

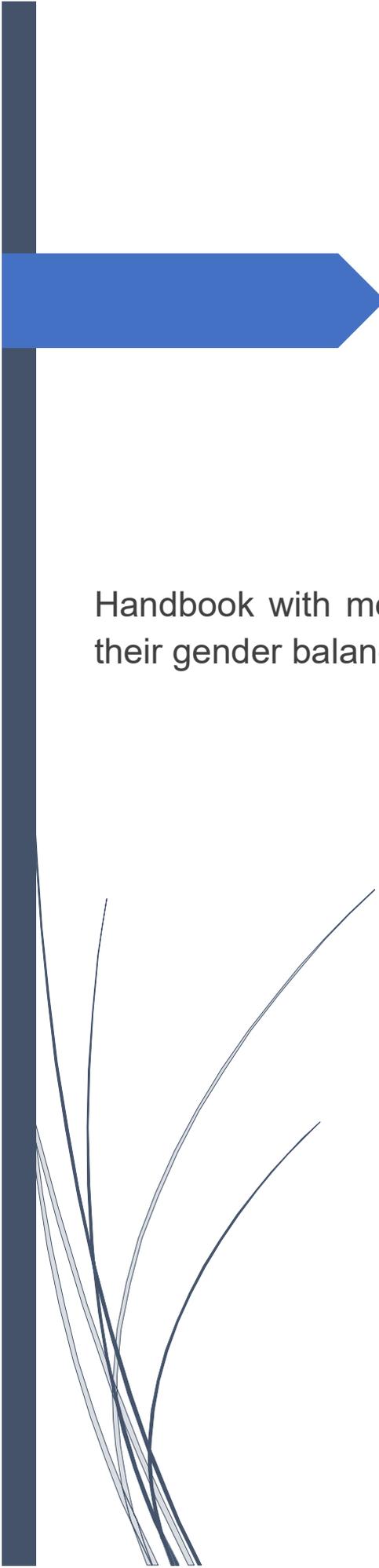
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Toolbox for improving faculty gender balance

Handbook with measures for departments seeking to improve
their gender balance



Gender balance from below

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Preface

This report is written to guide departments in their efforts to improve the gender balance among faculty. It is based on a combination of a review of relevant research, including our own, and the experiences from running an action research project at NTNU to stimulate gender balancing work at the level of departments. that participated in our project.

The advice is primarily directed towards Heads of Department and other employees engaged in improving the gender balance. Leaders at the faculty and top university level may find the report useful in order to get an overview of what they reasonably may expect of their departments and how they may support gender balancing work at this level. Gender equality advisors and others with specific tasks linked to gender balance improvement should be able to use the report both to identify the measures they would like the departments to implement and to stimulate such implementation.

Trondheim, June 2020

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1. Introduction: What is the toolbox for gender balancing work meant to be?

In this report, we propose an research-based approach to how the department level should work to create better gender balance in scientific positions. The report is shaped as a toolbox which is a result of the project “Gender balance from below: Toward a gender balanced NTNU 2025”. In this project we made use of an action research project to initiate activities and create learning opportunities from efforts to improve the gender balance among faculty. The approach and the measures described in the report take inspiration from research and focus on gender equality and gender inclusion work at universities. Our primary concern is gender diversity, but many of the measures can also be used more broadly in gender inclusion work. In addition, the report has benefitted from the Horizon 2020 project Fostering improved training tools for responsible research & innovation (Fit4RRI). The pursuit of Responsible Research and Innovation (RRI) emanating from the European Commission and many national research councils have gender equality as one of the main ingredients. The outcome of Fit4RRI highlights the importance of addressing governance settings also in the area of improving the gender balance among faculty. We return to this issue later.

However, a focus on governance settings serves as a reminder that gender equality and gender inclusion work functions best when it is part of an organisation’s daily operation. In the university context, this means that such tasks first and foremost must be maintained by the departments and possibly also by the research groups. We have designed the toolbox with this in mind. In addition, the action research project showed the importance of access to expertise in gender equality and gender inclusion work. Moreover, sharing of experience and learning from other departments is also a key resource for achieving high-quality and lasting results. Thus, it is important to create arenas for such exchanges.

The content of the toolbox reflects findings from research but also practical experiences from the action research project. In Appendix 1, we have provided some references to relevant research, including websites that may be useful.

Traditionally, gender equality efforts of universities have been based on a mix of direct interventions and policy initiatives. The direct interventions have usually been taken care of by a gender equality advisor, who may offer support to women, including resources and mentoring, across the university. Policy initiatives are meant to push departments to integrate concerns for gender equality in their day to day activities, often with limited effect because gender equality concerns compete with many other policies issued by top university leadership.

This report focuses on departments, their needs and space of action, because departments play a key role in making the decisions and carrying out activities that impact concretely the gender balance of faculty positions. Relevant actions include recruitment, improvement of the work environment, mentoring and division of teaching and other tasks. We describe in this report a multitude of possible gender balancing measures. Departments need to choose from these to make the effort doable. This means that departments should develop a strategy for their gender balancing work, including ensuring that someone takes responsibility for implementing the strategy. Chapter 2 provides some suggestions for this. Of course, it is crucial to have a good situational analysis at the individual departments as a starting point for making relevant and effective strategies and action plans for achieving a better gender balance. Chapter 3 therefore considers methods for establishing a relevant and necessary situational awareness as the point of departure for designing a strategy.

Chapter 4 deals with different focus areas in gender balance work. It gives an overview of and describes the content of specific tools that can be included in the action plan.

Appendix 1 is intended as a resource for those who want to investigate and broaden the professional roots in gender balance work. We give a simple introduction of some perspectives on gender balance work and present selected literature for further reading. Scientific knowledge can be motivating for the work as well as make it more effective in creating necessary change.

2. Targeted work for gender balance: Departments need a strategy and action plan!

There is no one-size-fits-all approach to improve the gender balance among faculty. The main message in this report is that such measures must be designed according to local conditions at each department. Admittedly, some established instruments, such as moderate gender quota and qualification grants, can be effective in achieving a better gender balance. However, they do not work well in all places, and moderate gender quotas can be controversial. Another important point for us is that measures for better gender balance should be inclusive. Measures that are aimed at the inclusion of the underrepresented gender are more effective than attempts to remove exclusionary mechanisms.

Improved gender balance often has a self-perpetuating effect. This can lead to a positive cycle in which progress creates progress, especially when measures are being constantly implemented to this effect. Achieving a certain number of the underrepresented gender can have a positive effect because it improves visibility and demonstrate diversity. To achieve such positive circles, it is usually effective to use several types of gender balance measures at the same time. The question is which kind

In most departments, gender imbalance tends to be a complex problem. There may be quick fixes, but one should preferably combine both long-term and short-term measures. An important point is that the choice of tools should be informed by an *overview* and *understanding* of the local situation and the most important challenges faced by the department when it comes to improving the gender balance. There are major differences between departments in terms of, for example, recruitment opportunities, professional culture, and work environment that can affect the gender balance. Therefore, it is important to be aware of the local starting point.

A strategy should have clear and realistic goals. The goals should be targeted towards improving the gender balance within a certain period of time (for example, three or four years) as well as targeting specific categories of positions. Other goals might include attitude changes, the establishment of new routines for recruitment and employment, and improvements in the work environment. It is important that the goals are presented clearly to all employees, and that employees at all levels commit to them.

First and foremost, it is necessary to clarify who has the responsibility for carrying out the chosen strategy. The department head is by default responsible, but the tasks can be delegated to others. For example, some employees may have a special interest in doing gender balance work. Regardless, it is important that the department head demonstrates that s/he supports the work symbolically and practically in order to give it legitimacy.

The measures in the toolbox vary according to their purpose – for example, with regard to the time frame and the kind of positions they target. Some are special measures directed at women/minorities, while others deal with incorporating new routines and attitudes into the daily work of the department in order to strengthen the academic and social environment. This latter type of measure often benefits everyone, though they especially improve the situation of those belonging to the minority. Such measures should often be prioritised and implemented in all departments.

The strategy plan must be feasible. It should not contain more measures than can be reasonably achieved within the planned period. Having fewer measures that are implemented in a thorough and proper manner is better than having many measures that are only followed up half-heartedly. The reason for this is that evaluation is important for knowing what is achieved with the measure. Every measure may be considered an experiment, which may have unintended effects, both positive and negative. It is important that lessons learnt along the way are carried into future work.

A strategy for improving gender balance should therefore include the following items:

- An overview of the situation and the set goals. Preferably, this should be based on data about the current gender balance among faculty.
- Selected efforts to communicate and discuss the assessment of the situation with respect to gender balance to root this in the department. In many departments, research team leaders make decisions and influence the work culture in ways that affect the gender balance. It is important that they also recognise the goals as being important.
- A choice of some gender balance tools, preferably a combination of measures that are directed toward recruitment, individuals and the working conditions in the department.
- Activities to monitor the effect of the measures over time. What works, and what does not?
- Criteria and mechanisms for putting in place new measures. What should be continued with? What should be reconsidered?

A three- or four-year plan may be structured temporally. It could start by communicating the need for and benefits from better gender balance among faculty. Then one could continue by focusing on recruitment, followed by measures to improve the work environment. The idea is to implement some measures early on and then introduce others gradually. If feasible, two or more measures could be implemented in parallel, producing a cumulative effect. Strategic assessments should underpin the selection of tools and the structuring of the action plan.

Strategy and action plans for improving gender balance can have an important symbolic effect. They show that the departments are concerned with being inclusive and diverse. It can make the department into a more attractive and productive workplace, in addition to motivating the employees to engage with the issues.

3. Assessment and situational awareness

In order to successfully develop a better gender balance among faculty, it is crucial to choose adequate and effective methods. The starting point for this choice must reflect the department's current situation. For some, the choice will be to focus on maintaining an already fairly gender-balanced composition of the faculty or to continue with measures aimed to support a positive development towards this goal. For others, the challenge is to change an imbalanced status quo. When they analyse the situation, many departments will find that the gender balance is different in different sections/research groups and/or with respect to faculty positions. Poor gender balance among students may be a challenge to improve the situation among faculty, and this may need to be addressed in a recruitment strategy.

Therefore, the first step in creating a better gender balance is to assess the point of departure. This must be done through an analysis of the current situation. In this chapter, we will look at different approaches in order to get a good description of the gender balance at the department.

3.1. What the numbers tell us

How does the department's gender balance pattern vary over time considering different academic positions? And amongst the student population? Investigating these issues will provide indications of at which point in the academic career the gender balance problem arises as well as where the potential for change is greatest in the short and the longer term. Such knowledge is also important for motivating the employees at the department to take gender balance problems seriously, helping to change attitudes.

The following tools can be helpful:

- Usually, the web page of a department contains a list of the people employed there. Such lists allow for simple counting of men and women according to position, also within sections and research groups.
- In Norway, the Database for Statistics on Higher Education (Database for statistikk om høyere utdanning, DBH; in Norwegian only): <http://dbh.nsd.uib.no/> provides easily accessible statistics about the percentage of women according to position in all departments at all institutions of higher education in Norway. It is also possible to study the gender balance among students. However, with respect to sections and research groups, manual counting is necessary. DBH can also be used for investigating the gender balance pattern at comparable departments/institutions, for example to identify environments that could offer guidance because they have managed to create a better gender balance.

- There are similar databases in many other countries. For the United States, see for example <https://www.nsf.gov/statistics/women/>

3.2. In-depth knowledge

It is always useful to get more detailed knowledge of the employees' experiences. Here, simple questionnaires can be employed to this end. For example, we have developed a method for assessing the career choices of graduated doctoral students, so that the department can get an indication of what are perceived as crucial factors for this group. Similar methods can be made with other target groups and for other purposes.

It can also be useful to look for patterns in:

- Recruitment processes: What has been the outcome of the previous 5-10 hiring processes? How was the gender balance amongst applicants? What criteria have the committees applied in their hiring processes?
- Distribution of tasks at the department: Is there a fair distribution of teaching, administration tasks, and academic service work (e.g. committee work, student social measures, etc.)?
- Existing working environment reports: How does the department score? It is likely possible to ask for more in-depth analysis to see if there are any gender differences that should be addressed.

It can be beneficial to conduct qualitative studies with the help of external professionals in order to assess how employees experience the academic and social environment of the department, but this is a costly undertaking. A more affordable alternative is to organise a department seminar or use the annual individual development dialogue to collect viewpoints and experiences of the faculty.

The following tools may also be helpful:

- Survey of career choices among graduated PhD candidates. Concrete opportunities for action can be identified by examining when, how and why PhD candidates make their career choices.
- Survey of well-being, attitudes and views among faculty and students to address gender balance issues. More in-depth knowledge of employee attitudes and practices may be important when adapting measures to the local situation at the department. Surveys may also have the effect of raising awareness of the issue of gender balance.
- Analysis of employee work plans. A review of the distribution of tasks over time can bring to light any systematic differences in work tasks between men and women faculty. This may then be pursued by mapping time budgets and engagement in work that is less visible. For example, it is widely believed that women do a larger share of uncredited and less visible academic activities.

- Individual development dialogues are an important arena for gathering information about how the conditions at the department are perceived, how belonging to gender (and/or ethnic) minority is experienced, and so on.
- Analysis of appointments for advertised faculty positions.
 - The number and proportion of men and women applicants, comparing to the gender of those who were appointed and eventually employed.
 - What criteria have the committees emphasised? Have they been applied in the same manner with respect to men and women applicants?
 - Was the call broad or narrow?
- If it is difficult to find clear trends through quantitative mapping and surveys, external assistance and the use of qualitative, exploratory methods may be needed. While surveys only provide information on predefined categories, a more open approach through qualitative interviews may provide other kinds of insights.

3.3. Local understanding of the issue

Both an assessment of any gendered patterns in the department and an in-depth knowledge of when, where and how these patterns occur provide a basis for choosing a strategy and designing an action plan for further work at the department. The vantage point can be simple questions, such as:

- Is there anywhere gender balance problems are particularly striking (master's degree programme, PhD programme, associate professor, professor)?
- Are there any sections/research groups that stand out as positive or negative?
- What kinds of improvements are wished for in the academic and/or social environment?

For example, a survey of PhD graduates that shows that the students made the decision to try to stay or leave academia early in the PhD project may support a commitment to career support and career planning at the beginning of the PhD project. Or, if a survey of time spent on non-meriting academic activities among employees in qualifying or associate professor positions appears to be lopsided genderwise, it may justify measures to make visible and/or redistribute academic tasks. Reviewing hiring processes can provide important lessons about what appears to be positive (or negative) in terms of attracting qualified applicants and top candidates from the underrepresented gender.

If it is necessary to change established practices at the department, resistance may arise. It could be both pronounced and unexpressed, and it may require explanation and motivation. The same applies to gender equality work and special measures aimed at certain groups of employees, which may be perceived as unfair. By having a clear and knowledge-based perspective of what are the most important problems and specific challenges facing the department, it can be easier to understand and support measures.

It is important to emphasise that a good gender balance is a resource for the department. It improves the department's reputation and helps make it more attractive to potential applicants.

Commonly, it makes the working environment better and more productive. Increased diversity often stimulates academic creativity. In addition, many measures that benefit everyone have a particularly beneficial effect on those who belong to a minority. These effects include strengthening the academic environment, enhanced openness regarding departmental activities, more cooperation among faculty, and increased visibility of efforts that benefit the department.

3.4. Time frame and performance goals

The time dimension is important for how we think about choosing instruments to improve the gender balance. It is commonly believed that changes instituted from below by, for example, evening out the student population, will propagate upwards through the system – just with a time lag. This notion is not entirely wrong, but one should not assume that changes happen automatically. There is a widespread phenomenon which is referred to as “leaky pipelines”. This designates situations where the proportion of women drops increasingly with every level of academic career advancement – when academics advance from master's degree to PhD, then from PhD to associate professor, and from associate professor to full professor. Therefore, it is important to look at the numbers for each category and study how they change over time. "Leaking pipelines" can be sealed, but it requires the "leaks" to be identified and addressed.

Measures such as quotas and qualification grants are aimed at contributing to the rapid improvement of the gender balances at the department level. However, the use of these instruments requires an adequate recruitment basis. In many departments, such instruments can have a good effect and contribute to a positive circle of improvement. For other departments, such tools may not be so useful.

As we have already discussed, long-term measures are often appropriate for the academic and social environments of the department, including recruitment processes and attitudes. Some measures require patience as it usually takes time before their effects can be observed. Examples of such include efforts to raise awareness and challenge stereotypical perceptions regarding gender and unconscious bias. Such measures can be just as important, especially if the long-term goal is to become independent of radical measures such as gender quotas and other special schemes.

In most cases, it would be best to implement two or more measures at the same time. We know that simultaneous efforts in several areas have a mutually reinforcing effect when it comes to creating lasting change of gender balance. In our research, we focus in particular on how we can develop measures that make inclusion a principle of lasting change. This requires that appropriate supportive and inviting measures are integrated into the department's everyday practices.

At the same time, as mentioned previously, it is important not to take on too much. Measures must be possible to implement well. A good way to go about it is by thinking strategically, whereby you start with some measures then supplement them with new ones when some time has passed, and the department can move forward. Some departments can achieve quite a bit in a short period of time, but most must expect that achieving a good gender balance among faculty will take time.

4. Focus areas

Experience from gender equality measures in organisations other than universities and colleges shows that gender balance work should, as far as possible, be integrated seamlessly in the day-to-day operations in order to ensure positive, long-term effects. Studies of research environments with a good gender balance have also shown that transparency and gender awareness in hiring processes are important. Therefore, key areas for working to create gender balance are:

- recruitment
- support for career advancements
- work environment

As we have mentioned, measures aimed at improving the working environment and professional cultures are also important in order to ensure inclusion and thus to achieve a better gender balance. Below we describe some specific tools and provide suggested readings that can be useful regarding the focus areas.

Across the focus areas of recruitment, career advancement support and work environment measures, it is important to increase understanding of what it means to belong to a minority and, in particular, to pay attention to *gender bias* – oft-unexpressed perceptions that men's research has a higher quality than that of women. These are subjective experiences, but they are often characterised by specific, unconscious patterns that can lead to discrimination. It is therefore important that gender bias is discussed.

The starting point in the process of improving gender balance among faculty is that both women and men have the capacity and desire to participate in research and teaching at the highest level. Therefore, in order to ensure that everyone has an equal opportunity to assert themselves, it is fundamentally important that gender bias does not affect recruitment processes, career advancement opportunities, or the social environment of the department. The work of exposing gender bias and making people aware of it is often challenging because good intentions can also be characterised by prejudice, which is a subtle form of discrimination.

4.1. Recruitment

Recruitment is a key area for creating gender balance. There are many models that describe dropout patterns and barriers – often using metaphors such as "leaky pipelines" or "glass ceiling". In all departments, thinking about recruitment should start by assessing the gender balance among students. Should measures already be implemented at this level? Is there an interest in academic careers among the master's students, and does it apply to both genders? Furthermore, it is

important to look at what happens in the transition from a doctorate to a post-doctorate/researcher or a permanent scientific position. Are there gender differences here?

The following measures can be potentially useful:

4.1.1. Student-directed measures

- Recruitment of the underrepresented gender to the department's study programmes may make use of information campaigns, assigned campaigning days for the study programmes, and a review of the introductory topics: are they attractive to both genders?
- Efforts to provide an inclusive student environment may to some extent rely on measures to increase general well-being. This would benefit everyone, but it would be especially important for minority groups. If there is a very uneven gender distribution among the students, this may require measures particularly aimed at minority groups to ensure that they thrive. If the number of men or women is very low, it may be important to create arenas that are more gender-balanced, by for example avoiding having study groups with only one man or one woman. This is to avoid so-called 'tokenism', which means that a person experiences being treated as a representative of their gender and not as an individual.
- Motivate students from under-represented groups to take on careers in research. It can be crucial if lecturers pay extra attention to potential research candidates from minority groups in order to determine whether doctoral education could be a realistic alternative to other jobs. Motivating students to research careers will be relevant for both women and men in some departments, because very few Norwegian graduates apply for academic positions.
- It is important that students have role models they can identify with in order to see a career in research as relevant/possible/appropriate for themselves. In general, departments should be aware how the visibility of women and demonstrated diversity among faculty can be valuable to the students.
- Stereotyping should be avoided. No one wants to be stereotyped. It is important to avoid statements that one wants women or men because of their "characteristics". Even 'positive' stereotyping of an underrepresented group may have negative effects. Many potential applicants feel they do not fit such gendered stereotypes and very few want to be recruited as a representative of a group.
- Quality improvement is an important and often uncontroversial measure. Research shows that if you increase the quality of the study program – such as better teaching, increased student involvement in research, strengthened supervision and better study conditions – then everyone benefits, but especially those who belong to the minority and feel marginalised.

4.1.2. Hiring processes

- The call for a position may be an important opportunity to think critically through the content of the description of the position. Who will be attracted to apply? Does the call fit the needs of the department? Although some requirements are predetermined, there may

be other relevant qualifications that could attract a more diverse set of applicants. Perhaps the call could be made more inclusive regarding research area, service skills, educational background, interdisciplinarity and teamwork experience. Should the call include subject areas that tend to be populated by the underrepresented gender?

- Time perspectives may be important. The timing of the call and the call period should be considered carefully. Many have found that the gender balance among applicants is improved with a longer application deadline.
- It is often beneficial to use preparatory exploration committees. If it is difficult to find well-qualified/realistic candidates from the under-represented category, a preparatory exploration committee may help to identify strong potential candidates before a position is opened. The information garnered can be used for assessing how the announcement should be designed, for example regarding position level, qualification requirements, professional scope and academic orientation.
- Exploration committee is a tool that increasingly it is required. The bottom line is that it can be effective to contact potential women applicants for an advertised position to alert them to the position and invite them to apply. The composition of the exploration committee is important to ensure the broadest possible scope. It is important that the candidates who are encouraged to apply are realistic candidates, i.e. they can be considered as qualified for the position and can compete for it. Applicants should not be invited without such consideration as it can give them false hopes.
- The composition of the assessment committee should be carefully considered. As a rule, both genders should be represented. However, it is essential to ensure that no one may be suspected of bias against applicants of the underrepresented gender and their professional orientation.
- Assessment committees will of course work independently, based on the call and standard quality criteria. However, final appointments are made by the department/Faculty and are also based on trial lecture and interview. In this process, it is important to check for possible prejudices in the assessment committee's recommendation. It is also vital oversee carefully assessments of how the final group of applicants fit into the department.

4.2. Career advancement support

To provide for a better gender balance in top academic positions, it is important that women (and/or other minorities) who are already employed by the department are encouraged and supported to qualify. Relevant measurements include the provision of professional advice and mentoring, facilitating visibility, support networking and make available resources to advance teaching and research.

For the most part, this is about management of human resources. Large departments tend to delegate such tasks either to section or research group heads, or to HR specialists. Thus, it is important that these people receive instructions and advice about how they should engage with gender balance issues. There are workshops where such issues are addressed, and leaders as well

as HR professionals should be encouraged to attend such workshops. Management of human resources needs to be sensitive to gender equality issues and engage with individuals as well as larger groups. The following types of tools may be relevant:

4.2.1. Individual follow-up

- Individual development dialogues with concrete, (binding) career planning are very important. We know that many find it demanding to invest in a career in academia. Good career planning and support in the qualifying process can therefore be crucial for further efforts. Of course, this tool need not be reserved for minority groups, as it usually benefits all employees. Increased awareness of career planning can also lead to greater transparency regarding the priorities of the department and what it looks for in future faculty hirings.
- Network sharing is another effective instrument. The Norwegian PhD regulations emphasise that supervisors are expected to include their candidates in their professional networks. The same applies to postdoctoral candidates. The department should remind supervisors as well as candidates of this commitment because participation in professional networks is very helpful to succeed academically. It can also be important to maintain transparency around what professional networks the faculty of department participate in, as this makes it easier to discern where to be active. Department heads and seniors should be aware of their potential roles as gatekeepers. This could be the subject of development dialogues with senior faculty.
- Faculty minority groups will benefit substantially from support (encouragement, shielding, guidance and practical help) to write applications for research funding and, eventually, for professorial promotion (including applications for qualification scholarships).
- In general, it is important for people in minority groups to feel that they are welcome and valuable to the department. Organised welcoming, such as formal introduction to colleagues and appointment of a professional “buddy” who have a special responsibility for helping newly hired people to find their way into the department, understand its routines and culture, participate in formal and informal social events, and enable the use of shared technologies (copy machine, coffee machine, etc.). Academics feel appreciated when their efforts and achievements are publicly noticed.

4.2.2. Information sharing

- Departments should engage in efforts to make career-relevant decision-making transparent. This includes openness about the procedures and criteria pertaining to promotions and hiring as well as realistic assessments of short- and long-term opportunities.

4.2.3. Division of labour

- It is important to control that no faculty is overloaded with teaching, administrative work and academic service work. If women faculty more frequently are asked to engage in recruitment and participate in committees as a gender balance action, this should be compensated through reduced teaching load and/or a reduction in other administrative tasks.

- Similarly, care should be taken to distribute prestigious tasks and positions as evenly as possible.
- When the department or some faculty members organise meetings, workshops and conferences, it is important to consider the gender balance among keynote speakers, moderators, chairs, etc. So-called panels should be avoided.

4.3. Working environment: department-based measures

As mentioned, a good work environment benefits everyone, but it is especially important for minority groups who gain relatively more from working in an inclusive and supportive culture. Those who see themselves as a minority are also more vulnerable to work life deficiencies, such as conflicts, animosity, unclear expectations, unfair practices regarding internal division of labour, and a highly competitive climate than those who belong to the majority. Minorities are particularly susceptible to harassment; sexual as well as other forms. It is important to have in place proper and trustworthy procedures for receiving and managing complaints about harassment.

Departmental measures that proactively deal with the work environment to improve conditions of work are therefore important tools for improving gender balance while contributing to the welfare of everybody. Many universities use surveys to map their workplace environment. These surveys may be helpful in identifying problems, since problems often go unnoticed because they are considered normal and thus not given attention. Employees and students are just supposed to adjust.

Most departments will benefit from regular discussions about the quality of working life in the department. Such exchanges may include issues such as gender bias and styles of collaboration. These discussions may take place at a break-out event, annually or bi-annually, and combined with debates about improvement of teaching, supervision and research. Department leadership will often be aware of problems due to the individual development dialogues that are meant to help identify what the individual is struggling with. This knowledge may be used to frame the discussions at the break-out event. It is important that discussions end with proposals of action and that the department leadership follows up on these proposals.

Some problems are difficult to deal with, such as interest conflicts regarding aims and use of resources or personal disagreements. Since these are common problems in organisations, it is possible to find advice about how to manage them. Occasionally, it is wise to seek assistance from outsiders.

Usually, social events are considered a way to strengthen the working environment, such as common lunches, spaces for spontaneous encounters, and parties. However, such events may be excluding. Therefore, it is important to keep an eye on who participates and who does not. Not everybody finds social events attractive, but if people from minority groups are systematically absent, this should be investigated.

Departmental measures can also include involving the majority group in gender balance work. We often see that the people who belong to a minority are the most engaged in efforts to

strengthen the culture of inclusion. However, better gender balance has positive effects for everyone. By making this apparent, it may be easier to engage more people in the work to achieve a better gender balance.

There is a host of different measures that may be applied in efforts to improve the working environment of a department to make it more inclusive. We have already mentioned some of the most important. The most effective measure is for department leadership to be sensitive to and eventually engage in issues that may strongly impact the situation of minorities and their careers. Essential examples are:

- Discussion culture – is it too harsh, are for example women not participating?
- Composition of project teams and research groups – is the practice inclusive? Is there gender bias in the assessment of the professional quality of people?
- Supervision practices – are students feeling equally integrated and taken care of?
- Publication practices – are there symptoms of gender bias in co-authorships? Are there issues with author order?
- Students career plans – do nearly all of them leave after graduation? Any gender differences? If nearly no graduates continue to take a PhD, this is an indication of work environment problems.

It is important to notice that an inclusive culture caters for diversity, not only with respect to gender and ethnicity but also regarding styles of work and interaction. Achieving a good gender balance is an effective way to improve the work environment of a department because it makes diversity more visible and facilitates diversity also along other dimensions. In turn, this provides for a more creative culture and better teaching and research.

Appendix 1. Readings and references

In this appendix, we have compiled a small selection of intellectual resources that can be useful and inspiring in the work of selecting tools and justifying strategies and action plans.

Websites with an overview of specific methods for implementing change in the gender balance among academics:

- <http://www.toolsforchangeinstem.org/>
- <http://garciaproject.eu/>

Websites for learning more about possible gender perspectives in the field:

- <http://igar-tool.gender-net.eu/en>
- <https://genderedinnovations.stanford.edu/>

Guides for gender equality work:

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