



Gendering the Academy
and Research: combating
Career Instability and Asymmetries



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Gender-sensitive Mentoring Programme in Academia: A Design Process

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Executive summary

The first aim of this Toolkit on the Mentoring programme (MP) is to enable research institutions and universities to conceive or build a mentoring programme, or to enhance already existing programmes with useful considerations about the academic and research environment and institutional context.

Mentoring in University represents a particular case, according to Thommen and Fueger (2002). The specificities of the professional pathways of researchers/academics are not only singular in that they are often difficult to plan ahead, but also that they are exceptionally rare as careers. Moreover, the pathways are rarely uniform and linear. Numerous short-term contracts and projects are necessary before being able to if at all to a permanent nomination. In this academic and research activity, specific gender sensitive mentoring is needed, which is the main aim of this Toolkit.

This Toolkit has been developed as part of the GARCIA “Gendering the Academy and Research: combating Career Instabilities and Asymmetries” project, whereby we have built the key ideas, definitions and generalized model of gender sensitive mentoring programs upon the different institutional case-studies across six European countries (Italy, Slovenia, Switzerland, Belgium, Iceland and The Netherlands), supported by a strong bibliographic review upon mentoring, gender issues and work culture in academia. For recall, the GARCIA project is targeted on combating gender inequalities in academia and research centers, with particular regard to researchers in the early stages of their careers and with temporary positions. GARCIA project focused upon comparing two different departments, Social and Human Sciences (SSH) and Mathematics, Technical and Engineering Sciences (STEM), which presumed some significant differences in the gendered organization of research/academia.

This Toolkit on MP is one of the deliverables that should support preventive actions in order to lower the gendered gaps in academia. The main idea is that this Toolkit could enable the development of self-tailored mentoring programmes, allowing institutional authorities, administrative and academic/research actors to recognize the specificities and the different stages of “what can we do in our particular institution” and “what resources do we have”.

Indeed, a key lesson learned from the GARCIA project was that each institutional and even departmental case was very distinctive, internally diverse, work-culturally diverse, and that as a consequence the initial identification of needs is very important. So, this Toolkit would enable any research/academic unit or department to undertake the exercise or actual development of a self-tailored mentoring programme. The examples from the SSH and STEM departments can point to specificities as they may arise elsewhere.

The existence of institutional resistance towards any kind of change, which mentoring programmes are ultimately aiming for, implies the need for this programme to be collaborative. Indeed, there is a vital need for persons involved in the development and mobilizations of a mentoring programme to be in line with, if not supported by, institutional authorities, by institutional administration and by the faculty and local research centre or other unitary environment, in order to avoid being considered a

destabilizing or counter-productive change. Thus collaborative negotiation, discussion and conviction are important steps in the creation and sustaining of a mentoring programme.

Moreover, we realized through the various initiatives that were launched through the GARCIA project in our respective institutions that any kind of developmental project (such as a MP) is a progressive, slow process, which needs realizable goals and takes into account small successes rather than only mile stones. Furthermore, the evaluation of such programmes is another challenge as it requires at least as many resources as setting up or continuing the actual programme. Building a MP is in fact a 'political decision', because if there is a poor response of several stakeholders to this initiative, it might be doomed.

We would encourage the core aims of mentoring programmes to not only focus upon targeting gender inequality in the long-term sense of increasing numbers of women in science, but also of being able to create in more immediate terms, a more gender friendly, gender sensitive, and more reflexive and conscientious research/academic work environment. It is about playing on and working with the existing system, but also guiding people towards a realistic and balanced working life and career, by integrating gender sensitivity in our work units. In the framework of transformative mentoring, the idea is to aim at transforming the person on the one hand (socialization through a process of adaptation to the structural functioning of an organization) and of the organization, in view of a system that is more adapted to the rhythm of the researchers, whatever may be their gender and of a better adaptation to their articulation of private and professional life. Mentoring then intervenes as a tool for change.

In this Toolkit, we will thus present the following two parts:

- A detailed section on "what is mentoring", which distinguishes different types, functions and practices of mentoring, including a part on mentoring and gender. The different benefits and difficulties of developing a mentoring programme will be presented. This part of the work is deeply rooted in the case-studies from the Garcia project as well as in the work of Adam (2016) which realized a bibliographic work on MP, whether gendered and/or academia specific or not. This section is highly informative for those who are unfamiliar with accompanying practices and mentoring in particular. We will see that mentoring proposes multiple functions and advantages, which are directly useful from an organizational and personal point of view of mentors and mentees. The success of a mentoring relationship can depend on a host of aspects, and on a formal or informal character of the programme. We therefore deem it necessary to focus, as much as the responsibility of the mentee in their accompanying, our attention on the institutional organization of an education for mentors;
- A second section on how to build a mentoring programme, which contains a "design process for a gendered-sensitive MP" designed in 4 main steps: Mapping the needs and create a self-tailored MP, Recruitment and training of mentors and mentees, Follow-up and Evaluation of the MP;
- In the Annexes you will find some examples of self-tailored MP by the GARCIA partners.

Toolkit to create a gender-sensitive mentoring programme in Academia

Helène Adam, Caroline Vincke and Farah Dubois-Shaik

This Toolkit has been developed as part of the GARCIA “Gendering the Academy and Research: combating Career Instabilities and Asymmetries” project, whereby we have mainly built the key ideas, definitions and generalized model of mentoring programmes upon the different institutional case-studies across six European countries (Italy, Slovenia, Switzerland, Belgium, Iceland and the Netherlands).

1. Introduction

The aim of this Toolkit is to enable research institutions and universities to conceive or build a mentoring programme (MP), or to enhance already existing programmes with useful considerations about the academic and research environment and institutional context. The main idea is that this Toolkit could enable the development of a self-tailored mentoring programme, allowing institutional authorities, administrative and academic/research actors to recognize the specificities and the different stages of “what can we do in our particular institution” and “what resources do we have”. A key lesson learned from our project was that each institutional and even departmental case was very distinctive, internally diverse, work-culturally diverse, and that as a consequence the initial identification of needs is very important. Our project focused upon comparing two different departments, Social and Human Sciences (SSH) and Mathematics, Technical and Engineering Sciences (STEM), which presumed some significant differences in the gendered organization of research/academia. However, this Toolkit would enable any research/academic unit or department to undertake the exercise or actual development of a self-tailored mentoring programme. The examples from the two departments can point to specificities as they may arise elsewhere.

Another significant realization is that of the existence of institutional resistance towards any kind of change, which mentoring programmes are ultimately aiming for, and of the need for this programme to be collaborative. There is a vital need for persons involved in the development and mobilizations of a mentoring programme to be in line with, if not supported by, institutional authorities, by institutional administration and by the faculty and local research center or other unitary environment, in order to avoid being considered a destabilizing or counter-productive change. Thus collaborative negotiation, discussion and conviction are important steps in the creation and sustaining of a mentoring programme. Moreover, we realize through the various initiatives that were launched through our own project in our respective institutions that any kind of developmental project (such as a mentoring programme) is a progressive, slow process, which needs realizable goals and takes into account small successes rather than only mile stones.

Furthermore, the evaluation of such programmes is another challenge as it requires at least as many resources as setting up or continuing the actual programme. Building a mentoring programme is in fact a 'political decision', because if there is a poor response of several stakeholders to this initiative, it might be doomed.

We would encourage the core aims of mentoring programmes to not only focus upon targeting gender inequality in the long-term sense of increasing numbers of women in science, but also of being able to create in more immediate terms, a more gender friendly, gender sensitive, and more reflexive and conscientious research/academic work environment. It is about playing on and working with the existing system, but also guiding people towards a realistic and balanced working life and career, by integrating gender sensitivity in our work units.

In this Toolkit, we will thus present the following two parts; a detailed section on "what is mentoring", which distinguishes different types, functions and practices of mentoring, including a part on mentoring and gender; a second section on how to build a mentoring programme, which contains a "design process for a gendered-sensitive MP".

2. What is Mentoring?

A. Types of accompanying practices

Mentoring is one particular type of accompanying practices, amidst numerous others, such as coaching, tutoring, counseling and sponsoring. In this Toolkit, the various characteristics of these different types of practices are essentially based on the work by Houde (2010), Paul (2004) and St-Jean (2011), but also on the examples of mentoring practices derived from the different case-study institutional practices of the Garcia project¹.

a. Coaching

Coaching is defined a type of cognitive-comportmentalist practice, which aims at being efficient on a short-term basis. In this type of accompanying, the objectives to be reached are clearly defined. The competences are specific and identified in a precise manner. The accent is put upon the know-how in a process focusing on performance. Whereas the major aspect is learning, the coach, sometimes taken as a model, can be an immediate hierarchically superior colleague, such as a boss. Often mentoring and coaching can be rightly confused. However Paul (2004) opposes the two practices, while emphasizing that mentoring is about searching a sense-making and learning-to-be process, whereas in coaching the emphasis is upon the acquisition of techniques. Houde (2010) and Persson an Ivanaj (2009) consider coaching as a part of mentoring processes. This is also reflected in the model proposed by Kram (1985) and by St-Jean (2011). The temporality is also different in the two cases of accompanying. In the case of coaching we are looking at a short-term process aiming at a precise objective whereas mentoring is a long-term practice.

¹ EU FP7 Gendering the Acadademy and Research : combating Career Instabilities and Assymetries : www.garciaproject.eu

b. Tutoring

Tutoring is an accompanying practice that is more technically orientated towards professional knowledge and types of know-how. It is inscribed in a perspective of transmission (of know-how) and of socialization. It is principally applied in the integration of young workers.

c. Counselling

Counselling on the other hand is defined as an accompanying practice that is aimed at orientation, at assistance for information, in short in form of advice. The social and psychological axes are emphasized.

d. Sponsoring

Sponsoring is about having a sponsor, who would permit you to be introduced into a defined circle, such a company for instance.

e. Mentoring

« 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 », (Houde, 2010).

The practice of accompanying developed in this Toolkit is intended to adopt a holistic approach in terms of guidance of a person less experienced by more experienced person(s).

Historically, mentoring is inscribed in a professional context. Although there exist a host of definitions of mentoring in the scientific literature, Cuerrier 's (2004) version seemed to us to offer a more complete definition : « 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 ».

Mentoring is therefore not only defined as per the perspective or angle of the mentor or the mentee or of their mutual relationship, but rather as a triangulation between these three poles, which each have their own characteristics. The mentoring relationship can be pivotal for the success of mentoring as underline Blake-Beard et al. (cited in Ragins and Kram, 2007). Haggard et al. (2011) insisted with the reciprocal relationship, which brings advantages for the mentee and for the mentor and which develops in a long-term process. Moreover, it is essential that the two protagonists engage in a dynamic manner and develop a link of trust (Kram, 1985). In the Icelandic report on mentoring in the GARCIA project, we find the following convincing definition by Gehrke (1988): The mentoring process should be seen as a gift-exchange phenomenon; a relationship that "captures the giving and receiving, the awakening and labour of gratitude".

B. Actors involved in mentoring and their responsibilities

a. Mentee

The mentee is a young or inexperienced person. This person is desirous of attaining professional objectives and of acquiring competences.

b. Mentor

The mentor is an experienced person, who, on voluntary basis, will accompany the mentee with the objective of permitting her/him of attaining their objectives via a host of actions. The mentor exercises different functions in the mentoring relationship, which have been studied. It is important to recognize that this role is different, even if some parts are complementary, to the one of research guidance/supervision. Often, supervisors have some resistance to any kind of training for mentoring, because they believe their scientific records suffice for assuming this role. An important set of results were obtained through the GARCIA project across six country research institutions on how female early researchers suffer significant drawbacks in their supervision during PhD or postdoctoral phases; they stated that they did not receive enough support in terms of institutional knowledge, networking or guidance in the career. Moreover, they felt that work/life interference and maternity issues was not something that they could ever discuss with supervisors. They felt that this made a significant impact upon their chances in the field and in the given institution to gain access to permanent positions. Supervisors thus enact the role of gatekeepers (van den Brink and Benschop, 2012; Dubois-Shaik and Fusulier, 2015), which are frequently male dominated roles that allow easier access to male early researchers. In line with these results, mentoring also can be addressed to supervisors as a distinctive training for supervision, but with the larger vision of mentoring. Mentoring programmes however need to enlarge the target group to include not only PhD or postdoctoral supervisors (see later), but also other researchers or academics within a given unit, aiming toward the fruitful participation and collaboration of early researchers in these units, and of a collective guidance and assistance in careers and in scientific/academic work.

c. Organizational context and other actors involved in the process of mentoring

The development of a formal (definition p.21) mentoring programme implies the contribution and collaboration of different types of actors (coordinators, education, HR...). Their roles and functions in this type of programme, the influence of their work on its success and on the level of the organization have not yet been studied in depth, despite the importance of such integration in future studies on mentoring programmes (McCauley and Guthrie, 2007). O'Neill (2005) distinguishes between two types of organizational contexts:

- The cooperative type of organization that is essentially orientated towards constructive relationships through cohesion, friendship, sharing, and openness and foremost orientated towards the satisfaction of the group;
- The competitive type of context favours the recompense of the most performative members.

O'Neill states that mentoring is more easily developed in a cooperative type of organizational context, which promotes work practices and functioning logics, which are compatible with mentoring functions. However, we can perhaps think of a third type, which can mobilize both collaborative and competitive poles in a programme that is integrated in a work environment such as the academia. Ragins and Kram (2007) pointed out that it is important to have an action research before integrating developmental programmes within an organization. A case-study analysis about the work culture,

organizational culture, needs of early researchers as well as academics/senior staff members and the organizational structures of careers, such as was undertaken for the six GARCIA institutions is a very useful and necessary first step in developing a mentoring programme.

d. Responsibilities of the mentoring relationship

Based on various researches on the practice of mentoring as a process of accompanying of a novice, we can question ourselves about the responsibilities of different actors. Intuitively, we can think that the main responsibility lies with the mentors. However, things are not that simple. Mentoring is not uniquely depending on the protagonists themselves, but also on the organizational context in which the mentoring relationship is exercised. It seems thus essential to attract the attention on developing a programme of mentoring that is adapted to this context if we want to optimize success.

A part of the responsibility has to be attributed directly to the organization itself. The mentor has part of the responsibility, which Duchesne (2010) specifies requires a certain amount of leadership, a certain amount of holding back in order to autotomizing the mentee, a capacity to guide the mentee, to listen, to assist, of sharing experience, of constructive criticism etc. A precious quality is the access given to mentors.

Finally, there is also a responsibility of the mentee. In other words, although the focus upon mentors is given in terms of the success of mentoring, the mentees are not quite devoid of responsibility in this relationship. Duchesne (2010) elaborates that mentees are co-responsible in the sense that they need to demonstrate a capacity to communicate, to have efficient reflexions, Mentees should be able to define their personal projects and be willing to divulge in the relationship. In a complementary manner, Martin and Rippon (2003, cited by Duchesne, 2010) considered that mentees have to show the capacity to reconsider criticism, to recognize their own difficulties, to accept help and finally to be able to have a self-reflexive and critical view on their own practice.

C. Functions of the mentor

Most of the research bearing upon the functions of mentors is based upon Kram (1985), Noé (1988) and Allen et al. (2004). St-Jean (2011) also undertook research about entrepreneurial mentoring, which proposes a model with nine key functions of mentors : 1) Psychological functions : Reflecting (mirroring project, projecting in future etc.), reassuring (throughout difficult and stressful periods), motivating (encouraging), confiding (being able to share doubts, projects, plans) ; 2) Career-related Functions : Integration (in the immediate and networking environment), informational assistance (rules of the game, institutional know-how, where to obtain information and assistance), confrontation (positive critique towards research developed, provoking and examining ideas together, developing research further), guidance (problem-solving) ; 3) Role model: Being a model for research, networking and attitude and skills of career.

In addition, despite the general utility and transferability of these functions by St. Jean (2011), which is based on the entrepreneurial environment, for the academic environment, we propose different visions of the functions of mentors proposed by some of the different case-study Garcia institutions. These definitions or examples are derived from an analysis of qualitative interviews held with young researchers and academics in a SSH and STEM department in each institutional context.

Concerning the role model in Academia in the **University of Iceland**, “The mentoring relationship should be built on the needs of the mentee and should be aimed at allowing the mentee to stand on their own two feet. The mentor should introduce the mentee to the basic structure of the university and the new job. Between mentor and mentee should be a relationship of trust, understanding and respect. A mentor was described as a solid person “with something to give”; a senior member of staff with a good reputation, natural mentoring abilities and with the university’s best interests in mind. (...) Friendly professional relationship built on the exchange of experience and information or even just a relationship built on respect and admiration”.

Their interviewees’ descriptions of role models in academia were characterized via six different categories.

1) **Seniority**. People who were described as respected and in positions to offer others their advice were, unsurprisingly, also those who had been at a particular institution the longest;

2) **Gender**. In almost all instances when a person was asked to describe a role model, a person they look up to in their department or who they would go to for advice this person was most often male (unless the department in question was made up almost exclusively of women);

3) **Alliance**. As was evidenced on a few occasions during interviews, having an alliance with a senior staff member can positively impact your career trajectory. Moreover, the concept of the “professor ally” to women in STEM fields was mentioned during an interview;

4) **Female role model**. The importance of having a female role model (especially in STEM) was mentioned on several occasions;

5) **Honesty**. For example, one newly hired female professor in SSH said that good people to go to for advice are “not the kind of people who’ll try to make you feel nice about it, they’ll just tell you straight out ‘I don’t like what you wrote’ and that’s good.”;

6) **Presence**. Unsurprisingly, it would seem that the more time one’s role model spends at work and spends talking to the people (mentees) around them, the more they are likely to be respected and admired.”

The interviews from **Radboud University (The Netherlands)** elicited some common categories of areas of potential benefit from a mentor: a) core academic tasks; b) networking; c) career perspectives; d) others.

1) **Core academic tasks** included ‘socialization in the discipline’, activities with and by the mentor(s) that directly affected the academic performance of the interviewees: debating ideas for research; learning as a PhD candidate to manage daily activities and getting organized; learning as a PhD candidate to write and think academically; getting involved as a reviewer through a mentor; collaborating on events, books, special issues, workshops instigated by a mentor; help, stimulation and advice in pursuing own research by providing help for grant and fellowship applications (giving feedback on texts, preparing for interviews); advice regarding teaching was also mentioned;

2) **Networking** was considered a second area of benefit. This included the mentors helping the interviewees gaining or maintaining visibility by being a role model for and providing help with building academic networks, such as on joint visits to conferences, joint publications, introduction to new contacts, and providing the opportunity to go to conferences. Being a role model concerning the building of collaborations with others is also part of this category. One female postdoc stated that her departmental mentor had been helpful in building an international network, yet she felt the mentor had lacked to help her build the internal network within the institute she needed to become more involved in the organization and understand the local cultural practices. Other movers and current employees made similar remarks regarding the lack of embeddedness in the respective research institutes;

3) **Career perspectives** were an important category of tasks (to be) conducted by mentors. For some interviewees mentors were a role model concerning the choices they had made for their careers and the activities they performed to develop their careers. Interviewees felt a mentor is a person whom one can go to for advice concerning career strategies and choices and future perspectives: “to provide knowledge on how academia works, how trade-offs are sometimes necessary for developing an academic career” (STEM interviewee who had moved to another research institution, female). Others mentioned advice on how to develop a vision as researcher; conversations on one’s position in the organization; and advice for and help with applying for a new position. One STEM current employee (m) specifically saw a mentor as a person in a power position who would be able to help him get a new position;

4) **Other activities** mentioned by interviewees that mentors would preferably engage in were providing a sympathetic ear; being open for “human chats”; providing inspiration and encouragement; and providing moral support for all the rejection letters. Few mentioned how their mentors were a role model concerning how to connect science and practice. For most interviewees, mentoring within academia was more central.

In the **Swiss context of the University of Lausanne**, the following two different types of mentors were seen to be crucial, and a number of examples of when mentors matter the most are given:

1) **Mentors who directly support the mentees’ career progression** (within or outside academia). This kind of mentor is supportive by providing relevant information on the availability of (usually academic) positions. Mentors play a role in circulating information about job vacancies and in motivating their mentees to apply for positions within their department/institution or in other universities. In certain cases, they may even have an influence on the creation of new positions for which the mentee would be a suitable candidate. This does not necessarily mean that the mentee is dispensed from following the formal application and recruitment procedures, but the creation of a position with the profile of the mentee in mind generally gives them a “competitive edge” over other candidates. This kind of mentor can also be helpful in adapting working conditions to suit the parallel commitments of the interviewees (e.g. combining a part-time postdoc with a second job at another institution; having cover arranged during maternity leave, so that the research project continues to advance, etc.). This kind of material support is particularly important when no such provision is made within the institution;

2) **Mentors who motivate the interviewees to be independent and autonomous.** The interviewees seem to appreciate relationships where the mentor's role leads to more intellectual autonomy, rather than institutional dependency. This kind of mentor shows respect for the research of the mentee and helps the mentee to define his/her own academic identity as a basis for his/her future academic career;

3) **When mentors matter most.** Mentors are usually mentioned in direct relation to **employment opportunities.**

- For postdocs and tenure track senior lecturers (maître assistants), mentors are seen as particularly important for helping them to increase the quality of an academic CV (e.g. by encouraging the mentee to publish in high-quality journals) and also for "filling the gaps" in the mentee's previous work experience (e.g. offering opportunities to gain teaching experience);

- Support for work-life balance and minimal demands over and above the formal job description are seen as fundamentally important at all stages of the mentees' academic career path;

- For postdocs and tenure track senior lecturers (maître assistants), the "political clout" of mentors within the department/Faculty, or in broader institutional settings, is seen as particularly important for the creation of stable positions that are in line with their field of study/qualifications/experience;

- Finally, being supported by a mentor with a prestigious academic reputation is generally seen as a considerable advantage for the career prospects of the interviewees (within, but also sometimes outside academia).

In the **Slovenian interviews form ZRC SAZU**, the interviewees refer to their PhD supervisors as career mentors. The interviewees from both test institutions believed that mentors were very important at the beginning of their PhD studies, as well as after the completion of their doctoral education. They ascribed a key role to their PhD mentors, who should carefully plan their trajectories also after their education. Characteristics of a good mentor were: trust towards their mentees; the mentees enjoy a high degree of autonomy, but under their mentors' constant and step-by-step leadership of the entire process of the socialisation into the academic work: from the creation of a research plan, definition of methods and approaches, common writing of project proposals and scientific articles, obtaining experiences from abroad with mentors' assistance and using their scientific networks, establishment of start-up firms (only in the STEM case), not perceiving teaching as an overburden, but an excellent experience and a proof of their mentors' trust, to generational solidarity and peer mentorship. Collocutors stressed open, regular and mutual exchange of their (mentors-mentees) ideas. A new term was coined among some collocutors – 'a fair mentor', who explains to their candidate at the very beginning that the completion of a thesis does not automatically lead to the employment in the academic environment, but rather to a 'likely unemployment'.

"Bad mentorship" was described in a similar way in both test institutions, irrespective of gender. These mentees were 'left to themselves' during their PhD studies, and were not adequately equipped and socialised in the academic environment to continue with research or teaching after their PhD studies. They identified several reasons for such poor mentoring, from inexperience, youth and the lack of skills of their mentors, who were

overloaded with teaching activities at the expense of research and overburdened with their own career trajectories. Being 'thrown in to the deep end', the mentees experienced fear, anxiety, uncertainty and trauma.

The following topics were commonly discussed: the role of mentors in the socialisation of young researcher in academic environments (in/formal tasks, commitments, an introduction to the work at a research or university organisation, useful connections, career assistance during and after PhD, the culture of organisation, gender issues, etc.); responsiveness of mentors; leading the mentees through all the steps in the process of doctoral education; the authorship of common results; personal characteristics of the mentors/mentees; education of mentors and mentees about mentoring; the introduction of the mentoring programme; other.

D. The different forms of mentoring

The classic form of mentoring is traditionally a one-to-one relationship, face to face between a mentor and a mentee. However, during these last years, the mentoring has lost its original character. Other forms of mentoring have seen the light of day and have started interesting the research community (for a comprehensive overview of the different forms, their advantages and disadvantages, see Table 1). We give below some more details on 3 types of mentoring:

- **Peer-mentoring:** This is a form of mentoring (generally organized in a group) where mentors and mentees, having equal amount of experiences, support each other and share their experiences. This form of mentoring is seen as favourable to create friendly relationships and trust, as there is not an authority and no persons that have more experiences than others. Peer mentoring allows the establishment to create a professional network between peers. A particular attention is given to not having a hierarchical bias, and of a potential competition that can develop between peers (Paul, 2009);

- **Cross-mentoring:** This form of mentoring has the objective of enlarging the number/platform of mentees and mentors by targeting a larger mentoring community. Practically, it is about using the different entities of the same organization by crossing mentors and mentees so people can benefit of more competences and a more diverse knowledge. The external cross-mentoring (between different units or even different institutions) has the additional particularity of being able to make people of the same or different disciplines to work together, in a greater network and of eliminating the bias of hierarchy, while simultaneously enabling an enlarging of the network of relations and of knowledge. Also, this form of mentoring seems to us to be particularly adapted to the university world and the specificities of a mixed programme that can also link multiple and very different research institutes;

-**E-mentoring:** This is a particular form of mentoring where the mentor/mentee relationship happens online via a web platform. This particular form of mentoring presents certain advantages for persons who are more reserved, gives a larger flexibility to the availability of mentors and mentees and also can suppress the geographical bias. However, often this is not the only tool of a mentoring programme. But the use of a complementary e-mentoring tool within a larger mentoring programme has seen to have important benefits (Ensher and Murphy cited by Ragins and Kram, 2007).

Type of Mentoring	Characteristics	Advantages	Disadvantages
Face-to-Face	Dyads with mentor (experienced in the position) and mentee (inexperienced)	Relational aspect favoured. A better knowledge of the issues.	If persons are not well matched, the relationship does not work.
Peer-Mentoring	Dyads are composed of peers.	Enlargement of the network, no hierarchical bias.	Can engender competition feeling. No role modelling.
Cross-mentoring	The members of the dyad belong to different categories (gender, ethnicity...) or evolve in different units of the organization.	Interdisciplinary exchange. Favours connectivity. Enlargement of the network.	Not always a good knowledge about the evolution of the particular domain/field.
Reverse-mentoring	An inexperienced person shares their knowledge with an experienced person.	More experienced workers acquire up-to-date knowledge. Valorisation of inexperienced workers' current knowledge/competences.	Not always well received by senior members.
Lateral-mentoring	The persons composing the dyad have the same status.	No hierarchical bias, using feedback as tool of evolution. More sharing. Feeling of « community ».	Risks of no enlargement of the network and/or the development of competences.
Group-mentoring	One or two mentors animate meetings with multiple mentees	Mobilisation of a single mentor for multiple mentees. Allows an enlargement of the network for the peers.	The relational aspect is not central. Introverts might not participate.
E-mentoring	The dyad is formed by people who are communicating via internet.	The ease of contact. Allows contact without actual physical presence. Introverts may appreciate.	Sometimes perceived as not personal enough.

Table 1. Types of mentoring (Adam, 2016 from Paul, 2009; Ensher and Murphy in Raggins and Kram, 2007)

Another significant element in the establishment of mentoring relationships is elaborated by Steele et al. (2014). Often, in mentoring programmes, this is a voluntary relationship initiated by the mentee, which may be problematic because often it is also a lack of self-confidence and lack of sufficient connections that makes a young researcher unsure of sustaining important mentor-mentee relationships or networking. In our project, we found that early-stage women researchers are often lacking self-confidence in the first place, and have trouble establishing connections with peers or with potential mentors.

We would additionally propose that a milieu or environment needs to be created or sustained institutionally and in scientific practice that favour mentoring relationships, not only between PhD supervisors and doctorates or postdocs, but rather also between other more senior and junior faculty members (in more stable positions) and young researchers in both precarious and also newly tenured positions or situations. Moreover, we feel that expecting from a single mentor or supervisor to fulfil support towards scientific technical and administrative advice, and scientific moral support, and strategic scientific advice is a tall order for any one human being. Instead, as DeCastro et al. (2013) propose, mentor networks (such as peer or group mentoring) and the need to cultivate more than one mentor may be important. However, we want to stress the fact that in conceiving mentoring programmes we need to take into account not only a need-orientated approach from the mentee's point of view, but also an approach that is realistic and encouraging from the mentor's point of view; therefore, we are interested in sustaining mentoring practices in research centres, to be integrated as both a structurally existing as well as an invisible scientific practice. Moreover, mentoring can also include a form of structured or semi-structured information and exchange; workshops, sessions, seminars, discussion groups, forums etc.

According to the national, institutional, funding type, contract type and personality types contexts, mentoring can translate into various needs, functions or spheres. It is often difficult for young researchers to navigate in these multiple spaces. There can therefore be a plurality of models that meet with young researchers' (in terms of experience) needs. The transversal idea that we would suggest is of mentoring to be seen as the creation for young researchers of a "map of orientation" by mentors (individual persons, groups, networks, centres, institution) that opens up different pathways and possibilities for mentees to be able to orientate themselves, according to their competences and capabilities.

The University of Lausanne, in its report on mentoring based on the GARCIA project, proposes "The NCFDD Mentoring Map" (Figure 1), which shows there are multiple mentoring relations and one single mentor will never respond to all the needs of a mentee, but he/she can give his/her advice on where to find answers to her questions/problems. They should be mentored in such a way that confidence-building becomes possible; that individual and different competences and preferences are recognized and valued; that information are given about the local codes, cultures and the nature of the work; in order for the person to be facing consciously informed possibilities or options, which can have plural forms.

We propose that mentoring programmes should therefore also include two elementary steps:

- a) A **de-mystification about the “rules of the game”** in terms of scientific/academic careers; mentors should provide a de-coding of international and local codes and myths of scientific/academic careers and work;
- b) A **clarification about real possibilities**, difficulties and increasing a plurality of options, taking into account the person of the mentee (competences, personality, capabilities, and preferences).

Figure 1. NCFDD Mentoring Map (www.Faculty.Diversity.org)



Keeping these different forms of mentoring in mind, we include in this Toolkit two long-established examples and four more recently introduced forms of mentoring practices from six different European research institutions (Annex 1).

Mentoring in University represents a particular case, according to Thommen and Fueger (2002). The specificities of the professional pathways of researchers/academics are not only singular in that they are often difficult to plan ahead, but also that they are exceptionally rare as careers. Moreover, the pathways are rarely uniform and linear. Numerous short-term contracts and projects are necessary before being able to if at all to a permanent nomination. In this academic and research activity, mentoring would match one or multiple experienced persons of the university world to another, who wishes to enter or adhere to this world. As in other sectors, mentoring is foremost based on a relationship of trust, and more is done in an informal manner, without a direct promotion in sight. In Anglo-Saxon countries, mentoring is integrated since several years in universities as an accompanying tool. In Switzerland and Netherlands, programmes of

mentoring have been integrated since 15 years, with a relatively high success in terms of accompanying women towards obtaining a permanent position (see later for specific mentoring programme types).

Whereas the mentoring process is essentially based on the adaptation of workers to an organization, we find a lack of research on transformative mentoring. However, we feel that transformative learning as per Mezirow (1997), based on the evolution of beliefs, of attitudes and of emotional reactions via a reflexive view on learning aspects, may be a good approach for creating a gender-sensitive mentoring programme. In the framework of transformative mentoring as we imagine it, the idea is to aim at transforming the person on the one hand (socialization through a process of adaptation to the structural functioning of an organization) and of the organization, in view of a system that is more adapted to the rhythm of the researchers, whatever may be their gender and of a better adaptation to their articulation of private and professional life. Mentoring then intervenes as a tool for change.

E. Mentoring and Gender

Since several years, numerous mentoring programmes have been developed in enterprises, which focus on leadership for women (such as in GDF, Suez, HP) ; a lot of this trend has also been transferred to Academia and research, especially as we are looking at counteracting phenomena elicited by the university's functioning methods that produce the sort of gender inequalities described in the expressions "glass ceiling" (redefined as "iron ceiling" – Fassa and Kradolfer, 2010) and "leaky pipeline" (e.g. Alper, 1993; Meulders et al., 2012; EC, 2013; Dubois-Shaik and Fusulier, 2015). The specific causes of these inequalities are less rooted in direct and explicit discrimination (notably in recruiting; Musselin and Pigeyre, 2008), as in the dynamics of a gendered organization (Acker, 1990; see GARCIA reports www.garciaproject.eu). Thus, attention has been drawn in higher education and universities towards women since roughly fifteen years in Europe (Switzerland, Netherlands, Great-Britain, Austria, France...). However, the principal objective so far in gender equality programmes has been to gain greater access to the highest positions of the organization, where large disparities have been observed between the sexes. The actions have been orientated largely towards enlarging the professional network and/or the integration of women in this network. The analysis of the results of various research studying these programmes have shown positive effects upon the access to high positions, however with some limits pointed out by Mc Keen and Bujaki (2007) :

- The mentors behave differently towards men (more instrumental orientation of the mentoring) and women (more developmental orientation);
- The objectives and aims of mentors in the mentoring relationship are different according to actions destined to a woman (adaptation to the system) or to a man (promotion and enlarging of networks).

These results do however have a tendency to show positive effects of mentoring by focusing on how women have successfully adapted to a masculine dominated environment, rather than a general inclusion of women in various academic levels of positions. To this we would add through our own research developed in our project that there are some host of other problematic issues drawn from interviews analysis throughout the six European country case-studies (Switzerland, Italy, Netherlands,

Belgium, Iceland, Slovenia) that are rarely evoked or addressed in previous mentoring programmes:

1. Across all country samples, **negative gatekeeping** by supervisors was observed, which came across as experiences of the power of « magnates » or male “professor allies”. There is a kind of filtering or selecting of doctoral researchers/postdoctoral researchers through centre/faculty members and heads and even supervisors. Having the chance of important allies on the institutional level (often experienced as male-dominated, as in male allies tend to be more powerful) is not something given easily to female researchers. There is not enough transparency or information or guidance provided as to actual opportunities, or non-opportunities, and recruitment, in both STEM and SSH departments (somewhat more in SSH for some countries);

2. The difference between female and male mentors is not particularly noticeable or not expressed to be particular, except in the **reception of/speaking about or support in maternity and family support-related issues**. These are generally issues that are taboo or avoided mentioning, which however play an important role in the everyday life of female (and male) researchers and have a high level of interference upon research and careers (Fusulier and Del Rio Carral, 2012; see also Barbier and Fusulier, 2016; Dubois-Shaik and Fusulier, 2015). Female interviewees express lack of female role models, especially in STEM. Mentoring and work/life balance policies are interconnected: expressed by several country interviewees that often mentoring programmes do not take into account the consideration of work/life balance; and that work/life balance policies are often lacking when mentoring programmes are not available or not efficient;

3. Some interviewees from both SSH and STEM departments mentioned senior colleague(s) at the Institute or outside the Institute coming across as informal supervisors in their postdoctoral phase, or frequently they relied on their ‘**international contacts**’, **counterbalancing the deficit of local or institutional support** by international networks and former colleagues from mobility postdocs or trips. There was some help in building an international network, yet a lack of internal network within the institute, which interviewees needed to become more involved in the organization and understand the local cultural practices;

4. ‘**To work alone**’ was understood as a value or nature of research/academic work, or welcome characteristic of male researchers' mentors, who allowed them or support them to be autonomous and independent. However, the down side of this often solitary work was described as isolation, needing to struggle alone and fend for yourself, with little or no help or assistance, especially in the case of female non-stabilized researchers (PhDs, postdocs, research assistants). Often female researchers’ spoke more frequently about requiring more collaboration, requiring guidance, which was often lacking, and working alone, was **experienced as isolating**. Some male researchers described permanent stimulation for studying/doing research abroad and involvement in the scientific international networks as a distinctive excellent feature of their mentors. They both praised their domestic and foreign mentors' work with them at every step of their academic career; their mentors were always available for discussions, although not always regularly; and they correctly directed them on their research trajectories. This was a clear difference with most female researchers’ experiences, excepting some mentors encountered abroad in international networks. These interviewees also stressed the more personal relationship of foreign mentors compared to domestic ones. Finally, some interviewees mentioned writing of co-authored articles as an important endeavour of

their mentors in introducing them into the research (see Belgium, Slovenia, Netherlands, Italy, reports www.garciaproject.eu for more details);

5. There is a **difference in experience with mentors between the PhD stage and later stages of an academic career**. During the PhD, interviewees looked to their supervisors for guidance in academic writing and thinking, networking, and general “socialization in the discipline”. Being postdocs or assistant professors, interviewees often expressed a sense of “own responsibility”, i.e. they felt they were required and expected to work individually and to get ahead independently, without much external help such as from a mentor: “you’re supposed to be your own master to a certain extent” (male example from Radboud University); more male than females expressed this. There is a change noted by interviewees in former PhD supervisors becoming colleagues during postdoc: some difference between male and females, male expressed that they had become “equal”, whereas some female interviewees (especially in STEM) express that they still feel like “extended PhDs” or in need of supervision/guidance (see examples from Belgium, Netherlands, Slovenia in Garcia reports);

6. Although there are differences in number of women in different departments, young researchers’ and women’s’ experience are very similar, because the problems and issues experienced lie in the **working culture**; there is thus a need to see the particularities of each department but also to recognize similarities between and across departments, work culture and the structural organization of integration of young researchers, in taking into account the gender differences that may arise (see criteria’s of excellence, Herschberg et al., 2015). There are differences in STEM and SSH departments/institutes: STEM is usually experienced by interviewees as more transparent in terms of « rules of the game », and the supervision was generally experienced as positive by both male and female interviewees during their doctoral and postdoctoral phase, save the differences noted in female and male and some negative gatekeeping experiences (Belgium, Switzerland, Slovenia) and male “professor allies” (Iceland), which could point in some cases to old boys clubs. In some countries, the SSH departments are perceived by interviewees as much less prone to cooperation or collaboration amongst colleagues. The « left alone » sensation was more pronounced, especially by female interviewees in SSH departments. Research was experienced as much more solitary and not collective and movers express frustration, both male and female. Institutional integration seemed more lacking in SSH (Belgium, Italy, Slovenia).

F. Training of mentors

Now that we identified the different functions of mentors, we want to dedicate this section to the training of mentors, with the perspective of implementing a mentoring programme. St-Jean and Mitrano-Meda (2013) showed how more than the actual experience of the mentor in the professional domain, it is the particular training that they receive that presents a crucial factor in the success in entrepreneurial mentoring programmes. Training, according to St-Jean and Mitrano-Meda (2013), permits not only to put an ethical and relational framework, but also to develop mentors’ own relational competences, their capacity to listen, their empathy and the use of questioning practices.

However, the content of such mentors’ training is rarely made public. A kind of confidentiality seems to exist about the content of training programmes, which are depending upon the internal objectives of organizations in terms of socialization.

However, the analysis of different programmes, which have been developed and initiated in the GARCIA project, for example in the Swiss case in University of Lausanne, enlists certain themes, which are recurrently chosen in the framework of the training of mentors: on the one hand, the problems linked directly to the functioning of the organization and on the other hand, the developmental competences, such as learning to communicate more efficiently, to increase your self-confidence.

This brings us to focus on the continuum of mentoring proposed by de Vries (2011) (Table 2), which seems relevant in the comprehension of the posture of accompanying of mentors. This continuum distinguishes on the one hand the « instrumental » type of competences and on the other hand the « developmental » type of competences.

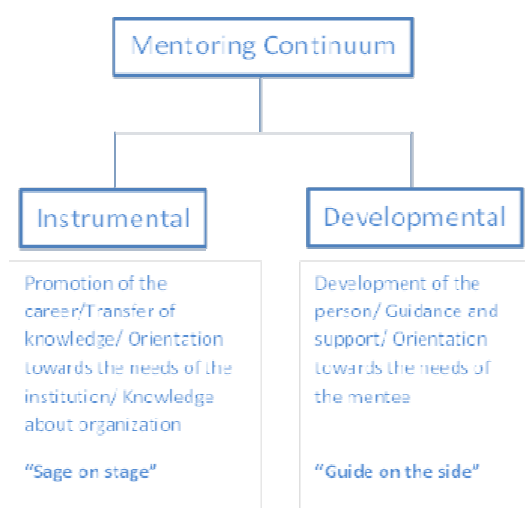


Table 2. The mentoring *continuum* (de Vries, 2011)

G. Formal or informal mentoring?

Mentoring is considered as formal when it is the fruit of an organizational intervention and informal, when there is no organizational intervention. The two types of processes, informal and formal can present advantages and disadvantages. We can point out some major differences shown in Table 3 below, which is based on three major steps in the mentoring process defined by Kram (1985).

Various researches on mentoring have tended to show that the efficiency of this practice is superior in an informal process. We feel that it is interesting to think of a way in countering this bias in the relationship, in the case of a formal mentoring, to aim for the highest potential of the relationship. Ivanaj and Persson (2010) use the allegory of the gardener (mentor), which works on the field and it is not the sprouts that can watch out for the optimal conditions of the situation (organization), which permit the sprouts to grow. This image can nourish more managerial conceptions, whether it is in enterprise or in higher education to make a plea for formal mentoring, which can be more efficient by basing it upon a process, which takes into consideration the organizational context.

	Formal Mentoring	Informal Mentoring
Principle characteristics	Developed, organized and evaluated by the organization.	No intervention by the organization.
Initialisation of the relationship	Determined by the organization and the matching is organized.	Naturally.
Regulation of the relationship	The organization defines the frequency, the form of encounter, the objectives, the training...	There are neither definite rules nor established structures.
Other aspects of the relationship	The organization may influence the motivation of the actors. A matching that is too framed is not helpful to the relationship. The mentoring competences are not guaranteed in all the mentors.	

Table 3. Main characteristics between formal and informal mentoring (in Adam, 2016, from Kram, 1985)

Baugh and Fagenson (2007) highlighted that the advantages of the mentorship relationship are often equal or inferior in formal than informal mentoring. For these authors, in the case of formal mentoring you can observe more regular and frequent contacts whereas in informal mentoring cases there is a larger accent upon the higher quality of the relationship, notably through a better matching. A particular attention has to be given to the creation of mentor-mentee dyads in the case of a formal mentoring programme. Finally, we remain with a relative uncertainty in terms of the benefits of informal and formal mentoring, but formal mentoring is more supportive of a long term MP.

H. Expected benefits of mentoring

Three efficient domains of mentoring for the protagonists in organizations have been defined by Hezlett and Gibson (2005): learning for growing, the development for the career and the development for the organization.

a. Learning for growing

Different studies have shown that the principle benefit of an engagement in a mentoring relationship are, for mentors and mentees, the different learning steps that have been taken through the relationship (Eby and Lockwood, 2005; Lankau and Scandura, 2007).

There are also learning and personal development effects for mentors themselves (Lankau and Scandura, 2002; Kram and Hall, 1996) and an overall improvement in their capacity to

interrelate with others. They will be able to develop capacities of communication, of accompanying and of transmission of experiences. The mentors can experience a personal enriching through the relationship, to grasp opportunities to develop their leadership, their experience in supervision and the sharing of their experience with a person, who is less experienced by confronting themselves with their own individual representations.

b. Development of the career

Duchesne (2010) developed a series of benefits for mentors and mentees in terms of development of the career. From the point of view of mentees, we can observe the following effects: personal fulfilment, development of competences, enlarging of the network(s), success in planning the career, professional insertion, improvement of their production, a way to avoid isolation at the beginning of the career, the creation of a reflexion about ones practice, a growth of the level of self-confidence and self-esteem, emotional assistance, reduction of stress, etc. We can equally point out that this can have an influence on the syndrome of « imposture » regularly evoked in the GARCIA project by women, which experienced taking second place or being pushed aside.

Regarding the mentors, few studies have been interested in the practice of accompanying, but have principally highlighted their experience and valuing of their competences. From a concrete point of view, mentors can value their training and their participation in a programme through auto-promotion (CV, profile LinkedIn, etc.).

Notably, if mentors had once been mentees, they will be more likely to exercise this function (Hezlett and Gibson, 2005), and this can be an asset for the organization on long term.

c. Development of the organization

It is important that the benefits of mentoring can be remarked in the protagonists; however, the organization itself has benefits by developing its mentoring practices. Ivanaj and Persson (2012) based on different studies (Hezlett, 2005 ; Eby et al., 2004 ; Lankau and Scandura, 2002) observe that mentoring not only can assist in diminishing the intention to leave of many researchers, but also on work relations and the increase in the satisfaction of workers (mentees).

Moreover, mentoring can bring a greater understanding of the organization in its members. Whereas mentoring seems favourable to organizational change (De Janasz et al., 2003), Ivanaj and Persson (2012) remark that mentoring can also represent an « opportune resource in matters of equity and diversity at work ».

Duchesne (2010) enlists further a better management of the numbers of persons working currently, a sustenance of jobs, a greater performance of teams, a development of a community of practice, a greater collaboration between workers and teams. In terms of development, the organization can therefore gain resilience and connectivity of its members, and thus decrease its vulnerability.

In this perspective, de Vries (2011) has developed a bifocal approach based on the work Cockburn (1991). This approach constitutes two agendas: the « short agenda », which aims at the equality of women in work in a short term perspective on an individual basis, in a logic of adaptation. The « long agenda » aims at the transformation of the organization during a longer period, which would affect all the individuals within this organization. In her article « Mentoring for change », de Vries (2011) develops this

approach by juxta-positioning the two agendas in an objective of organizational transformation.

Finally, in the case of a formal mentoring set up by the organization, we can conclude that this practice can represent a real tool of socialization of persons, and by this logic of adaptation can be a major attribute for the organization.

I. Limits of mentoring

Duchesne (2010) points out several limitations in the pursuit of a mentoring relationship. Firstly, the relationship of trust can not appear, or the dyad of mentor/mentee does not work out. This limit or set back is most frequently cited by researchers. We believe that this element points out to us the extreme caution that needs to be exercised while forming the mentor/mentee dyad.

Secondly, the organizational context can be unsuited for this particular practice. We therefore highlight that the Toolkit also includes a step of assessment of the institutional context and organizational functioning, and the adaptation to these by choosing the right form of mentoring.

Stahl (in Duchesne, 2010) also mentions that the mentor could also misuse their relationship to manipulate or serve only the organizational objectives contrary to the mentees best interests. As we have observed through the GARCIA results, women researchers have often experienced negative gatekeeping through often male supervisors. A mentor relationship can be equally fragile and sensitive to the right kind of use of this relationship and in some types of mentoring hierarchical relationships.

It can also happen that the mentor is not apt at the functions of mentoring (a lack of experience) or in some cases his/her too great experience works against the relationship. However, this phenomenon should be able to be countered through an adequate training, according to St. Jean (2009).

As we see, although the practice of mentoring presents numerous advantages, we need to be vigilant and conscious of some disadvantages that may arise in this type of accompanying, and that caution needs to be exercised while forming the dyads, training the mentors and the nature of the context of organizational implementation of the mentoring programme.

3. A design process for a gendered-sensitive Mentoring Programme (MP)

Step 1: Mapping the needs and create a self-tailored MP

To build a self-tailored MP, it is essential to gather the different actors in order to define the objectives and actions of the programme, the target groups and actors, the resources, the institutional lacks etc.

Identifying the needs is an essential step, because each institutional and even departmental case is very distinctive, internally diverse and work-culturally diverse. This step may be done through workshops/seminars with all concerned partners, and/or (semi)-structured interviews with early career researchers, and/or online survey. Interviews may reveal subjects like the need for transparency, lack of information about everyday research practice, lack of support from supervisors, challenges with the provision of information (rights, unemployment, duties, and regulation), insensitivity to gender unbalanced positions etc.

For example in Italy - University of Trento, semi-structured interviews were held in the concerned departments with 40 early career researchers - female and male - who are still working in the two involved departments – as postdocs or as assistant professors – and also who recently moved in other universities or outside academia. They were asked to answer to the following questions:

- How your current workplace is supporting your academic career?
- What kind of activities would be useful to postdoctoral or other researchers to facilitate their careers?

In The Netherlands - Radboud University, a survey mentees inventory (Annex 2) was sent to potential participants (mentees).

Once the needs are identified, an important step is to **diagnose your initial specific situation** about mentoring: ‘Zero action’ (in the GARCIA project this was valid for Italy-University of Trento, Slovenia-ZRC SAZU, and Belgium-Université catholique de Louvain), Mentoring Programme but not gendered (University of Iceland), Gendered Mentoring Programme (Switzerland-Lausanne University, The Netherlands- Radboud University). On that basis, it may be easier to identify internal stakeholders and define where to start.

Then, a “state of the art” about the **organizational and institutional environment** must be realized: collection of information about all the types of actions, with information on the level at which it is organized (unit/department/Faculty/Institute/University...); information about already ongoing actions from different offices (research administration, Job Guidance Office, Diversity Policy framework etc.) that offer tools for funding opportunities, writing research proposal, corporate culture, organizational rules...

The MP responsible and **coordinators** need to be identified and their tasks clearly defined.

This means that all internal stakeholders dealing with some aspects of MP are part of the programme elaboration. This may include researchers, deans, HR officers, Diversity officer, MP coordinators of other MP programmes in the Institution, Support Office to scientific research, Job Guidance office, Technology transfer office, legal office, communication office, webteam, GRH etc. It is essential to organize an activate collaboration between the concerned services, especially if a formal MP is to be build.

At some point, the **target groups** must be defined. Who is concerned: men and women or women only? Early career scholars with temporary position only (PhD and postdocs) or also assistant professors? Training of “high-potential” or open to all? How many potential candidates? Is the participation on a voluntary basis? What degree of formalization?

For example in The Netherland-Radboud University, the target groups are both men and women (to making mentors sensitive to gender issues, e.g. concerning work-life balance, which can impact both men and women (possibly in a different way), on the contrary to University of Iceland where it is mainly women-only peer- mentoring, who meets together once a week during half a day.

Then, before the elaboration of the programme, realizing a **SWOT** (Strengths - Weaknesses - Opportunities - Threats) analysis with all the concerned actors allows the listing of the organization’s internal and external environment characteristics that have some influence on the MP. In the GARCIA project, we used the SWOT strategic planning tool and Table 4 below resumes the different sections that were highlighted for the specific case of building a gendered-sensitive mentoring programme within academia.

Then the **objectives of the programme** and its organization are elaborated. Among things to decide, the type of mentoring (formal/informal/transformativ etc.) must be defined as well as the mentoring ‘system’ (mentor/mentee only or with peer mentoring, e-mentoring etc.). At this point, the scale of the project, the ideal timeline (for both short-term and long term), the duration of the MP, the agenda are defined. It is important there to recall that implementing a MP, especially from a ‘Zero action’ situation, is a progressive process.

For example, at the University of Iceland, “our definition of gendered mentoring borrows from the ideas of consciousness-raising (...). The peer mentoring process should therefore be seen as a way for academic women to see eye-to-eye rather than entering into a mentor/protégé relationship with the risk of reproducing the hierarchal power structures of their institutions”. At the University of Trento (Italy), the objective is “to improve visibility of postdoc research fellows and PhD students especially women, within the University community, and to build a sense of belonging”.

The **different activities** need to be defined and planned and a responsibility framework established. Activities may include: workshops for mentees (strategic career planning, negotiations, presenting and profiling yourself, and networking), workshops for mentors on mentoring and gender (in)equality, intervision sessions for mentors and for mentees, conferences, focus groups, seminars, video pills, interviews from private sector, association of women in science, webinars (if poor funding), sensitization of students, mentor-mentee relationship building etc.

	Positive (to achieve the goal)	Negative (to achieve the goal)
INTERNAL ORIGIN	<p>Strengths</p> <p>Networks, existing programmes</p> <p>Bottom up</p> <p>Gender expertise and knowledge among organizers</p> <p>Potential complementarity among SSH and SST (ex. Participatory design)</p> <p>Management support</p> <p>Informational content already available</p> <p>Tools (Qualtrics...)</p> <p>Good timing</p> <p>...</p>	<p>Weaknesses</p> <p>Budget, time</p> <p>No perspective for lasting mentoring initiatives</p> <p>Lack of institutional support</p> <p>No experience in MP</p> <p>Too many candidates</p> <p>Incomplete and spread information</p> <p>No clear regulation for rights and duties</p> <p>...</p>
EXTERNAL ORIGIN	<p>Opportunities</p> <p>Will, motivation</p> <p>To enhance visibility of early career researchers</p> <p>Increase the sense of belonging</p> <p>Existing base and links with it</p> <p>Institutional generalization and support</p> <p>National or European gender regulation</p> <p>Networks</p> <p>...</p>	<p>Threats</p> <p>Institutional complexity</p> <p>Lack of collaboration between actors</p> <p>Administrative and bureaucratic process schedule</p> <p>Time, costs</p> <p>Resistance: Judgment "sexism", men vs women, low awareness about mentoring</p> <p>Too few mentors, mentors availability, no incentives for mentors</p> <p>Position instability (changes in deans etc.)</p> <p>Low gender expertise and/or no gender equality office</p> <p>...</p>

Table 4. A cross-country SWOT analysis.

Then the **resources** must be listed (available and needed) in terms of personnel, time, data base, organigram, space, budget and fundings. The ideal timeline must also be

decided. Below, in Table 5, an example from the Radboud University in The Netherlands is presented.

Finally, the programme must be **validated** by the competent authorities.

	When?	Who?
IMR		
Meet with HR for organization	April 2016	GARCIA + HR + head support department
Find mentors	April/May 2016	HR
Match mentors and mentees	May/June 2016	HR (lead) + GARCIA
Organize kick-off meeting	June 2016	HR (lead) + GARCIA
Evaluation through email half-way (mentors & mentees)	December 2016	HR
Evaluation after a year through survey (mentees & mentors)	May 2017	HR
Reporting results to dean	June 2017	HR
Make inventory mentees new mentoring program	September 2017	HR
Find mentors	November 2017	HR
New cycle mentoring program	December 2017	HR
IMAPP/Faculty of Science (FoS)		
Determine form and width of mentoring program	April/May 2016	MP committee FoS with GARCIA advising
Make inventory mentees	May/June 2016	MP committee FoS
Find mentors	May/June 2016	MP committee FoS + HR
Match mentors and mentees	July 2016	HR
Organize kick-off meeting	August/September 2016	HR + MP committee FoS
Evaluation through email half-way (mentors & mentees)	February 2017	HR
Evaluation after a year through survey (mentors & mentees)	September 2017	HR
Reporting results to dean	October 2017	HR + MP committee FoS
New cycle mentoring program	December 2017	HR

Table 5. Ideal timeline for a MP (example from the Radboud University in The Netherlands)

Step 2: Recruitment and training of mentors and mentees

The recruitment of mentors and mentees (in SSH and SST if needed) is a very important step. This implies identifying mentors' role and mentees' characteristics appropriately, defining the type of relationship between them, creating a database with the potential mentors/mentees and train the mentors.

While recruiting mentors, it is important to take into account the risk of overload with other charges, and therefore mentors incentives must be discussed (courses discharges, stimulation as “change agents”, training on new skills etc.).

The coordinator of the MP must decide how to communicate about the programme and the recruitment strategy, in order to motivate potential mentors and mentee application. This may be done by orientation meeting, emails, communication about the MP through existing organs/committees etc.

Then, once mentors and mentees have applied and/or are selected (by the deans for example), it is useful to create:

- An identification badge for each participant containing the following details: the training/education path, professional path, scientific interests, personal interests, but also a motivation letter, which comprises the motivation to enter in this project;
- A kick-off evaluation about the participation of mentors and mentees attending the programme;
- The establishment of a status quo about the positioning of the mentees (Annex 3).

The training of the mentors, who, in addition to the mentees support, may be viewed as change agents in the institution (example from Radboud University, The Netherlands), is a very important step. The establishment of a training curriculum must include to framework guidelines, a definition of roles and functions, sensitization to the relevant topics (gender, academia excellence, communication tools etc.). Despite resistance of full professors that they do not need any kind of education on mentoring since they are sufficiently qualified, the education should be introduced as mandatory and properly evaluated. So the definition of their core tasks and responsibilities is quite important, especially by targeting skills that are not just supervisors’ skills. Training of mentors and mentees may include instrumental competences (institutional knowledge, communication skills, project management, understanding of administrative structure, networking abilities, information about rights and duties, everyday research practice, funding opportunities, publishing skills etc.), developmental competences (active listening, alter-excellence, gender equality, work-life balance etc.). This training may be done through workshops, webinars, with the support of handbooks on mentoring etc.

Then the mentor/mentee dyads may be formed. A specific way of matching needs to be set up. The best way is to encourage spontaneous dyads formation (through ‘speed dating’ process or orientation meetings for example). This step may also be under the HR department responsibility. Cross mentoring may be chosen to avoid political difficulties. A Mentoring Chart can then be elaborated. At this stage, the mentees should create their Mentoring Map (Figure 1) in order to clearly identify who they can rely on according to their needs.

The coordinator must also identify the available and needed resources (staff, time, mentors and mentees database, meeting space...) and the planning of the recruiting phase.

Step 3: Follow-up of the MP

The objective is to organize the follow-up of the MP, including mainly the coordination of all the activities, and the updating:

- Devising a complete list of the activities that must be always up to date;
- Establishing the continued training of the mentoring team and the assistance of mentors/mentee by the coordinator, and readjustment if necessary;
- Update: of the data of mentors and mentee in the programme of continued training;
- Information: Ensure the regular diffusion of the progress of the programme destined to the persons, who are concerned or implicated in this project, including the decision-making organs in the organization. Update of the information on the website, if this exists;
- Resources: required and available Personnel; time that needs to be taken; data concerning mentors and mentees; spaces for meeting ; budget ; trainers/educators;
- Identifying persons with competence in diffusing information; Logiciel of the pursuit of the programme;
- Planning: identifying the precise agenda of the phase of recruitment.

Step 4: Evaluation of the MP

As stated before, the evaluation of such programmes is another challenge as it requires at least as many resources as setting up or continuing the actual programme. One important step is to create evaluation tools, such as an evaluation grid towards mentor and mentees and the MP coordinator, a focus group organization etc. A first evaluation might be organized half-way by email. Evaluation should concern all aspects of the MP.

Then the results from the programme evaluation are to be analyzed, synthesized in an activity report and disseminated. The presentations of the above results to the interested publics and offices need then to be organized in order to raise awareness and to find appropriate solutions at the departmental, institutional/organisational and national levels about gendered mentoring. This may be done for example via meetings, or website, Newsletter etc. If needed, the readjustment options need to be defined and organized.

The coordinator must decide who is in charge of the evaluation, what are the resources available and needed and so on.

Annexes

Annex 1. Case studies from GARCIA countries

University of Lausanne, Switzerland : “gender mentoring” in UNIL

1. Pre-existing mentoring programmes at the University of Lausanne

Programmes of the BuLa network

Over the past 12 years, the University of Lausanne (UNIL) has developed quite an extensive range of mentoring programmes, each addressing women at a particular stage in their academic career on non-permanent or tenure track positions. All these programmes have been principally financed through the Federal “Gender Equality in Academia” 4-year structural programmes (hereafter PFE for Programme fédéral Égalité des chances), and are organized collectively by the BuLa (Les Bureaux de l'égalité des Hautes écoles universitaires de la Suisse latine) network of the “Latin Swiss” (i.e. French and Italian speaking) universities (Fribourg, Geneva, Lausanne, Neuchâtel and Lugano) and the French-speaking federal Engineering School (EPFL), located in Lausanne. The different mentoring activities offered directly by this network include the following programmes.

StartingDoc

Currently in its 7th edition (since 2008), StartingDoc1 is a mentoring programme aimed at (female only and funded) PhD students at the very beginning of their doctoral training. It aims to help them through the particularly important phase of getting started on their PhD and completing their dissertation in the required time. More established female academics (not always tenured) are invited to advise a group of approximately six mentees over a 16-month period. The programme is thus structured as follows:

- Group mentoring (1 mentor and a group of approx. 6 mentees, usually from a similar disciplinary background, but not working in exactly the same field)
- Six 2-hour mentoring sessions (this is the recommended format, which can be freely adapted to particular circumstances or time-constraints of the group members)
- Two half-day seminars, with the whole group of mentees and mentors
- Two one-day training sessions for the mentors
- Two one-day workshops and networking sessions for the mentees.

Each 16-month period has covered approximately 30 to 50 mentees and 8 to 12 mentors, bringing the total number of women involved close to 300, of whom about 30% are from Lausanne University.

French-speaking Swiss mentoring network for women

Since 2001, this mentoring network (Réseau romand de mentoring pour femmes)² – hereafter RRM – has offered one-on-one mentoring between a mentee (only women) and mentor (woman or man in Switzerland or abroad) to more than 500 women, along with a more limited number of collective training and peer mentoring sessions. It has two main aims:

- To help women solve practical difficulties associated with the organisation of academic lives and/or the achievement of their academic objectives;
- To encourage networking opportunities for women in the French-speaking Swiss universities, in order to further their academic career chances.

1 For further details, see: <http://www.unil.ch/mentoring/fr/home.html> (retrieved 20/04/2016).

2 See: <http://www.unifr.ch/f-mentoring/en/welcome> (retrieved 20/04/2016).

REGARD programme

“The REGARD programme offers workshops for young female academics and for women professors of the universities of French-speaking Switzerland. Its aim is to develop competences and to propose concrete tools for career management and supervision. These workshops also create opportunities for discussion and the exchange of experiences between women researchers. They also aim to increase awareness about gender equality in the academic career.”³ Registration for one or more REGARD workshops is free of charge. Some workshops are also open to women with permanent positions (professors or senior lecturers) and to men, to create more gender awareness among them.⁴ Since 2004, around 20 workshops have been organized yearly for a total of around 300 participants.

Additional advice, guidelines and resources for young academics: Guidebooks

The BuLa network published two guidebooks in 2011 (in French and in English); they were written by a Gender Studies specialist (Corinne Dallera), in collaboration with staff from the Equal Opportunity Offices, under the supervision of an academic editorial board:

- “Getting your thesis off to a good start - Guide for doctoral students.”⁵ The booklet provides doctoral students with advice on how to successfully negotiate the main stages of doctoral student life and a guide for finding their way in the academic world. It is also intended for those who would like to embark on a doctorate but are still hesitating. Here they will find information to help them clarify their choice.

- “Beyond the doctorate - Guide for advanced doctoral and postdoctoral students.”⁶ This guide is for those reaching the end of their doctorate, or who have already completed it, and who are seeking information on possibilities for continuing their career as a researcher or other alternative career paths.

Early academic career Web portal & discussion forum

Both previously mentioned guides can be found on a Web portal, which was inaugurated in February 2011.⁷ This information tool offers a variety of advice and support measures to women who are at the beginning of an academic career (pre- or post-PhD). In addition to this Web portal there is also a Facebook page (<http://www.facebook.com/releveacademiquech>) and an on-line discussion forum,⁸ which offers exchange opportunities for young researchers, enabling them to: Exchange (anonymously or not) information, resources and advice about the stages and structures of an academic career; Find solutions to practical problems (job offers, grant opportunities, international mobility schemes, work-life balance issues, etc.); Discuss issues related to academic and research policies and future employment in research, etc.

2. Additional services to early career academics

In addition to these mentoring programs, the Equal Opportunity Office of the UNIL also offers various kinds of material and financial support to young female PhDs, postdocs and some junior academics. Firstly, so-called “trampoline grants”⁹ are offered to women who are at the early stage of an academic career (postdocs and tenure track senior lecturers or assistant professors) in order to help them overcome barriers to obtaining a full professorship. The grant enables applicants to apply for a temporary and partial (usually 50%) reduction in their workload (particularly to be relieved of teaching and administrative duties) for up to 6 months, in order to concentrate on their own research and publications.

Until 2016, an open call for so-called “equality grants” of up to 5000 CHF was addressed to any member of the junior academic community of the University, enabling them to apply for funds to enhance their research profile and career opportunities. These funds could be used for a wide variety of career support activities (international conference participation, field-work visits, technical data analysis tools, including funds for interview transcriptions, for example).¹⁰

We can say in conclusion that the combination of various types of mentoring activities among different programs and addressed to persons at different stages of their careers seems to be a successful solution.

Finally, it was not always easy to make a clear distinction between mentoring actions for GARCIA’s WP6 and the WP7 workshops for junior researchers or those of WP4, as they intersect and overlap to a certain extent. For example, the REGARD program organizes workshop that will also be cited in the WP7 report as they are directed to postdocs who wish to follow an academic career path. We have nevertheless reported on that program in this report, because it is considered to be part of the mentoring package and it is financed as such. Clearly, the mentoring program is dedicated to supporting women (essentially) in accessing professorial positions. Other actions to help postdocs to disseminate their work and pursue non-academic research careers (in industry, public administration, etc.) are organized by other services than the Equal Opportunity Office, such as the Research and Career Office.¹⁹ These activities (workshops in most cases) will therefore be presented in the report for WP4.

3. Self-tailored objectives building on existing programs:

In our team, we felt that it is useful to consider mentoring activities also aimed at decision-makers, rather than only at aspiring academics themselves, since this helps to move the focus away from individuals – women in a majority, for mentoring programs – (perceived as being somehow “deficient,” in nature, socialization or knowledge), towards more institutional considerations (such as the criteria of excellence).

In her talk during the opening session of the StartingDoc 2016-2017 mentoring program (see below), Nicky Le Feuvre highlighted some points to understand the main objectives of mentoring, and in particular:

- a) The need to justify the women-only programs without giving the impression that women are somehow “deficient” in relation to men.
- b) Inform in a constructive manner about the different aspects of career tracks without giving the impression that work-life balance and other life events (parenthood for example) are specific to women.
- c) Acknowledge the small number of women professors without giving the impression that those who achieve such positions are exceptional: instead of presenting them as role models, we should make their achievements seem “normal”.

Therefore, good mentoring should:

- cast a lucid eye on the academic world;
- be explicit about the (sometimes opaque) “rules of the game” in the academic world;
- avoid stigmatizing women who decide to leave the academic career;
- foster internal transformation of the academic world.

Radboud University, The Netherlands – Group Mentoring Program

The Radboud University already has a well-developed central mentoring program in place, which is targeted at talented women academics, i.e., postdocs, assistant professors, and associate professors.

This is a one-year program which includes several elements:

- a) mentor-mentee relationship building;
- b) workshops for mentees on strategic career planning, negotiations, presenting and profiling yourself, and networking;
- c) intervision sessions with peer mentees;
- d) personal coaching of mentees by university career coaches (and the option to extend coaching after the program is finished);
- e) workshops for mentors on mentoring and gender (in)equality; intervision sessions for mentors. Highest appreciated elements expressed by the mentee participants was the intervision, through which the women had the opportunity to share experiences and advice.

The selection of women for the program is decentralized, i.e., the responsibility for selection is located within each research institute's/faculty's board. Because the number of places is limited due to the intensity and costs of organization, it was decided that the program is aimed at women talents within the different faculties, which are women who are already quite visible and on their way to climbing up the university ladder. After an intake with the mentees, a proper match depending on the mentees' needs and wants is sought by the coordinator of the program and presented to the mentees, who can then decide on whether to go ahead with the suggested mentor. The mentors are deliberately taken from faculties or research groups unrelated to the mentees to avoid political difficulties.

Objectives and Planning

The objective on the long-term for both IMR and IMAPP/Faculty of Science is to have mentoring programs that are embedded in the institutions and structurally organized. Both the arranging of mentors as well as the matching of mentees with mentors should be responsibilities of the HR department of both institutes to make the programs durable. The Faculty of Science program is aimed at PhD candidates and postdocs. The IMR mentoring program is aimed at postdocs and assistant professors in the first place, but may be extended to the PhD candidates in a later stage. The idea in IMR is to have a two-yearly mentoring program, in which postdocs and assistant professors – if they indicated an interest in participating through a survey or at the start of their appointment – are linked to a mentor. The idea in the Faculty of Science is for new PhD candidates and postdocs to be pointed at the existence of the mentoring program and arrange a mentor for them if they want one as of entry moment. In the IMR mentors will be asked through the dean and in a later stage by the HR department; in the faculty of Science mentors will be taken, in the first place, from the networks of the gender equality committee members and later by the HR department. Eventually, the aim is to build, through the mentoring programs, a supportive environment and culture in the two GARCIA institutes, in which early career scholars – men and women – have access to support and know where to go for help with their career and issues related to that career.

The objective on the short term, is, first, to (further) support the Faculty of Science in their set up of the faculty-wide mentoring program. We do so by being a member of and attending meetings of the mentoring program committee of the institute, which is a sub-committee of the larger faculty-wide gender equality committee of the Faculty of Science. The second short-term aim is to start the pilot mentoring program in the IMR. Preparations have already started.

Before the end of GARCIA project, we want to have matched a first cohort of mentees to mentors, and have organized a kick-off meeting in which the mentoring program is officially started. See below for the ideal timeline for concrete short-term objectives.

Gender mentoring

The mentoring programs in the GARCIA institutes are aimed at all early career scholars of the target groups, so both men and women. Gender mentoring is hence not so much the focus on building a mentoring program for women only (which already exists at the university), but is related to making mentors sensitive to gender issues (e.g. concerning

work-life balance), which can impact both men and women (but possibly in a different way). At least, in the communication to the mentors, this gender sensitivity will need to be addressed by the mentoring program organizers. It is also addressed indirectly to (potential) mentors through workshops for committee members.

In the four following examples, there was no real mentoring programme in place at the start of the GARCIA project. Each institution then worked on the first steps of a self-tailored mentoring programme.

University of Trento, Italy: A Web-platform

Formal mentoring programs work to re-create the informal partnerships that have always occurred in the workplace, particularly for men, and to make these partnerships available to women and other groups who would not normally be included (Moberg, Velasquez, 2004). In order to avoid it and to provide equal access to everyone, objective of the GARCIA project team was to design, implement, and assess a mentoring program oriented toward the creation of a milieu favouring mentoring relations, intended as the provision of advice, information, and opportunities among researchers at different levels of their careers. Particular attention has been dedicated to unhinge the gender asymmetries, both in the design of the tool and in the choice of the mentors.

Starting from the analysis of the needs emerged from the interviews, we decided to develop the mentoring activities at the University of Trento consisting in the creation of a website that includes information and supports for early career female and male researchers in their everyday working life at the UNITN and in their future career development.

Designing a website for PhD students and Research fellows

The purpose of the web page is to inform and empower young female and male researchers at the early stages of their career paths by providing them support for their everyday working life at the UNITN, as well as to their academic/scientific career development. The website is a space in which they can find the needed information at an organizational level but also advices on how to manage early stages scientific careers, and how to apply for an academic position or for grants and funding opportunities.

Given the lack of information about our specific targets – early career researchers with a temporary position – throughout the University of Trento, we decided to build a website for all of the STEM and SSH departments of the university, consequently not only addressed to the two departments involved in the GARCIA project. The label of the two mentioned profiles will be place also into the University homepage. The website has been developed in collaboration with the InterAction lab team (<http://interaction.disi.unitn.it/>) of DISI, a research team with experience and expertise in interactional and participatory design processes. The contents, therefore, have been identified and selected through a participatory design approach, in order to engage the final users, our target: postdoctoral research fellows and PhD students.

For this purpose, we developed an implementation process divided in the following steps:

1. Desk analysis of the available online mentoring activities and services in the Italian Universities and in the most important universities around the world.
2. Desk analysis of the information regarding PhD student and postdoctoral research fellows available on the UNITN website (www.unitn.it) and the connected webpages in order to define the contents already available related to these categories.
3. Identifying the contents to be included in the new website. To this aim some workshops with postdoctoral research fellows and PhD students at UNITN and their representative board were organized in order to identify and discuss needs, requests and other potential issues of the target of the website and compare them with the information obtained through the desk analysis and the previous interviews realized within the GARCIA project.
4. Identifying the best strategy to develop through the website a section focused on the career development issues (e.g. through video pills realized with mentors from STEM and SSH departments).
5. Involving in the website creation the internal stakeholders (Technology transfer office, PhD offices, Administration Office, Legal Office, Communication Office, Webteam, Technical Support) in order to guarantee visibility of the new website in the UNITN community as well as its maintenance and upgrade after the end of the GARCIA project. Obtaining a direct link to the new website from the homepage of the UNITN website has been one of the main formal tasks we achieved. More precisely, the university agreed to add between the profile of “student” and “professor”, the profiles “Research fellows” and “PhD students”, which were not yet included in the UNITN institutional website.
6. Programming the website and creating/organizing the new contents.
7. Launching the website.

Desk analysis

The desk analysis technique helped us to track down useful information about activities carried out in other universities and inside our own. We started the work by investigating strategies related to career development and mentoring with respect to gender in various universities of the world. In order to limit the scope of our analysis, we carefully selected keywords, related to the goal of the GARCIA project. These were: mentoring, career development, gender equality, capacity building, research experience, equal environment and leaky pipeline.

Then, we carefully categorized the information regarding PhD student and postdoctoral research fellows available on the UNITN website (www.unitn.it) and the related webpages. We catalogue them by topic, services and research area (STEM and SSH). Until the GARCIA project, as mentioned, there was not a specific profile for “Research fellows” or “PhD students”. For this reason, we also re-clustered the existing information by career advancement and the needs connected to the different academic positions. Main goal of the project was also to include the profile in the homepage in order to give visibility to early career researchers.



Figure 2: Unitn Homepage at January 2016.

Participatory design approach

Participatory design focuses on the inclusion of users at many levels of the design process so that change can be shaped from several perspectives (Bratteteig, 2001). It is an extension of socio-technical systems (an approach to change the concept of fitting people to the technology), designing with and for the users. In this step of the process we involved the InterAction lab team (<http://interaction.disi.unitn.it/>) of DISI, expert in interaction and participatory design processes. Thus, PhD students and research fellows from the different departments – belonging both STEM and SSH disciplines – have been involved in the design process of the website.

We conducted two workshops: the first one with a group of PhD students and postdocs, both from DSRS and DISI, and the second one with the representatives of PhD students and postdocs from all the UNITN departments.

In the workshop preparation we did a strategy clustering of the results obtained from desk research and we identified 3 main clusters: general information, communication and announcements and career development. These three categories helped us to generate fruitful ideas for the workshops. In both the workshop we started presenting to the participants some data and the project to contextualize better what they were about to do.

In a second step, participants were randomly grouped and asked to think about the information they daily look for. Afterwards, they had been given the task to think about the opportunities and challenges related to gender and equal opportunities, career development and mentoring they would have willing to find. Then, in a last activity, they had to group the information and to design the “dreamt platform”.

The input received in the first and second workshop had been analyzed and merged by the GARCIA research team. This first participatory process allowed us to create the solid base for the information architecture of the website.



Figure 3: Participant analyzing graphic data



Figure 4: Working in groups sharing opportunities and challenges



Figure 5: Post-its under respective categories

Information architecture design

Merging the desk analysis and the outputs of the participatory design process, we designed the information architecture of the PhD students and Research fellows' website.

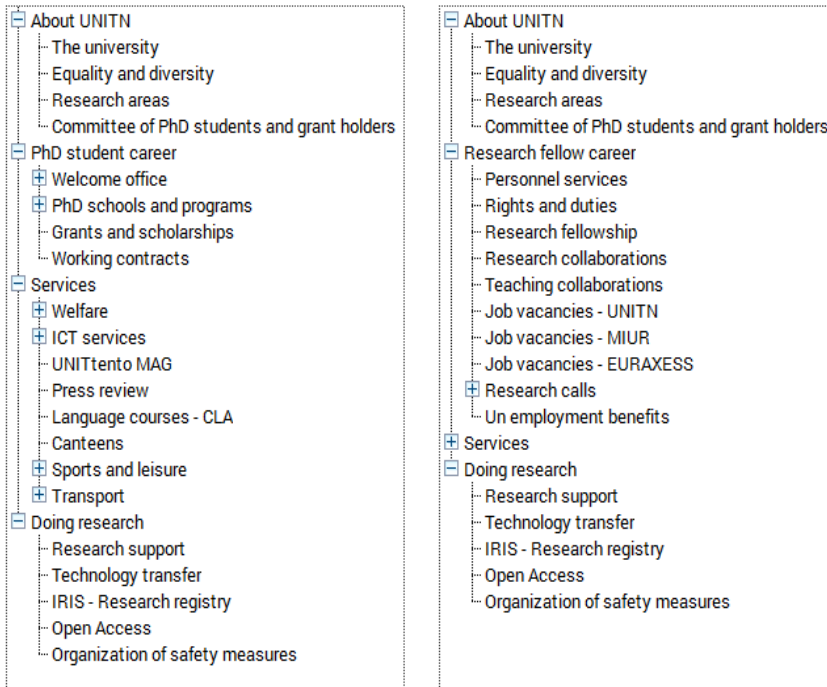


Figure 6: Information architecture of PhD students page (left) and research fellows (right)

The final version of the web platform, built through a high level prototyping tool called JustinMind, was then hosted online and tested by the team and the users previously involved in the participatory process.

Website implementation

In order to create a sustainable website, since the beginning of the implementation, it has been crucial to involve in the web-site design and set up all the internal stakeholders in order to guarantee its visibility and its upgrade after the end of the GARCIA project. For these reasons, we spent a considerable amount of time in the negotiation with the university internal offices in order to have their approval and support. This dialog allowed us to become an official and formal area of the university webpage.

The stakeholders involved were: the rector office, the Equality & Diversity division, the administrative directors of doctoral schools, the ICT team of UNITN, the Communication office, the Webteam, the Legal office and the Technology transfer office.

CMS tool selection

The technologies and theming standards to be used in the development of the website are similar to those already used in the UNITN website. We used Drupal as a content management system because of different reasons. Firstly, since the GARCIA project is tied to funding for a limited period of time, building the platform with Drupal, which UNITN websites are currently running, helped us to create a sustainable process for maintenance and updates on major security releases even after the end of the project. Secondly, using Drupal CMS helped us to easily integrate all the UNITN services (like news and events) into our website. Thirdly, as a CMS, we could use the core functionality of Drupal to manage content and users, in particular to allow them to authenticate directly in the private area and in the university intranet. At last, in order to be part of official website of UNITN, and to have the chance to be accessed from a top menu in the home page, we had the need to respect the university visual identity and to use the standard theming and graphic guidelines provided by the university webteam.

General features of the website

The final version of the website has generic features provided by Drupal CMS and some customizations designed ad hoc.

The website is bilingual; all contents are available in both Italian and English versions. The website is responsive and it could be used in various browsers and devices ranging from mobile to large screen computers and can be navigated interactively. Moreover, the platform is built on the most recommended version of Drupal available at this point of time. News security releases of Drupal can easily be integrated without affecting the functionality of the website.

Website content/structure

As previously mentioned, we designed the contents in the platform merging the desk analysis, the analysis of the realized interviews, and the outputs of the participatory design process. This process had been used both in categorizing the information in the PhD students and Research Fellows' profiles and in the mentoring area created ad hoc in the new website.

UNIVERSITÀ DI TRENTO

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PhD - ResearchFellow Portal

HOME MENTORING NETWORKING WHO ARE YOU?

The key principle of the development of research within the University of Trento

ARE YOU A PHD STUDENT?

ARE YOU A RESEARCH FELLOW?

NEWS

EVENTS

Merit-based hall of residence: selection procedure for graduate students 2016-2017
Deadlines: 1 June 2016

A survey on how students use spaces and time at the University of Trento
IPSP2016, Industrial Problem Solving with Physics - call for Brains
application by June 9

Call for selection within the "IEEE Smart Cities Initiative" project
Deadline: 6 June 2016

SCODEM - a master of science for experts in smart communities
Deadline: June 10

Call for applications for traineeships under the Erasmus+ programme a.y. 2016/2017
Candidates have to apply online by 25th May 2016, at 12.00

Round table "Migrations, borders, work: what is the future for Europe?"
13 May 2016

The University of Trento supports EMMA, the European multiple moocs aggregator, with the online course "LinkedIn for your job search and personal branding"
Registrations are open

A course on intellectual property and open access
The course will be available until 30 September 2016

Doctoral Course in European Cultures. Environment, Contexts, Histories, Arts, Ideas - 32nd cycle
Deadline: 12th May 2016, 04.00 p.m. (Italian time)

Hype - Global Sport Innovation Competition
Trento final May 31st 2016

Crash Course 2016
18 May 2016

Facing the invasion of alien arthropods species
Registrations are open

Architettura per la salute: la progettazione consapevole degli spazi di cura
May 20, 2016

17th Trento Summer School on "Macroeconomic coordination and externalities"
Deadline for applications: 22 April

UNIVERSITÀ DEGLI STUDI DI TRENTO
Università degli Studi di Trento
via Calepina, 14 - I-38122 Trento
P.IVA-C.F. 00349520220
ateneo@pec.unitn.it

Gendering the Academy
and Research: Combating
Career Instability and Asymmetries

Supported by
the 7th Framework Programme
of the European Union

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Figure 7: Home page of phd-researchfellow website

In the webpage, users have the possibility to go to specific pages of either PhD students or research fellows. Detailed information about their position is available in their respective pages.





<p>ABOUT UNITN</p> <ul style="list-style-type: none"> The university Equality&Diversity Research areas Committee of PhD students and grant holders 		<p>DOING RESEARCH</p> <ul style="list-style-type: none"> Research support Technology transfer IRIS - Research registry Open Access Organization of safety measures 	
<p>RESEARCH FELLOW CAREER</p> <ul style="list-style-type: none"> Personnel services Rights and duties Research fellowship Research collaborations Teaching collaborations Job vacancies - UNITN Job vacancies - MIUR Job vacancies - EURAXESS Research calls Unemployment benefits 		<p>SERVICES</p> <ul style="list-style-type: none"> UNITN library system Welfare ICT services UNITrento MAG Press review Language courses Canteens Sport and leisure Transport 	

Figure 8: Main section of PhD student's page

Mentoring area

For the mentoring section it has been decided to create a collection of videos in which we interviewed some senior professors of the University of Trento.

We asked to four professors of our two target departments (DSRS and DISI), 2 men and 2 women, and to two professors from all the other departments of the University, one man and one woman for every department. The interviewees have been selected in order to guarantee a gender balance in proposing female and male "models" to early career researchers both in STEM and SSH disciplines, and according to their curricula: position, experiences abroad, grants and role in their departments.

We decided to ask them a first general question and then to focus on six main areas of interest, emerged from the interviews but also from the participatory process, that could be helpful from an early career researcher. Particular attention has been given to gender, in order to provide specific advices to female researchers. The interview outline was the following:

Video pills: suggestions for a postdoc / early career researcher

Thinking about a postdoc or a researcher at the beginning of his/hers academic career, which suggestions would you give her/him? Which are the most relevant activities s/he should focus on? (research, publications, networking, writing a project proposal, etc.)

1. Publishing

Which are the most useful tips you may share for publishing in important journals?

2. Networking

As a researcher yourself, is there any useful tip you may give to help creating a successful network of academic relations?

3. Career planning

Which steps would you suggest to follow in order to apply for a tenure track position? In particular, which advices would you give to prepare a job interview to both male and female early career researchers?

4. Funding/ writing a project proposal

Do you have any advice regarding the process of writing a project proposal?

Where would a young researcher look for funding?

5. Gender

Researches show the presence of many women in the first career steps but then, slowly, they decrease. Which suggestions would you give to female early career researchers?

6. Scientific communication

In your opinion, which are the best ways to communicate scientific results?

Do social media play an important role to share the academic work of a young researcher and to create his/her network? How would you suggest using them?

The videos were filmed as little pills, in which the answers last just few minutes. Our purpose is to create some compilation of answers divided by topic.

Outcomes

The outcome we want to accomplish creating the webpage as an alternative mentoring tool, is to improve the visibility of postdoctoral research fellows and PhD students, especially women, within the University community. Creating an official profile in the main webpage of the university, as some tested we run showed, already helped to make them feel more recognizable in the university community. Our purpose is to raise awareness on their position and their contribution to the UNITN activities. This also means that part of our expectation is to create a more transparent relation between the early career researchers and the university, in particular on the areas in which there was a lack of information. Moreover, we overcame the challenges of building an infrastructure that could guarantee the sustainability of the designed web portal establishing solid partnerships with the internal offices, involving them into the process since the beginning.

In addition, with the video pills we recorded, our goal is to offer to non-tenure researcher an unconventional mentoring tool where to find useful information about their everyday working life and their career development. The video pills have the advantage to be always available for everyone because they are stored online on the platform. We also succeed in offering different points of view, involving senior professors from all the departments of the university, both STEM and SSH, men and women. We see it as a strength that could allow early career researchers to use the advices to build their own path.

Finally, next to work done to implement the platform online, an effort was made for the dissemination among PhD students and postdoctoral researchers in spreading some important results achieved by the project. The main ones that need to be mentioned are the enlargement of the university kindergarten event to the early career researchers categories - that before were penalized in the ranking from their not permanent position - and the recognition of unemployment benefits for postdocs - that was introduced in Italy for the first time in the University of Trento, thanks to the work done by the GARCIA project.

University of Iceland - Peer Mentoring Group

The short-term objective in the School of Social Sciences is to start a women-only peer-mentoring group made up of eight assistant professors, adjuncts and PhD students. This action will be directed by three GARCIA team members. The initial group of willing participants has been formed and meets together on Fridays between 10.00-15.00 to work on their individual or collaborative research and in between writing sessions to discuss the direction of their research and their work in academia in general. The format they work by is the Pomodoro Technique². This is in an effort to counter those instances of academic housework and tedious work/life balance issues that for women often come in the way of developing their research. This initial short-term peer-mentoring program will continue until the end of the GARCIA project, at which point the possibilities for extending the initiative long-term will be discussed. The long-term goal is to make a sustainable formal structure of this type of peer-to-peer mentoring.

Association of Women in Science

The original idea was conceived by a female biochemist, who approached a member of the Icelandic GARCIA team, with the proposition to start an association for women in all scientific fields. Icelandic women's associations with a similar concept inspired the idea. Many fields in the private labour market or in the arts have founded women's associations in contexts where women are either underrepresented or their voices drowned out by traditional masculinist discourse. The two met and organized a founding meeting for the association, which was attended by over 200 women (Harðardóttir, 2016), which shows that there is widespread need for such an initiative. The association settled on the name Samtök Kvenna í Vísindum (SKVÍS). The idea behind the association is not only that women engage in peer-to-peer mentoring, but that women in science generally need more opportunities to network, come up with research ideas together, apply for funding, etc. without relying on an "old boys network." In the words of Auður Magnúsdóttir from a recent interview in a national newspaper:

² <http://www.lifehack.org/articles/productivity/the-pomodoro-technique-is-it-right-for-you.html>

I'm experiencing it as if women are without a network. They do not get enough pats on the shoulder or enough guidance. Older male scientists are less prone to help them out. They give the young men all the credit meanwhile women get little attention. This association will be a backend for women [our translation] (Guðbrandsdóttir, 2016).

The association is for all women in all fields of science, and apart from bringing together women scientists; the association has also set goals relating to empowerment, the power of cooperation, networking, monitoring and supervision, visibility, interdisciplinary cooperation, diversity in science, and representation. This is not to be viewed as a short-term objective, but a continuous one that will develop in accordance with input from members of the association.

Evaluation, Objectives and Planning

Both of these gender mentoring actions have strengths and weaknesses, internal as well as external. The peer-mentoring group is a small-scale action and therefore inexpensive and easy to implement, and it may have impact on a small group of women here and now. On the other hand, the chances of this initiative gaining popularity in other departments is uncertain due to the independence of the individual peer-mentoring group, meaning that competition for space and perhaps funding could ensue. The Association of Women in Science (SKVÍS), however, is a large-scale project and therefore stands more of a chance reaching and affecting more people over the long term. On the other hand a project of this size might require funding and extensive working time.

Taken together, both of these actions are very feasible and as such they will continue working with and developing both. However, whereas the peer-mentoring group will be a more direct hands-on project for the GARCIA team, we take more of a sideline stance in relation to SKVÍS, offering expertise where we can and otherwise try to follow up on and developing the mentoring activities of the association.

The GARCIA team members who are organizing the peer-mentoring group activities will be responsible for evaluation. An evaluation took place in May 2016, at which point it was decided to continue the project until the end of the next Fall semester, at which point further evaluation will take place at the end of the trial period. After our involvement with SKVÍS, our continued involvement will be on an ad hoc basis. While we will remain at the association's disposal when it comes to providing gender expertise and advice, we will not be directly involvement in the choices the association makes for itself in the future.

Université catholique de Louvain, Belgium – Doctoral assistance and continued Training

As no mentoring program was taking place in UCL at the start of GARCIA, the first steps were to collect information about what was already in place that could serve a mentoring initiative.

UCL's "lady doctorate"

The UCL has a "lady doctorate", who is a HR staff administrative appointee, principally responsible for the ongoing PhDs at UCL. She generally tries to coordinate the information supplied to doctorates about the process and also more recently, co-organizes, a tool called "Valodoc", which is about valorizing the doctorate at UCL, in terms of giving more transparency of information on financial resources, professional insertion and also institutional knowledge.

Valodoc Program

For this valodoc program, the UCL has a Centre of Information and Orientation that holds some socio-professional insertion workshops, whereby the idea is mostly to give career advice in view of an academic career. There are three forms of services at the CIO :

- Collective workshops on various topics relating to career development
- Personal interviews with careers advisers specializing in PhD graduate employment :

Interviews to help the Professional insertion of (future) doctorate holders :

Objective- to help you with ...

- Learning to present your doctoral pathway as a real Professional pathway.
- Identify and valorise the Professional competences obtained during the doctorate.
- Clarifying your Professional and future projects.
- Identifying the functions that best realize the doctorates
- Improve your Tools (CV, motivation letter) and strategies for employment searching.

Methods: An interview with a consultant is proposed in order to speak about your doctoral experience, your responsibilities, your personal profile, your work situation, any questions that you may have while looking for employment.

The consultant helps to take into account your competences, which characterize your expertise and strengths. A particular focus will be given to your Professional projects. The consultant will make you chart out your long and short-term objectives and guide you as to the appropriate resources, which can be useful in your search for the targeted sectors.

Practically: these interviews are reserved to the future doctorate obtained from UCL, 20Euros charge.

- The interviews of the consultancy on « Studies-Professions »
 - Helping to discover the complementary trainings possible to learn the realities of professions
 - Helping to overcome precognitions and stereotypes
 - Opening new horizons

Methods : You will be received personally by a counsellor, who will give you their point of view on your future projects in order to discuss these ; making a synthesis of your reflection, and some guidance in order to advance.

Free of charge, with no visible restriction as to the target crowd.

➤ Interviews on international post-cursus mobility

Objective – answering questions about post-cursus international mobility

- Complementary studies abroad: application, scholarships, calendar etc.

- Post-cursus internships: offers, financing...

- Working abroad: expatriation possibilities, thinking about the project, administrative aspects....

- Voluntary work, linguistic immersion, back packing...

Practically: these interviews are reserved for the students and diploma holders of the UCL.

➤ A document centre with ample resources to answer your questions and help you get started

➤ Resources on line: this information takes you through a five step process

Language school

Another informal avenue of discussion that has been named by UCL authorities is the framework of the UCL language school that has informal discussions about institutional culture or exchange of experiences on research/academic careers. However, this is very informally done and non-systematic as it involves merely academic staff, who are engaged in English classes at the language school as a necessary acquisition for their engagement as a permanent lecturer, for whom the requirement is to have a certain proficiency in English, in order to hold potentially (not yet practically!) lectures in English. These types of discussion spaces, as per the interviewee (in WP7 interviews) allowed staff members to exchange outside of any formal institutional framework, and in a non-sanctioned space, experiences about teaching etc.

Personal Accompanying

At the nomination after successful recruitment for a permanent position as a lecturer at UCL, the nominee has a three-year probation period during which he/she has to fulfil some personally charted out professional plan that is usually devised with the president of the institute. This tool however is experienced according to interviewees, who have been nominated or appointed as more of a probation tool, a kind of initial examination of competences or requirements that need to be reached by three years of nomination at least. They mostly involve teaching and the obtaining of research project funding. It is not really experienced as a mentoring, although some advice is offered by the councillor in question, who is often a senior colleague. This relationship is sometimes not seen as a mentorship nor guidance, but more of a control mechanism; so there is room for improving this tool.

Objectives and Planning during and after GARCIA project

The idea is to build a formal and transformative mentoring program in collaboration with the gender officer in the university. As an initial stage of action research and identifying the contextual needs and organizational culture, focus groups were conducted with SSH and STEM department academics and early researchers, in order to identify needs and get the ball rolling on discussions on gender sensitivity in research and teaching, about criteria of excellence in academic recruitment and work/life balance issues. Then, a master thesis (Adam, 2016) was realized with the goal of creating a self-tailored gender-sensitive MP for UCL, in close collaboration with the gender office. This work is on his way to being used for the MP implementation by the University.

University of Ljubljana and the ZRC SAZU, Fran Ramovš Institute of the Slovenian Language – Slovenia – Self-tailored short-term and long-term objectives on mentoring

A definition of 'gender mentoring'

In Slovenia, there is no document related explicitly to 'gender mentoring' in academia, but there are laws that address women's equal opportunities for employment and promotion. Yet, in 2013, the Ministry of Labour, Family, Social Affairs and Equal Opportunities, in cooperation with the Female Managers' Section of the Manager Association and the Commission for the Prevention of Corruption, began implementing the Vključi.Vse (Include.All) project. As part of this project, the Manager Association, with the help of 2 selected Slovenian companies, developed career mentoring for women (and a recruitment scheme) as 1 out of 6 modules on the basis of the Vključi.Vse measures and guidelines from 2012 (Kanjuro Mrčela et al. 2015: 24). Among initiatives and 'good practices' there are: the mentoring programme at the Y Institute (2013), which is designed to encourage young female entrepreneurs, facilitate their development and help them realize their potential with the help of experienced mentors; in 2013, the Meta Institute in cooperation with the KonektOn entrepreneurship center implemented a project F2F – female entrepreneurs to female entrepreneurs for equal opportunities in entrepreneurship, which offered business mentoring support to women entering the entrepreneurial environment; and there is also the High Heels Club (Klub visokih petk), established by the company Bisnode Slovenija in 2012, which promotes mentoring, monthly gatherings for women from various areas and sectors to make contacts and plan future business and cooperation (ibid.: 26). In the High Heels Mentoring Club, the mentoring is practiced in a two-way direction: each member of the Club selects from the list of more than 100 experts her own mentor or mentee (Visoke petke 2016).

The possibility and the way to recruit mentors and mentees

The mentors and mentees were planned to be recruited for 2 seminars (a kind of focus groups) on mentoring from both GARCIA test institutions/departments (the Biotechnical Faculty UL, and ZRC SAZU), and from other Faculties of the University of Ljubljana and Research organisations in Ljubljana. It was envisioned to create the list of the addressees-

participants for the seminar (focus group) on mentoring and those who would further distribute the e-invitation letter.

The 'ideal' timeline for mentoring program

Given the SWOT analysis, emphasizing the strengths of the Young Researcher Program in Slovenia, a non-existing Mentoring Program or clearly defined protocol of tasks and commitments of mentoring itself, low awareness among mentors about the need of such a protocol because of the institute of a mentor, and particularly low awareness of gender issues in mentoring, the following short and long-term objectives are defined:

The short-term objectives:

-State of the art: since there is no mentoring program in the Slovenian academic environment, it was envisioned to contact the existing offices at the University of Ljubljana and the Association of Young Researchers in order to check the state of the arts (which offices or individuals at the university level were (if) responsible for any kind of information, initiatives and actions related to mentorship, mentoring program and gender issues related to mentoring): 1–2 M

-Preparing the agenda for the seminars – focus groups (about the GARCIA results on mentoring, the reviewed literature and documents on mentoring, guest speakers about the mentoring, etc.): 2 M

-Fixing the datum and the venue of seminars – focus groups: 0,5 M

-Preparing the list of addresses for seminars – focus groups: 0,5 M

-The creation and distribution of the e-invitation and the evaluation form for seminars – focus groups: 0,5 M

-The implementation of 2 seminars: 1 M

-The transcription and analysis of the recorded material and evaluation forms: 1M

-Writing a report: 1M

The long-term objectives:

-Dissemination of the above results in the form of a scientific article (in a planned national GARCIA monograph-volume);

-The presentation of the above results at the national (GARCIA) and international conferences;

-The presentations of the above results to the interested publics and offices at the ARRS, UL, ZRC SAZU, etc. in order to raise awareness and to find appropriate solutions at the departmental, institutional/organizational and national levels about gendered mentoring;

-The organization of the workshops for the mentees about the promotion criteria (only at the ZRC SAZU);

-The organization of the workshops for the mentors and mentees about (gendered) mentoring.

The tools that we plan to use:

- Interviews with individuals who were identified as the ones that would know something about the mentoring program in academic environments;
- 2 seminars (focus groups) on mentoring at the GARCIA test institutions;
- Presentations and dissemination of the GARCIA results on mentoring (scientific articles, meetings at various institutions, national and international scientific conferences, etc.);
- Workshops on mentoring for the mentors and mentees (envisioned in the long term);
- Workshops on promotion criteria for the mentees (envisioned at the ZRC SAZU).

Annex 2. Survey Mentees inventory (Radboud University, The Netherlands)

1-4-2016

Qualtrics Survey Software

Block 1

Position

- Postdoc
- Assistant professor
- Other

Department

- Business Administration
- Public Administration
- Political Science
- Economics and Business Economics
- Geography, Planning and Environment
- Other

Gender

- Woman
- Man
- Other

Block 2

A mentoring program aims at linking early career academics (mentees) to senior academics (mentors). This can be a useful tool for mentees to gain better insight in their career options, rules of the game, and possible career strategies. It is a possibility to talk with independent others – both seniors and peers – about current worries and challenges, as well as long term goals and perspectives.

I am interested in a mentoring program, in which several times a year I can discuss my career and related issues with a senior academic.

- Strongly agree
- Agree
- Neither agree, nor disagree

- Disagree
- Strongly disagree

I am interested in peer mentoring sessions, in which several times a year I can discuss career choices and related issues with other postdocs and assistant professors.

- Strongly agree
- Agree
- Neither agree, nor disagree
- Disagree
- Strongly disagree

Block 3

If a mentoring program existed, I would participate.

- Strongly agree
- Agree
- Neither agree, not disagree
- Disagree
- Strongly disagree

If you're interested in an IMR mentoring program, could you please tell us

1. Your name
2. What you would like to gain from such a program
3. The name of a potential mentor, if you have one in mind.

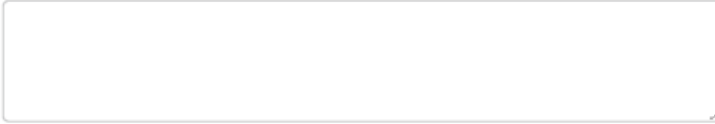
If you're not interested in an IMR mentoring program, could you please indicate why?

- I don't see the benefit of having a mentor.
- I don't need help from a mentor.
- I already talk to people who fulfill the function of a mentor for me.
- I feel like I don't have enough time to participate in a mentoring programme.
- I feel reluctant to talk to a mentor.
- Other



Block 5

Do you have any further remarks about this initiative?



Thank you very much for filling out this questionnaire. We will inform you when a decision has been made on whether a mentoring program will be set up.

With kind regards,
Laura Berger
On behalf of the Garcia projectteam

Annex 3. Positioning of mentees (from Adam, 2016)

	Where do I come from ? (History)	Where am I ? (Present)	Where am I going ? (Future/Project)
Private life : Family, Friends, Others			
Studies/training : Options, specialization Secondary School University			
PhD: Research domain, Stays abroad, Publications...			
Integration in academia: Laboratory, Research groups, Institutes, Others...			
Professional experiences:...			
Volunteer experiences, sports, other , ...			

References

- Acker, J. (1990). Hierarchies, jobs, and bodies: A theory of gendered organizations. *Gender & Society*, 4:139-58.
- Adam, H. (2016). Mémoire de Master: Implémentation d'un programme de mentoring pour favoriser le maintien de tous les talents au sein de l'UCL: Analyse et proposition d'un modèle. Université Catholique de Louvain. Belgique.
- Allen, T. D., Eby, L. T., Poteet, M. L., Lentz, E., and Lima, L. (2004). Career benefits associated with mentoring for proteges: a meta-analysis. *Journal of applied psychology*, 89(1), 127.
- Alper, J. (1993). "The pipeline is leaking women all the way along", *Science*, 260, p. 409-411.
- Barbier, P. and Fusulier, B. (2016) Comprendre l'expérience de la carrière scientifique et les inégalités entre les sexes au regard de l'interférence Travail/Famille. In: Rogers R. et Moulinier, P. (Eds) *Les femmes dans le monde académique* (Essais), Presses Universitaires de Rennes: Rennes, 2016, p.
- Baugh, S.G., and Fagenson-Eland, E.A. (2007). 'Formal Mentoring Programs', in *The Handbook of Mentoring at Work: Theory, Research, and Practice*, (eds) BR Ragins & KE Kram, SAGE Publications, Los Angeles, pp. 249-271.
- Cockburn, C. (1991). *In the Way of Women: Men's Resistance to Sex Equality in Organizations*, ILR Press, New York.
- Cuerrier, C. (2004). Le mentorat appliqué au monde du travail : analyse québécoise et canadienne, *Carriérologie*, vol.9, no.4, p.519-530.
- DeCastro, R., Sambuco, D., Ubel, P.A., Stewart, A. and Jagsi, R. (2013). Mentor Networks in Academic Medicine: Moving Beyond a Dyadic Conception of Mentoring for Junior Faculty Researchers, *Acad Med*. 2013 Apr; 88(4): 488–496.
- De Janasz, S.C., Sullivan, S.E., and Whiting, V. (2003). Mentor networks and career success: Lessons for turbulent times. *The Academy of Management Executive*, 17(4), 78-91.

de Vries, J. (2011). *Mentoring for Change*, Universities Australia Executive Women & the LH Martin Institute for Higher Education Leadership and Management, Melbourne, Victoria.

Dubois-Shaik, F., and Fusulier, B. (2015) Academic Careers and Gender Inequality: Leaky Pipeline and Interrelated Phenomena in Seven European Countries, GARCIA working papers n. 5, University of Trento. http://garciaproject.eu/wp-content/uploads/2015/11/GARCIA_report_wp5D.pdf

Duchesne, C. (2010). L'établissement d'une relation mentorale de qualité: à qui la responsabilité ? McGill Journal of Education/Revue des sciences de l'éducation de McGill, 45(2).

Eby, L. T., and Lockwood, A. (2005). Protégés' and mentors' reactions to participating in formal mentoring programs: A qualitative investigation. Journal of Vocational Behavior, 67(3), 441-458.

EC (European Commission), (2013). She Figures 2013. Statistics and Indicators on Gender Equality in Science, Luxembourg: Publication Office of The European Union.

Fassa F., and Kradolfer S. (dir.) (2010). Le plafond de fer de l'université. Femmes et carrières, Zurich, Seismo.

Fusulier, B., and del Rio Carral, M. (2012). Chercheur-es sous haute tension ! : vitalité, compétitivité, précarité et (in) compatibilité travail/famille. Presses universitaire de Louvain.

Gehrke, N. (1988). Toward a definition of mentoring. Theory Into Practice, 27(3): 190-94.

Guðbrandsdóttir, K.B. (2016). Konur heltast úr lestinni.

Haggard, D. L., Dougherty, T. W., Turban, D. B., and Wilbanks, J. E. (2011). Who is a mentor? A review of evolving definitions and implications for research. Journal of management, 37(1), 280-304.

Harðardóttir, H. (2016). Konur í visindum eru ósýnilegar. Fréttatíminn. Reykjavík.

Hezlett, S. A., and Gibson, S. K. (2005). Mentoring and human resource development: Where we are and where we need to go. *Advances in Developing Human Resources*, 7(4), 446- 469.

Herschberg, C., Benschop, Y., and van den Brink, M. (eds.), (2015). Constructing excellence: the gap between formal and actual selection criteria for early career academics, GARCIA working papers, n. 2, University of Trento (ISBN 978-88-8443-610-8).

Houde, R. (1996). *Le Mentor : transmettre un savoir être*, éd. Hommes et Perspectives. Québec, Martin-Media.

Houde, R. (2010). Le mentorat : un outil de développement de la relève. In Texte présenté à l'occasion du colloque organisé par l'Association suisse de psychologie du travail de langue française.

Ivanaj, S., and Persson, S. (2010). Le mentoring à la française : une pratique qui ne dit pas son nom. XXIème congrès de l'AGRH.

Ivanaj, S. and Persson, S. (2012). Le mentoring à la française : un processus informel, silencieux mais efficient", *Management & Avenir*, no. 55, pp. 79-97

Kram, K. E. 1985, *Mentoring at work: Developmental relationships in organizational life*. Glenview, Ill.: Scott, Foresman.

Kram, K. E. (1988). *Mentoring at work: Developmental relationships in organizational life*. University Press of America.

Lankau, M. J., and Scandura, T. A. (2002). An investigation of personal learning in mentoring relationships: Content, antecedents, and consequences. *Academy of Management Journal*, 45(4), 779-790.

Lankau, M. J., and Scandura, T. A. (2007). Mentoring as a forum for personal learning in organizations. In *The Handbook of Mentoring at Work: Theory, Research, and Practice*, (eds) BR Ragins & KE Kram, SAGE Publications, Los Angeles, pp. 95-122.

McCauley, C.D. and Guthrie, V.A. (2007). Designing relationships for learning into leader development programs. In B.R. Ragins & K.E. Kram (Eds) *The handbook of mentoring at work: Theory, research, and practice*. Thousand Oaks, CA: Sage.

- McKeen, C., and Bujuki, M. (2007). Gender and mentoring. In B. R. Ragins & K. E. Kram (Eds.), *The handbook of mentoring at work: Theory, research, and practice* (pp. 197- 222). Thousand Oaks, CA: Sage Publications.
- Meulders, D., O’Dorchai, S., and Simeu, N. (2012). Les inégalités entre femmes et hommes dans les universités francophones de Belgique, Université Libre de Bruxelles, rapport de recherche GENIUF, Bruxelles.
- Mezirow, J. (1997). Transformative Learning: Theory to Practice. *New Directions for Adult and Continuing Education*, 74, 5–12.
- Musselin, C. and Pigeyre, F. (2008). Les effets des mécanismes du recrutement collégial sur la discrimination : le cas des recrutements universitaires, *Sociologie du Travail* 50 (1), 48-70.
- Noe, R. A. (1988). An investigation of the determinants of successful assigned mentoring relationships. *Personnel psychology*, 41(3), 457-479.
- O’Neill, R. M. (2005). An examination of organizational predictors of mentoring functions. *Journal of Managerial Issues*, 439-460.
- Paul, M. (2004). L’accompagnement : une posture professionnelle spécifique. *Savoir et formation*.
- Paul, M. (2009). L’accompagnement dans le champ professionnel. *Savoirs*, (2), 11-63.
- Persson, S., and Ivanaj, S. (2009). Faut-il adopter le mentoring en France ? Etat des savoirs et perspectives généalogiques.
- Ragins, B. R., and Kram, K. E. (2007). *The handbook of mentoring at work: Theory, research, and practice*. Sage Publications.
- Steele, M., Fisman, S., and Davidson, B. (2014). Mentoring and role models in recruitment and retention: a study of junior medical faculty perceptions, *Med Teach*, 35(5): p 1130-8.
- St-Jean, E. (2009). Retombées et facteurs de succès d’une relation de mentorat d’entrepreneur novice selon la perspective du mentoré. Thèse de doctorat, Université Laval, Québec (Québec).

St-Jean, E. (2011). Les fonctions du mentor de l'entrepreneur novice, *Revue de l'entrepreneuriat* 2/2010 (Vol. 9), p. 34-55

St-Jean, E., and Mitrano-Meda, S. (2013). Training Mentors: A Way to Ensure the Quality of Mentoring Outcomes for Novice Entrepreneurs? - *Academy of Management Proceedings*.

Thommen, E., and Fueger, H. (2002). Un exemple de mentoring pour femmes dans la carrière académique. *Education permanente*, 36(3), 44-45.

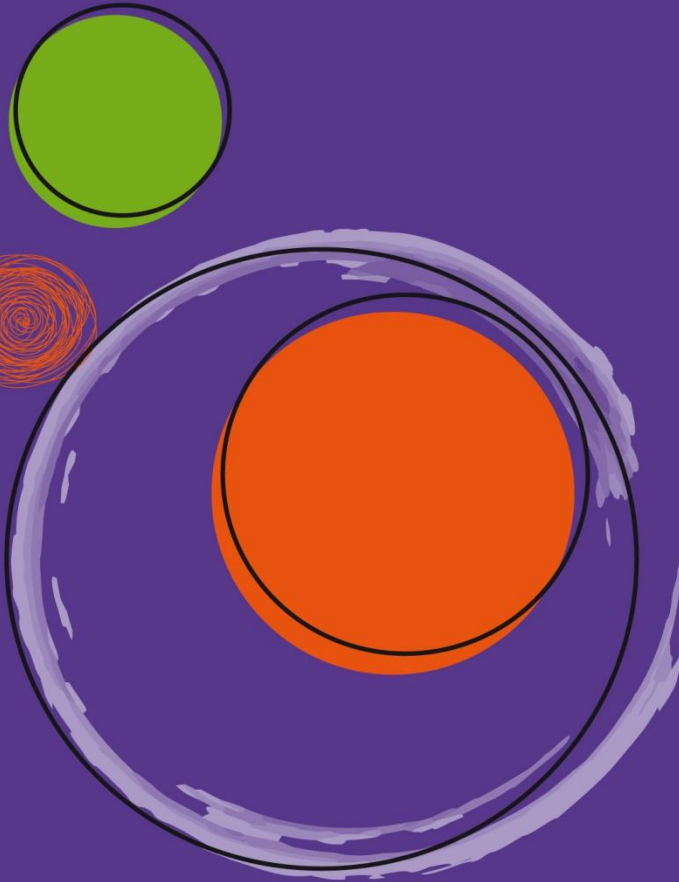
van den Brink, M. and Benschop, Y. (2012). Gender practices in the construction of academic excellence: Sheep with five legs. *Organization*, 19(4), 507-524.

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