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Guidelines

for quality assurance of mentoring in academia

Results from the project

STARQ

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Content

Preamble

The aim of these guidelines is to contribute to the quality assurance of mentoring programs (with a focus on one-to-one mentoring). This is also connected with the concern to support those responsible in the conception of quality assurance for mentoring programs and to stimulate a dialogue about the binding nature and further development of quality standards (cf. Steinweg, Meyer 2021).

The guidelines provide important impulses for different phases of quality assurance, but they are not to be understood as an evaluation concept[1]. The guidelines are based on the quality standards of the Forum Mentoring[2]. The guidelines focus on the conception of quality assurance instruments and the operationalization of impact measurement. The target groups are not only the mentees, but also the mentors. The guidelines are supplemented by literature tips and specific examples of survey questions.

We would like to thank the participants of the *Equality Lab Mentoring*, which took place in October 2022, for their valuable support in developing the guidelines, especially for their qualified feedback!

1. Quality assurance: general information

1.1. Instruments for quality assurance

RECOMMENDATION:

It is important to think about quality assurance when designing the mentoring program. Therefore, inform yourself early on about the various instruments for quality assurance (e.g. standardized surveys, written feedback, evaluations, monitoring, program/documentation, reports ...) and weigh up the respective effort and benefit.

EXPLANATION:

On the one hand, the different quality assurance tools involve different costs, time and resources. They can be planned and implemented internally or externally. On the other hand, they fulfil different purposes, e.g. the quality of training offers and program coordination, measuring effectiveness, documentation or the further development of the mentoring program.

In the *first step*, it makes sense to explore the appropriate instruments according to the objective of quality assurance. With the help of **standardized surveys**, evaluations and experiences can be recorded and compared with one another (Forum Mentoring e.V. 2014). In contrast, **evaluations** systematically examine the benefit and/or the quality of the object of evaluation on the basis of

[1] The manual written by Elke Wolf und Stefanie Brenning 2021 “Wirkung messen. Handbuch zur Evaluation von Mentoring-Programmen für MINT-Studentinnen” offers a specific guidance for the evaluation of mentoring programs.

[2] https://forum-mentoring.de/mentoring/qualitaetsstandards/

empirical data and include an assessment with the help of transparent criteria with regard to a specific purpose (DeGEval - Gesellschaft für Evaluation e. V. 2017: 66). **Monitoring** on the other hand, does not involve an evaluation; it is the routine, regular and criteria-driven collection (logging) of comparative data and aims to identify steering needs (ibid.: 68). The implementation of programs can be recorded in **documentation** and **reports**. **Program documentation** can be used to make the results of evaluations accessible within the higher education institution (e.g. university management) or to publish them university-wide in order to increase transparency (Wolf, Bertke 2017: 187).

In the *second step*, the instruments must then be assessed for their implementability according to the framework conditions of the mentoring program (e.g. time, personnel and knowledge resources, etc.). When assessing resources, it is important to consider, for example, whether the quality assurance instrument is being designed and carried out for the first time or whether it is another run that can be managed with somewhat less time. It is also important to consider whether quality assurance can be supported internally or externally and what costs are associated with each. Due to the high amount of time and expertise required to carry out some evaluations, it is important to take this into account as early as the financial and human resources stage of a program. Finally, sustainable knowledge management plays a crucial role in maintaining important knowledge about the program and its quality assurance. Mentoring coordinators are often employed on a temporary basis through external funding (project funding). The high fluctuation in these positions due to the precarious framework conditions poses a particular challenge to the sustainable implementation of quality assurance instruments. In order to establish mentoring as a personnel development and gender equality instrument, it is therefore recommended that the tasks and positions be permanently anchored.

Further literature:

- Kromrey 2001
- Stockmann 2022
- Franzke 2017

PRACTICAL TIP:

INTERNAL AND EXTERNAL UNIVERSITY SUPPORT FOR QUALITY ASSURANCE

Professional planning and implementation of quality assurance instruments can be supported by persons or organizational units, both outside and inside the organization. It is advisable to establish cooperation within one's own organization, especially with regard to the design and evaluation of surveys. Central organizational units that are entrusted with quality assurance tasks (e.g. in the area of quality management and evaluations) as well as personnel development can be considered for this.

The Forum Mentoring provides information on the quality standards of mentoring programs in the brochure „Mentoring mit Qualität“ (2014), which deals with the conceptual requirements, institutional conditions, program structure and elements. Standards for the quality assurance of evaluations were published by DeGEval - Gesellschaft für Evaluation e.V. 2017.

1.2. Relation of mentoring to organizational goals and strategies

RECOMMENDATION:

When designing mentoring programs, it is advisable to explore and reflect on how the mentoring program as an instrument for intersectional gender equality is embedded in the goals and strategies of the organization, e.g. in the area of junior staff development, academic staff development, internationalization, anti-discrimination and diversity.

EXPLANATION:

The structured promotion of young female researchers serves, among other things, to compensate for the informal promotion of young researchers. Men are often favored in the promotion of young researchers via male-dominated informal networks. However, mentoring programs should not lead to a situation where female researchers are only supported through formal programs and male researchers through informal programs. It is therefore important to sensitize those responsible for promoting young researchers to structural disadvantages or privileges, e.g. through training and further education programs. At the same time, mentoring programs also touch on other important cross-cutting issues in the organizations, such as internationalization, anti-discrimination, academic personnel development, and diversity. An exchange or cooperation with the relevant actors can create synergies between the different topics or offers.

1.3. Quality assurance in different qualification phases

RECOMMENDATION:

In the quality assurance of mentoring programs with several program lines (according to qualification levels), it is advisable to design specific questionnaires for the respective target groups. Master's students should be surveyed separately, while the groups of doctoral and postdoctoral students can be combined.

EXPLANATION:

A specific conception of the questionnaires is necessary in order to record the specific needs of the mentees, which differ due to the different qualification levels and the associated development goals. For students, for example, the decision for or against a doctorate is pending. In contrast, for doctoral and post-doctoral students, the requirements for developing or establishing an academic profile play a stronger role. In addition, knowledge about the various career paths to a professorship is also relevant for this target group.

1.4. Quality assurance at different points in time

Keeping in touch with former mentees

RECOMMENDATION:

It is advisable to maintain contact with the alumnae of mentoring programs even after their participation has ended. For data protection reasons, consent to maintain contact should be recorded in writing while the program is still running.

EXPLANATION:

On the one hand, contact with former mentees enables an exchange between different mentee cohorts and, on the other hand, there are opportunities to survey larger groups of mentees as well as to conduct long-term analyses in order to be able to assess the long-term effects of the program participation on the mentees. Another goal can be to build up an alumnae network in order to highlight career perspectives and stimulate exchange between current mentees and alumnae.

Survey after participation in the mentoring program

RECOMMENDATION:

It is advisable to survey the mentees again after completion of the mentoring program and with an interval to the end of the program in order to analyze the added value of participation for further professional development. Furthermore, surveying several mentee cohorts allows for a higher informative value for the entire program.

EXPLANATION:

The long-term effect of mentoring on the career can often only be recorded at a later point in time, e.g. after reaching the next qualification level. Therefore, in addition to surveying the mentees before the formal completion of the mentoring program or directly after participation, it is recommended to conduct another survey (of former mentees) at a later point in time (two survey points in a cohort). In order to increase the validity of the survey for the entire program, several cohorts of mentees can be surveyed within the framework of one survey; the time of participation in the program should also be recorded. Experience has shown that a survey up to three years after the end of mentoring is suitable for reaching former mentees and achieving a good response rate. Alumnae networks can support this. A short processing time of the survey has a positive effect on the response rate; therefore, the questionnaire should be kept as short as possible.

2. Operationalization of impact measurement

2.1. Models of impact

RECOMMENDATION:

For a better operationalization of impact measurement, the use of impact models can be helpful. Impact models can already be tested and indicators for the achievement of objectives of the measures can be defined within the framework of the conception of quality assurance measures. Possible models include the Logic Model and the Theory of Change (TOC) model.

EXPLANATION:

To measure the impact of mentoring programs and, in particular, to develop indicators for goal achievement, the program goals can be elaborated in a model of program theory. Here, the focus is not on the overarching goals (guiding goals), such as increasing the proportion of women in academia, but on more specific goals (intermediary goals), such as strengthening the scientific profile of the mentees or sensitizing the mentors to the special challenges of female researchers. Specific action goals, such as participation in career workshops, should also be included in the impact model. The use of impact models makes it possible to reflect on the program goals and to check the operationalization for quality assurance. The requirement for this is the specific formulation of the goals at different goal levels (guiding, intermediary and action goals), ideally in a hierarchy of goals.

When deciding on an impact model, the advantages and disadvantages of the two models must be weighed against each other. Logic Models are often used to capture the impact of existing programs (Balthasar, Fässler 2017: 304). In contrast, Theory of Change (TOC) is more appropriate for designing new programs, but also for further development and as a basis for determining evaluation questions, comparisons and methods, and for identifying indicators. Following a depiction by Balthasar and Fässler (2017: 308), the characteristics of the two models are summarized and compared below.

Table 1: Logic Model and Theory of Change

	Logic Model	Theory of Change
Central objective	Reducing complexity	Understanding complexity
Specific characteristic	Distinction between context, input, process and product	Presentation of causal hypotheses
Potentials	Clear presentation of the program logic	Presentation of complex interventions that intend social change

Source: Balthasar and Fässler (2017: p. 308)

Further literature:

- Brenning, Wolf 2020
- Löther, Steinweg, Lipinsky, Meyer 2021

2.2. *Capacity change* and *practice change*

RECOMMENDATION:

We recommend that the goals for the participants of the mentoring program be assessed in a differentiated manner within the framework of quality assurance. Depending on the program level (especially mentoring relationship, qualification offers, networking), this means distinguishing between competence and knowledge changes (*capacity change*) on the one hand and behavioral changes (*practice change*) on the other. If possible, the enquiry into practice change should also be made at a time interval from participation, in order to include an appropriate time for the effect on behavior. Then check whether the respective intermediate goals can be formulated and examined separately. The basis for this form of impact measurement can be, for example, the Theory of Change (TOC).

EXPLANATION:

The distinction between competence/knowledge change on the one hand and behavioral change on the other hand enables the development of tailor-made indicators. For the qualification offers, the targeted competence/knowledge change can usually be clearly named. In the context of the mentoring relationship, *capacity change* and *practice change* cannot always be clearly separated. For example, the mentees' reflection on their own professional development can be supported both by knowledge about the mentor's career path and by the mentor's advice. The ability to reflect and the reflection cannot be clearly distinguished here in the sense of the TOC model.

EXAMPLE QUESTION *CAPACITY CHANGE*:

> *To what extent did the workshops within the framework of the mentoring program help you ...*
>
> *... better prepare yourself for the demands of academia? (scale)*
>
> *... acquired new competencies? (scale)*

EXAMPLE QUESTION *PRACTICE CHANGE*:

> *To what extent has participation in the mentoring program encouraged you to pursue your career as a researcher? (scale)*

2.3 Identifying the needs of the mentees

RECOMMENDATION:

Mentoring programs should be regularly reviewed to see whether they meet the needs of the mentees. A combination of self-assessment by the mentees and other factors that allow conclusions to be drawn about the needs is recommended for ascertaining the needs.

EXPLANATION:

The needs of the mentees can be addressed directly in order to find out whether the needs have been or are being met through participation in the mentoring program. However, this requires that the mentees know their needs very well and that they are interviewed both at the beginning and after completion of the program. Addressing other aspects of the mentees' professional situation can provide additional information about their requirements of the program. This can be done, for example, by asking about factors influencing professional development (see Fig. 1 and Fig. 2 below). The regular standardized needs assessment of different cohorts enables the systematic recording of the mentees' needs over time. In addition, it offers starting points for the further development of mentoring programs, if necessary.

RECOMMENDATION:

For a needs analysis, both positive and negative factors influencing study or professional development should be collected. The differentiation according to private, professional and social factors makes it possible to identify fields of action for the organizations.

EXPLANATION:

The survey of influencing factors allows indirect conclusions to be drawn about the needs of the mentees and also serves to classify mentoring as a central instrument of academic personnel development. For example, an exemplary survey showed that the self-assessment of personal potential is a negative factor for one third of the mentees and that mentoring, support persons and networks play an important role (see Fig.1).

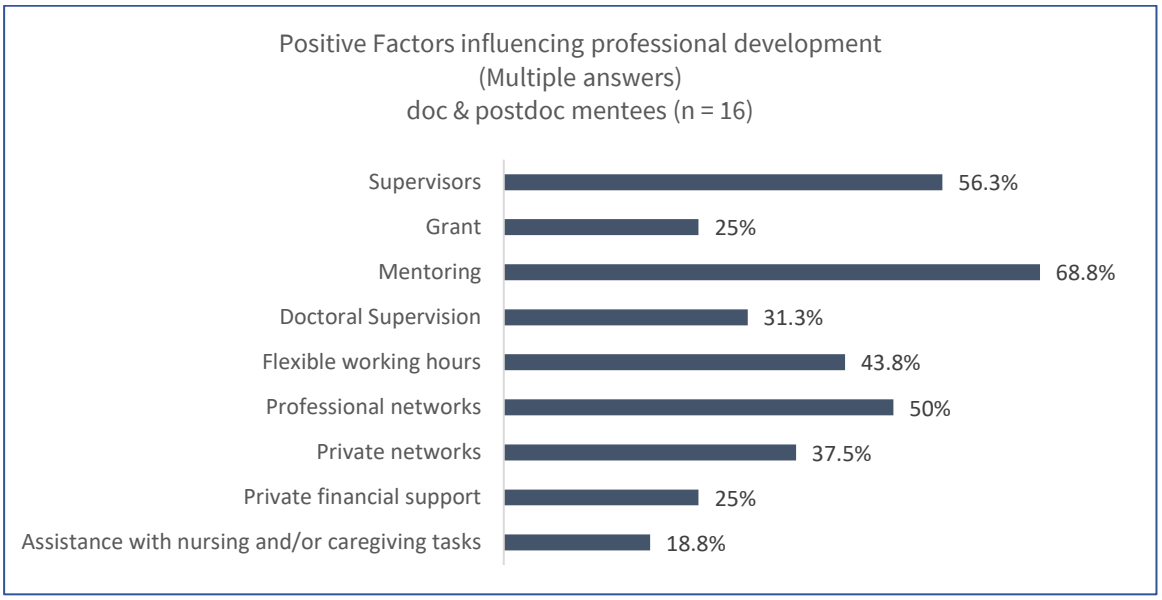
EXAMPLE QUESTION AND EVALUATION 1:

> *During your employment or qualification in academia (after graduation), which factors have promoted your professional development? (Multiple answers possible)*

EXAMPLE QUESTION AND EVALUATION 2:

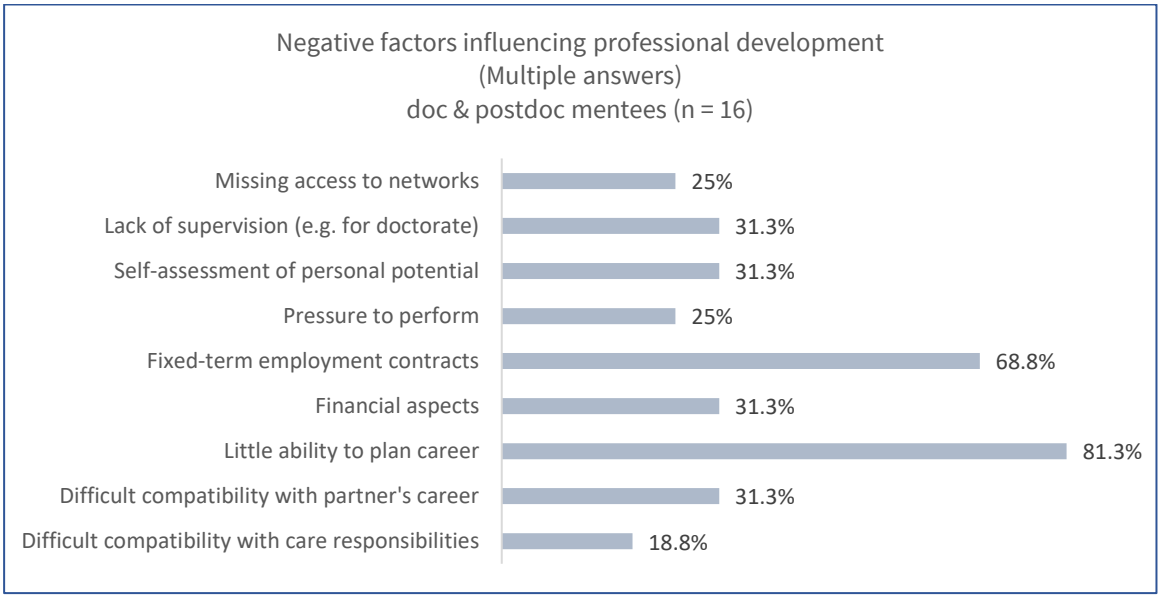
> *Overall, which of the following factors have had a negative impact on your professional development? (Multiple answers possible)*

Figure 1: Results from the field: positive factors



Source: Survey of mentees of a program at a German university

Figure 2: Results from the field: negative factors



Source: Survey of mentees of a program at a German university

3. Role of mentors in quality assurance

3.1. Interviewing the mentors

RECOMMENDATION:

In principle, the mentors should be asked in writing about their experiences and assessments of the mentoring program.

EXPLANATION:

Our recommendation is based on the quality standards of the *Forum Mentoring*, which suggest a survey of mentors as a "should" criterion. Due to the orientation of the programs and the lack of time and personnel resources, the focus on the mentees is understandable. However, the mentors are also a central element for the mentoring relationship and the success of mentoring programs. Therefore, it is relevant to collect their experiences, perceptions, and assessments. In addition, they also function as multipliers, i.e. they can help to recruit further mentors or young researchers for the mentoring program. Another positive effect on the mentors can be their sensitization to gender-related disadvantages in the context of academic careers. This goal must also be examined in the quality assurance process.

3.2. Survey for mentors

RECOMMENDATION:

It is recommended that participation in the mentoring program and its effects on the mentors be surveyed at various levels. The areas “participation in the program”, “mentoring relationship” and “mentoring program as a whole” can be considered for this purpose.

EXPLANATION:

The mentors' participation in the programs provides relevant data on the structured promotion of young researchers. Questions in this area can also indirectly provide information about satisfaction with the mentoring program, such as the question about the total number of mentees mentored or the question about whether participation in the mentoring program is recommended to colleagues (see below).

The following aspects can be queried for the three areas:

Participation in the mentoring program

- Number of mentees mentored
- Period of participation in the program
- Overall satisfaction with the mentoring program
  - *How satisfied were you with the mentoring program overall? (scale)*
- Assessment of the program coordination
- Assessment of the impact of the program

- *How high do you rate the positive impact of mentoring on junior researchers? (scale)*

Mentoring relationship

- Evaluation of the mentoring relationship
  - *How would you rate the overall relationship between you and your last mentee? (scale)*
- Feedback from mentees
  - *Did you receive feedback on whether the exchange with you as a mentor was helpful? (Yes/No)*

Mentoring program overall

- Experience, competence and knowledge gain of the mentors
  - *On which aspects were you able to gain knowledge and experience during the mentoring? (Multiple answers possible)*
    ...the needs of young researchers
    ...challenges regarding the compatibility of academia and private life
    ...professional barriers/challenges for early career researchers
    ...gender-specific barriers for early career researchers
    ...feedback on one's own image
    ...the importance of networks
    ...reflection on one's own career path
- Suitability of the program for the promotion of young researchers
  - *How suitable do you think the mentoring program is for promoting academics?*
- Mentors as multipliers: towards colleagues and young researchers
  - *Have you told colleagues about your involvement in mentoring? (Yes/No)*
  - *o what extent has mentoring encouraged you to motivate colleagues to make themselves available as mentors? (scale)*
  - *To what extent did your involvement in mentoring encourage you to motivate young researchers to apply as mentees? (scale)*

4. Literature

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