involved.

Career development support

Supporting postdoctoral researchers in their career development is essential to develop their skills and increase their employability within their current appointment and beyond.

The EUA-CDE Thematic Peer Group report¹ also stressed the importance of career-related support for postdoctoral researchers. This kind of support should therefore definitely be anchored in a training and development scheme for postdoctoral researchers. Career development support can take many different forms and ideally various stakeholders are involved. First and foremost, the guidance and support of the supervisor (PI) is essential for postdocs to be able to grow as researchers. They are an important part of the researchers' professional network and are the ideal person to act as an academic mentor in terms of showing the postdoctoral researcher how to navigate the academic world, but also in supporting them in writing and following up on their research plan. Ideally, each university has tools and/or a system in place to support the supervisors in taking up this role. Apart from the guidance of the supervisor, having another mentor can be of great added value.

Mentoring can take on different formats. As engaging with stakeholders is important, industrial partners and non-profit organisations could be involved in a mentoring programme. Having a non-academic mentor may ease the transfer from academia to industry for the postdoctoral researchers involved. A good practice to make a mentoring programme manageable, can be setting up a mentoring programme where postdoctoral researchers are in charge of finding their own mentor. This approach was used within 'Referent - A mentoring initiative for Marie Skłodowska-Curie Actions (MSCA) early career researchers', a pilot project run jointly by the leaders of the Mental Health of Researchers and the Responsible

Research Environment taskforces at the Marie Curie Alumni Association (MCAA)'s Policy Working Group (Darragh McCashin and Stéphanie Gauttier)⁴. By doing so the postdoctoral researchers can develop their leadership skills and organisational skills.

Another valuable approach is to facilitate peer mentoring among postdoctoral researchers within YUFE. This can be done by training postdoctoral researchers to become mentors, who will then guide an interdisciplinary group of peers. The group should meet at least five times during the project phase to foster a trusting atmosphere.

Tools such as personal development plan or career plan, and a research plan, can help postdoctoral researchers reach their professional and academic goals. Career orientation support can be provided both through a (YUFE-wide) course offer and career counselling at the individual universities.

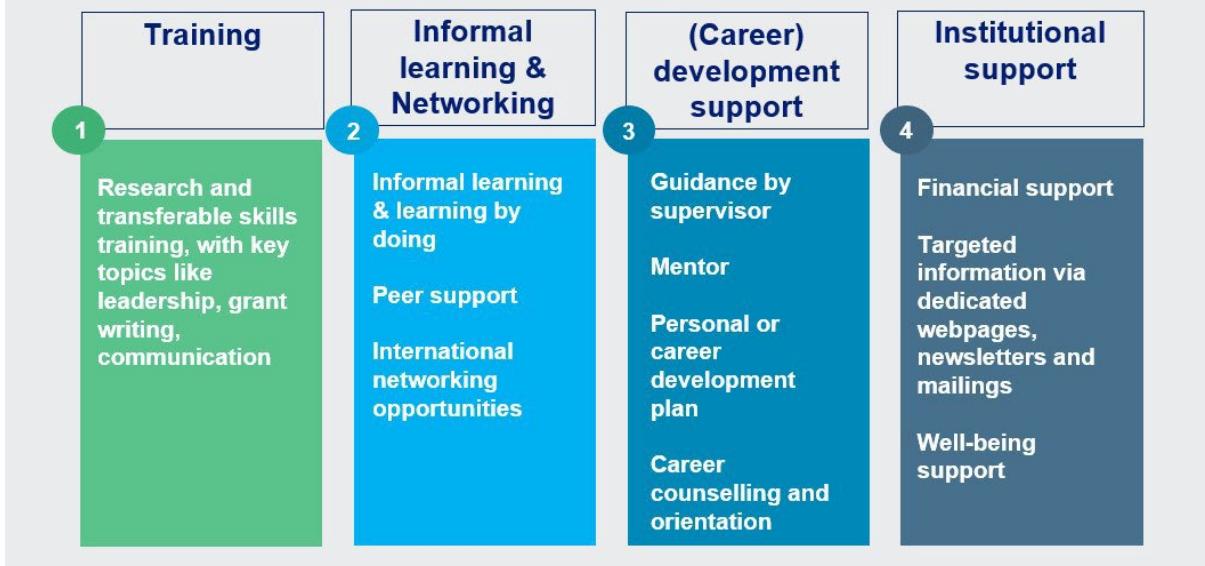
Institutional support

To facilitate the embedding of postdoctoral researchers, institutions are encouraged to provide specific services and information channels tailored to this group. This may include dedicated websites, newsletters, and email communications. The need for financial support and job security, also to be able to foster research and development opportunities was especially emphasised within the postdoctoral focus group. Given the high-pressure postdoctoral researchers often faced (due to career and financial insecurity, unstable working conditions, publication pressures and work-life imbalances)¹, the wellbeing of this group requires specific attention.

The scheme

The YUFE Postdoctoral Training and Development Scheme can be summarised as follows:

The YUFE Postdoctoral Training and Development Scheme



Next steps

In the following phase, the YUFE Postdoctoral Training and Development Scheme will be translated into concrete training activities and tools, which will be provided to postdoctoral researchers at the YUFE universities. The ten YUFE universities have committed to enabling their postdoctoral researchers to participate in a pilot project that will test and evaluate this scheme from November 2024 to December 2025. This pilot project will give us the opportunity to adapt the scheme based on the lessons learned by the universities and the experiences of the postdoctoral researchers that are part of the pilot project.

References

1. Engels, T., Hasgall, A., Peneoasu, A. & Hanenberg, P. (2024), Postdoctoral researchers at European universities: profiles, roles and institutional support structures, European University Association. <https://www.eua.eu/publications/reports/postdoctoral-researchers-at-european-universities-profiles-roles-and-institutional-support-structures>
2. Almerud, M., Ricksten, M., O'Neill, G., van der Weijden, I., Kaltenbrunner, W., Núñez, L. & De Coen, A. (2022), Knowledge ecosystems in the new ERA - Using a competence-based approach for career development in academia and beyond, EU publications. DOI: 10.2777/150763
3. Kersschot, M. (2021), The DIOSI Model for Doctoral Learning: A holistic approach, Zenodo. DOI: 10.5281/zenodo.7300114

4. McCashin, D. & Gauttier, S. (leaders of the Mental Health of Researchers and the Responsible Research Environment taskforces within the MCAA's Policy Working Group), Referent - A mentoring initiative for MSCA early career researchers, Marie Curie Alumni Association.

<https://www.mariecuriealumni.eu/referent-mentoring-initiative-msca-early-career-researchers>

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