

# Developing and Writing a Research Plan

## *Possibilities and Barriers*

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### Introduction

“I upphafi skal endirinn skoðast”: Begin with the end view. These ancient Viking words of wisdom are highly relevant for modern research. The first and very important task in every study is to prepare and provide structure for a realistic research process. The knowledge embedded in a research plan sets the standard for the research process and product. Administrators of research funds are conscious of this wisdom, and most funds have developed a set of criteria to secure as well as possible that financed studies are realised. Some of these criteria are classical “evergreens” in all kinds of research programmes, while others have been developed within the specific scientific discipline and in accordance with overriding intentions of the financing body at any given time. Thus human right issues and gender equality are examples of principles that have to be included in project planning on behalf of current UN- as well as most Nordic research funds.

When applying for research financing to a Nordic or Norwegian fund or university, it is an advantage for applicants to understand the local language. More information tends to be given in local languages, whereas English versions may be shorter and, depending on the translation accuracy, somewhat unclear. In addition a number of written and unwritten practices may be hard to grasp. Reading former high quality proposals may be of great help in gaining insight

into the changer of research plans. However, research plans written in English are few and difficult to access. Through the years I have observed international Master students in educational disciplines having difficulties sorting out the essentials in preparing and writing a research plan for their PhD fellowship applications. I have also seen international colleagues searching in vain for successful structures and content of project applications. However, some have managed to pass through the needle eye and obtain a research fellowship, as several research plans published in this book show. Nevertheless, there is a need for a broader and more thorough understanding of the possibilities and barriers encountered by international PhD applicants and researchers. I have therefore conducted a small scale study of this issue.

The goal of the study was to explore international applicants' possibilities and barriers when preparing and writing research plans. The focus was mainly on applications for Norwegian funding, but most aspects of the study are assumed to be generalizable to development of research plans in general. After providing a brief account of methodological issues, the following presentation gives a detailed description highlighting main aspects and a variety of nuances concerning planning research. Essential knowledge and experiences of junior and senior researchers are discussed in view of research literature and official guidelines for research funding.

## Learning from experience – a qualitative study

What are the general knowledge and skills required for a qualified research plan? And what characterises the tradition of planning and applying for a research project in a Norwegian context? A qualitative study was conducted in order to explore general as well as particular aspects of this phenomenon, applying e-mail questionnaires and individual face to face interviews.

**Key informants.** The study was conducted with two groups of researchers:

- Senior researchers with experience as informal mentors of applicants to PhD fellowships<sup>23</sup> and as members of reviewer committees on behalf of research funds and universities

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23. There is no official practice of mentoring applicants to PhD grants and PhD positions within Norwegian universities. However, several senior researchers consider it part of their informal academic duty to give a certain amount of information and guidance to applicants when contacted. Large scale research projects and research groups may offer information and even preparatory seminars for potential participating research colleagues or PhD applicants. Much of the information in this article is about this kind of support.

- International PhD research fellows with an accepted research plan and fellowship

These informants were assumed to have experience of central importance for the issue at hand. Members of the two groups were purposefully and conveniently selected. Concerning the latter group, the selection was consciously biased, as it was limited to international PhD research fellows who had succeeded in gaining acceptance of their research plan and receiving research grants. Since the number of accepted research plans is higher than the number of available PhD fellowships, to take the Faculty of Educational Sciences, University of Oslo (UiO), as an example (<http://www.uv.uio.no/english/research/>), these informants represent only applicants who have enjoyed double success, as their research plans have met the quality criteria for being accepted, and they have been prioritised to receive one of the few research fellowships available. If applicants whose research plans had not been accepted had been amongst the informants of this study, there is reason to believe that the information collected would be more nuanced. The selected senior researchers have experience with applications to research programmes and PhD research fellowships, with supervision of PhD research fellows as well as with holding seats in adjudication committees (Creswell, 2007; Gall, Gall & Borg, 2007; Kvale, 1996; Stake, 1995).

**Research instruments.** Based on both my experience as a Norwegian-speaking research applicant to Norwegian national and international research funds, and my interaction with international applicants (Gadamer, 1975), I formulated two sets of open questions, which were tried out in a pilot study with feedback from two colleagues. A revised set of questions was sent to 19 senior researchers, whereof eight answered by e-mail and five in interviews. Likewise five international research fellows were contacted, one answered by e-mail and two in interviews.

The international research fellows were asked if, in retrospective, there was any kind of information which they had missed while preparing and writing their research plan, such as information lacking on the English-language home page about applications and admission (<http://www.uv.uio.no/english/research/doctoral-degree/phd/application/>), or from other sources. The joint questions to all the informants were based on the classical content and structure of Norwegian research plans; theme/topic – research problem/question – methodology – progress plan – needed resources – references; and they were asked if there were some typical topics or aspects related to structure and content that seemed to cause

difficulties (shortcomings, misunderstandings, writing style, etc.). If so, they were asked, what are these, and what general ideas or recommendations do you have concerning how to overcome each of the barriers? Both informant groups were asked to recommend literature supporting the quality of research plans. The two groups were also asked to give useful literature references within methodological fields with which they were familiar, such as within quantitative methodologies and statistics, qualitative methodologies, mixed methods and/or text analysis.

**Validation.** The informants were selected due to their experience with international research plans or as mentors and evaluators of such plans, all representing different backgrounds, experiences and goals. The intention was to gain an understanding of their various perceived experiences and report and discuss these (Creswell, 2007; Stake, 1995). Validation of their statements was crucial and took place in two steps: 1) Immediately after gathering their information through e-mail and informal talks or interviews, their information was transcribed and returned for comments. 2) The second step took place when the first draft of categorised findings was sent to all informants marked with their own initial beside each corresponding statement, and again they were asked to comment on their reported information. I quickly received responses containing suggestions for revisions, additions or removals as well as suggestions related to language improvements. All in all they added to the report's nuances and overall trustworthiness.

**Analysis and interpretation:** As mentioned, the transcribed texts were categorised in accordance with the open questions concerning the selected topics. This procedure was chosen in order to highlight information and considerations concerning the classical aspects of developing and writing research plans in the Norwegian educational science tradition. Within the frame of these main categories, senior researchers' and research fellows' statements were gathered into joint units of meaning. These units put focus on different aspects of the informants' experiences concerning developing, advising, writing and assessing research plans, including possibilities and obstacles and how to surmount them. In the article each unit of meaning is marked with a number in brackets to show how usual each statement was amongst the informants. In addition to the units of meaning, quotations are presented either as examples or to emphasize certain points (Stake, 1995).

In the discussion following the reported findings, information from Norwegian and other international research application guidelines as well as from relevant methodology texts have been added to the interview findings. Finally

the main parts of a prototypical research plan in educational sciences are discussed, and some aspects regarding the further development of information and support are suggested for international applicants to PhD grants and other research programmes.

## Experiences, knowledge and opinions regarding developing and writing a research plan: Findings<sup>24</sup>

As mentioned, my focus was on collecting information from senior researchers and successful project applicants represented by PhD research fellows in the study of the phenomenon “developing and writing a research plan”. Special emphasis was placed on revealing barriers and shortcomings in the process as well as ways to overcome them (Gall, Gall & Borg, 2007; Kvale, 1996). The findings have been categorised and presented in accordance with the main topics expected of a PhD-level research plan at the Faculty of Educational Sciences, UiO; theme/topic, research problem/-question, methodology, progress plan, needed resources and references. However, the informants also had a number of general comments concerning how to succeed in developing and writing a research plan. The presentation starts with them.

### General responses

Writing a research plan is a complex and time consuming task (2). It is also a complicated task to assess the quality of research plans, as pointed out by one of the informants (1). The number of applicants to research grants and positions<sup>25</sup> as well as other research programmes is, as a rule, much higher than available fellowships, and the competition for these fellowships is increasing and tough.

During the last few years it is fair to say that “the needle eye” through which applicants have to crawl in order to get a research fellowship has become steadily narrower (1)

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24. Many have contributed to this article as informants and peer reviewers. Thank you all: Emad Al-Rozzi, Birgit Brock-Utne, Crina Damşa, Eva-Signe Falkenberg, Greta Björk Gudmundsdottir, Tone Kvernbekk, Solveig Lyster, Solveig Bauge Løland, Anders I. Mørch, Liv-Randi Opdal, Snorre Ostad, Berit Rognhaug, Eva Simonsen, Reidun Tangen, Steinar Theie, Arnfinn M. Vonen and Siri Wormnes.

25. The University of Oslo has a number of PhD research positions distributed among faculties and departments. In addition PhD research fellows with grants from other institutions participate in PhD programmes.

Senior researchers assume that around 10 – 20% of applicants to PhD fellowships manage to write a research plan of acceptable quality (2). Many PhD applicants submit research plans several times before mastering the task (4). All applicants receive a written statement from an assessment committee comprised of a few sentences pointing out quality aspects and opportunities for improvement (1).

Basically there are no great differences between project plans designed by Norwegian and international PhD applicants. Applications may be delivered in Norwegian or English, and some Norwegian applicants also write their applications in English. Problems with writing in English are quite common, but writing English well is important. Low level of mastery of a relevant English research genre usually results in “poor” text with weak and possibly inappropriate vocabulary, or incorrect grammar and syntax. Thus the text may appear naive. There is a great potential for improvement when writing good applications in English. Even when applicants have a good knowledge of English, it is necessary for them to be precise in their use of concepts (2).

Applicants from other cultures than Norwegian academia may not be familiar with requirements and standards. This is a gap that may be time consuming and difficult to bridge. Requirements regarding precision and overview of the field of study are similar as for Master-level students, but are on a higher level for PhD studies (4). Currently no less than two years’ Master-level education is accepted for applicants (1). Still they may have insufficient theoretical and methodological knowledge and, as a consequence, too many undocumented statements tend to occur (1). This view is supported and even strengthened by one of the PhD research fellows, a former student at the two years international Master of Philosophy programme in Special Needs Education at UiO. He adds that it would have been preferable to have more academic experience after completing his Master study before starting on his PhD research (1). Another research fellow states that having four years’ experience after receiving her Master’s degree employed in different research groups has given her a variety of important research experiences (1).

Research fellows reveal a number of differences between their former universities and UiO. Some of these appear in the preparation process; in other cases it may take a long time and specific experience to discover them:

- One informant points out that different universities and countries seem to have different traditions in writing research plans and applications. For instance at her former university research plans and applications are

expected to be shorter. Guidelines are not so general, but more strict and to-the-point; described in a maximum number of words and not pages. In this way they do not allow for as much discussion. Administrative procedures are more emphasised, and (financial) plans expected to be much more detailed. The UiO application tradition appears more flexible and general in nature, allowing applicants the freedom to present and discuss their application information (1).

- One of the research fellows had neither studied nor worked in Norway, and she prepared and wrote her research plan in her former country of employment. She states that she needed information about expectations related to the content of her application as well as administrative aspects:

Administrative procedures were rather unclear to me. I used UiO's internet information, e-mail, and telephone contact with partners from UiO in a joint international project. On the Net I found links to information on the faculty homepage as well as links to the homepage of UiO centrally. I read all the documents from the Faculty of Educational Sciences concerning expected content of a PhD project, evaluation and quality criteria ... I thought the information was comprehensive. All in all it was informative. I also got good information and feedback from UiO concerning the administrative procedure of the application process. It mattered for the result (1).

- Her description is supported by another research fellow, who points out that it is important and valuable to have as much information as possible available on the Internet. She mentions specifically relevant literature lists, information about research ethical aspects and the assessment process of submitted applications. Examples of model proposals would also be valuable (1).
- When preparing the research plan, a number of methodology books have been consulted; however, none of them offer a complete set of advice on how to write a research plan (3). One exception is mentioned, namely Phillips and Rugh's book *How to Get a PhD. A Handbook for Students and Their Supervisors* (2010), (1).
- Ethical standards are more detailed and formalised in Norway than in certain other countries. Consequently, it may come as a surprise to the research fellow the amount of time it takes to formulate letters of consent, post them and wait for answers. For example, the Norwegian Social Science Data Service, NSD, assures that ethical issues regarding informants' privacy are followed. In my home country, says one research fellow, although we do not

have such a committee, we still follow the same research ethical guidelines. He points out that it is easier to recruit informants at home (1).

- There are, of course, some communication difficulties for international researchers in Norway, even if they have a basic mastery of the Norwegian language. Sometimes one finds oneself using non-verbal communication in order to clarify questions in an interview situation. Language problems take a lot of time in all phases of research, even when the research work is written in English (1).
- It is also noted that there are fewer PhD courses offered in English than in Norwegian. Thus international research fellows may have to wait or search for relevant courses at other universities or in other countries. Regarding this aspect, the choice of courses is more limited for them than for Norwegian research fellows. This may affect their efficiency during the research fellow period (1).

According to senior researchers, there are several problems related to research plan quality varying among applicants (1). Many project descriptions are too broad in scope (1). There may be unclear relationships between the research question or topic, theory, design, methods, instruments and analysis (2). While the plan's structure often follows the required parts of a research plan, the level of precision and clarity is too low within some or all of these parts (2). Some research plans have shortcomings in the latter part of the listed items above, as if the candidate were short of time. Thus the time line and reference list may be incomplete; selection of informants and contact with case owners (for example organization) may be suggestions only, as if no informants have been requested and none have given their consent to participate. Thus some plans do not have sufficient feasibility due to inadequate preparation (1).

When a funding organisation announces that research plans have to be in line with their profile, it is very important to study this research profile and come up with content which combines the organisation's priorities and applicant's research interest (1). Research programmes usually have general guidelines, which have to be carefully analysed. It is important to discuss the project in view of these guidelines (1). Assessment of PhD research plans on behalf of the Faculty of Educational Sciences, UiO, is in accordance with the faculty's guidelines. When the faculty has priorities within specific fields of research, they have to be considered in the research plan (1). One research fellow (1) reports that his application is based on former knowledge from his Master study, requirements announced for a PhD position within a specific

research project, and on the formal criteria of the Faculty of Educational Sciences, UiO, (<http://www.uv.uio.no/english/research/doctoral-degree/phd/application/>). Another research fellow finds the UiO criteria for a research plan “alright and general” (1). A third research fellow emphasises that talking with former PhD fellows has been of great help (1). General requirements of a research plan at the PhD level are summed up in this way by one of the senior researchers:

In order for a research plan to be accepted at the PhD level, it has to demonstrate in-depth knowledge of relevant theory, an overview of existing research and methodological insight. Key concepts need to be clarified. Based on knowledge within these areas, the applicant is expected to be able to describe and discuss existing knowledge within the selected field of research, and also point to lack of knowledge within certain areas, a lack which calls for more research. In this way the applicant constructs a necessary connection between the research question or topic, discussions of existing research within the field, as well as documentation and argumentation for further studies (1).

Senior researches convey a number of **general recommendations** regarding the process of making a quality research plan.

First, the plan needs thorough preparation. Having several years of preparation and a good Master’s degree provides a solid general background in order to start the actual writing of a project plan (1). Writing a project plan requires, as a rule, three months of work, even after many years of research experience (1). High quality research plans have a high degree of precision, relevance and references to relevant literature and former research (1). It is important to follow “the rules” of academic writing (1). The research plan should start with stating the theme and a preliminary research problem or question. The importance of theoretical discussions and overview of relevant former research is pointed out by several senior researchers: The plan should proceed to a thorough literature review, a) discussing theoretical positioning of the study and b) present a thorough review of relevant studies from a broad research front and conclude with arguing and formulating a more exact researchable problem or question. This procedure makes it possible to combine empirical and theoretical research questions, out of which a good thesis can develop. The literature review is also important in searching for relevant methodology in order to “answer the question” of the research topic or problem (2). Reading methodological handbooks is important, but not sufficient. Even more important are the discussions of choices related to the research problem or question and methodology, i.e. the inner structure of the plan. A completed research plan must be coherent and

not merely a collection of “this and that” (1). To sum up, a research plan needs to be reasonable and manageable. Applicants are advised to keep in mind how to “sell” their project plan to the sponsors, whether they are applying for a PhD position or other funding institutions and research programmes (1).

A pure innovation project is not suitable as a PhD project. The intention of PhD projects is to do research and generate knowledge. Possible innovation may be an additional aim or further consequence of a project (1).

If available, the senior researchers recommend that potential applicants request competent mentors or peers to review and comment on their research plan before it is submitted. However, senior researchers may only give minor support, since it is crucial for acceptance that the research plan is the applicant’s independent work. The key question is whether the plan is comprehensible, realistic, credible, important and interesting (3). One of the research fellows relates that a senior researcher read and gave feedback on the application draft before submission (1). “I advise all potential applicants to have somebody comment on the content and language before submitting”, says another research fellow (1). Research fellows had access to one or two former research applications during their work on their own research plan (2).

## Regarding research problem or question

A frequently found shortcoming is that the research question or topic is too general and too broad and, likewise, that sub-questions or -topics are not sufficiently delimited. Consequently the research plan is not limited in accordance with the time limits of the fellowship or programme (5). It is crucial that research questions are formulated in such a way that it is possible to find answers (3). “How do we proceed from general to specific research problems?” asks a researcher, adding: “I do not remember a single application where this was not a difficulty; this goes for Norwegian and international PhD applications alike (1). His further statement represents the opinion of most of the senior researchers (1):

Applicants’ difficulty does not concern their choice of theme. They are usually relevant for special needs education. The typical difficulty arises on the way from theme to specific research topic or –question; from the general to a specific research problem. Applicants usually have difficulties with the process of making the research theme or general problem researchable; with the process of operationalization. This is a challenge which occurs in the majority – if not all – first drafts of project plans, and which needs to be in focus when we give advice to applicants: The challenge is to find a “name” for the variables the applicant intends to study.

It is recommended that the research problem or question is presented on the first page of the plan, even at the beginning. It should be followed by a discussion of the relevance and importance of answering the question through further research. It is preferable that the main research problem or question is divided into a maximum number of two or three sub-questions. Each of these sub-questions should be accompanied by a few sentences arguing for the direct connection with the main problem or question. This procedure works well in quantitative as well as qualitative plans (1). Another researcher points out that it is helpful to state the topic as a subject for investigation and to do so in the form of a question. This helps focus the research (1).

## Theoretical basis of the selected research area

One research fellow tells that while he learned a lot about excellent and helpful theoretical perspectives as a Master student, he did not learn how to argue and connect theory to his research problem (1).

Senior researchers place great emphasis on the theoretical aspect of research plans. In the review part of a plan, it is important to report on and discuss a broad range of literature related to theory. Having a thorough knowledge within their field of study, applicants will manage to develop specific and researchable problems or questions and operationalized variables (3). One of the most difficult parts of the research plan concerns the presentation of theory in relation to the main topic or question. Some plans are weak on theory. In other plans the theoretical section tends to be presented in a “study book”-like genre, and applicants have not managed to apply the chosen theory to their theme of interest. A central question here is how to “move” from theory to research problem; how the formulation of the research problem is anchored in theory. The discussion of literature also needs to clarify limits and weaknesses in the argumentation for the choice of research topic, requiring the applicant to have spent considerable time searching for and studying relevant theory (5).

In order to achieve applicability and creativity, the plan would gain by having either one or more of the following traits:

- Application of new theory
- Modification of a well-known theory due to novel character of the application context
- Application of theory within a new application context (1)

Should the theoretical discussion contain an account of theory of science? A prominent senior researcher within theory of science does not expect so. “However”, she points out, “research fellows seem to perceive that knowledge within theory of science helps to improve their argumentation. This is especially so for those who use the opportunity to relate the obligatory PhD course essay to their own research” (1). She adds that there is even a question if the Faculty of Educational Sciences should support research fellows with an additional course in argumentation.

One of the research fellows mentioned explicitly that he applied cultural-historical theory in his research plan and mentioned literature relevant to his studies (Bronfenbrenner, 1979; 2005; Rogoff, 1990; 2003; Vygotsky, 1978).

## Presentation of former research within the selected area of study

Another important part in the preparation of a research project is to search for and read former relevant studies. Many research plans have too limited reviews or too diffuse connections between reported studies and the actual research topic. They need to contain an updated overview of a broad research front, presenting knowledge about previous studies and the future need for research, and in this way legitimate the chosen research problem (8).

## Discussing research methodology

An often mentioned problem is the lack of or unclear relationship between the research problem or question and choice of methodology, and further, between research design, methods, instruments and analysis. Challenges in this area are more or less evenly distributed across chosen methodological approaches, such as quantitative, qualitative, mixed methods, etc. Whatever methodology is applied, it is necessary to demonstrate thorough knowledge concerning how to use it. There has to be compliance between the research problem and choice of methodology. It takes hard work to find, argue for and formulate this connection (7). A group of senior researchers recommend that applicants observe how Yin (2009) and others discuss the relationship between different types of questions or intentions and choice of methodology (4).

As mentioned, methodology covers design, method, instruments and analysis. All aspects need to be accounted for. Discussion of chosen method needs to provide necessary and sufficient means to answer research questions (1). A detailed account for data gathering instruments is not always required, espe-

cially if developing instruments, such as an interview guide or questionnaire, is an important part of the planned research activities. In such cases the topics of investigation should be explicitly presented (1). The research plan should also contain an accurate plan for analysis of findings (1).

A research fellow points out that it is important to be well informed through methodological readings, and in this way achieve an idea of different approaches which may be of use in the study (1). Applicants may have applied the same methodology as in their Master studies, or they may have chosen quite another methodology. One informant had used qualitative methodology, then participated in a quantitative study and argued for using mixed methods in her PhD application (3). Research fellows have used and recommended a number of methodology books, including literature focusing on research in countries in the South. The majority of these are referred to below or in the reference list and relate to relevant methodological genres (Befring, 2004; Gall, Gall, & Borg, 2007; Laws, Harper & Marcus, 2003).

## Planned progress and recourses

One research fellow states that even though in principle the calculation of a time plan at the PhD level is the same as at the Master level, it needs to be more detailed, covering a more complicated activity process (1). As mentioned, senior researchers argue that some research plans have shortcomings in the latter part of their presentation. It is as if the candidate has not had enough time to complete the application thoroughly. In many cases the time plan seems to be based on guesswork, or it seems to be part of the plan just in order to fulfil a required set of criteria. This lack of sophistication may in some cases have a boomerang effect, leading to difficulties for researchers who do not manage to follow their written time line (1). Selection of informants and contact with case owners (for example an organization) sometimes appear to be suggestions only, such as if no informants have been requested, or none have given their consent to participate. Such inaccuracies indicate that the plan does not have sufficient feasibility (1). As with the time line, the estimated budget also often looks like guesswork (2).

## Presentation: language, logic and structure

Concerning presentation, the importance of “following the rules of writing a research plan” (1) as well as demonstrating a sophisticated knowledge of the English language (1) has already been mentioned. Another piece of advice relates to the literature list: “Do not be sloppy with references” (2).

## Viewpoints on specific research methods

Informants were also asked to add more specific comments related to methodologies with which they had direct experience and to recommend possible literature. As the researchers were selected from different traditions within education and special needs education, detailed recommendations were given regarding quantitative, qualitative and mixed methods, as well as text analysis. The following quotation represents a common fundamental view:

You should not let the method direct you. It is the research questions which should direct which tools of analysis may be possible and relevant (1)

**Quantitative methodology.** The impression is that those who present plans with quantitative methodology master its usage. Operationalization and discussion of instruments are usually good (1). For example, it should be possible to describe experimental design in details when the research problem is clarified. Quantitative methodology is suitable to analyse large samples. However, it is also applicable in relation to small populations and samples, such as is often the case within special needs education. Handbooks on quantitative methodology also offer readers good advice concerning studies of small samples. Relevant variables should be described and discussed in the plan (4).

Knowledge about statistics needs to cover the variety of statistical means as tools in data analysis. Research plans should have explicit discussions of which statistical methods are assumed to work as tools for analysing expected findings. This requires thorough knowledge about possibilities and limitations (6). The following books were recommended; Befring (2004), Robson (2011) and Gall, Gall & Borg (2007). Gall, Gall and Borg's book has been the most applied book on the international Master of Philosophy programme in special needs education, UiO, through several editions, and is also applied in other programmes.

**Qualitative methodology.** "Presentations of qualitative methodology often tend to be insufficient", states one of the informants, and points out that methodological discussions must be explicitly related to the research problem (1). Qualitative analysis may have a bottom-up, even a "grounded" perspective, or it may have a set of pre-determined categories as its point of departure; or it may place itself somewhere in between these two outer edges. If categories are pre-determined, these should be identifiable within the theory section of the plan. Sometimes they are directly reflected in the research questions. The analysis is the most difficult part of the research report. The plan should accordingly suggest what kind of analysis might be expected (1).

Several books were recommended within qualitative methodology (2): The large Handbook of Qualitative Research edited by Denzin & Lincoln (1994) is considered reputable. Within the grounded theory tradition Corbin and Strauss' basic book (2008) is amongst the major literature (1). So is also Cresswell's introductory book to five genres within qualitative research (1). When it comes to conversation analysis: Harvey, Schegloff and Jefferson's article "A Simplest Systematic for the Organization of Turn-Taking for Conversation" (1974) is a classic (1). A research fellow doing her study on the African continent (1) also recommends Vulliamy, Lewin & Stephens (1990) together with Silverman's classical handbook (2010) and Fangen's Norwegian book on participant observation. Another informant (1) adds Kvale's (1996) book on interviews to the methodological repertoire.

**Mixed methods.** Large-scale studies do not leave much opportunity for the voice of the individual informant to be noticed, argues one of the informants, pointing out that research focusing on one or few informants, which is usual in qualitative studies, offers this opportunity. Therefore it may be good to start with a broad survey using a quantitative approach, and then pick qualitative cases within the sample, or strengthen qualitative findings with quantitative data (1). The strength of mixed methodology is that such studies may consist of a combination of interview or interaction analysis and questionnaire. It offers a combination of different kinds of analysis, which when combined may strengthen or weaken the findings in a transparent way. Furthermore, qualitative categorisation and quantitative analysis may support each other mutually. Tashakkori & Teddlie's handbook on mixed methods (2003) is recommended. Currently triangulation or multiple methods approach may more easily be accepted in the research community. However, it is noted that different research communities accept different methodological approaches (3).

**Text analysis** contains several genres such as document analysis, text analysis and discourse analysis. One of the research fellows points out that within text analysis we again find different methodological approaches like interaction analysis, conversation analysis and anthropological analysis. Concerning text analysis, the informants in this study mostly use Norwegian literature (Neumann, 2001; Sacks, Schegloff & Jefferson, 1974; Svennevig, Sandvik & Vagle, 1995). In addition the Italian researcher and novelist, Eco's, book on the art of writing an academic thesis (2010) is recommended<sup>26</sup> (5).

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26. The author of this article has not managed to find an English translation of Eco's book, originally published in Italian, but translated to and published in Norwegian (2010).

## Concluding comments

At the close of their interviews, informants usually emphasised certain concerns or ideas. One point was that applicants very seldom are aware of the amount of time it takes to develop a quality project plan (2). Another point was that new technology with the Internet and e-mail makes it easy to gain access to researchers. This, in turn, increases the number of applicants. However, this does not necessarily increase the quality of presented research plans. An increasing number of unqualified applications arrive on the doorsteps of university boards and research programmes. Senior researchers point out that applicants need to know that potential advisers have a very limited amount of time to read application drafts and give feedback; maximum one or two revisions. It is important that international applicants are given the opportunity to find detailed information on the university faculty's and research programme's homepages and that they have access to asking questions during their application process. Two full-time positions are allocated at the faculty level in order to administer matters regarding PhD activities. They have a key role in providing information service to applicants (3).

Two senior researchers referred to a current example from an obligatory midterm evaluation of three international PhD research fellows, which showed an immensely increased level of reflection compared to when they started their studies. This indicates good interaction between university and research fellows during the first half period of their fellowship. However, it is a problem for some PhD applicants from the South that they seem not to have access to sufficient research libraries and a relevant local research community where they can discuss their ideas during their research planning. It is important to support access to literature as well as discussions and reflections in relevant research communities. The informants therefore address the University of Oslo (UiO) as an international university, giving the following recommendation: Norwegian authorities could support a certain number of promising international PhD applicants through sponsoring study visits to our university in order for them to use our facilities and receive a limited amount of mentoring. Thus, six months grants at the Faculty of Educational Sciences, UiO, would be appropriate, according to the informants' experience (2).

## Experiences, knowledge and opinions in light research texts - Discussions

The presented information conveys a broad spectre of shared experiences, references and recommendations. The following discussions add to the informants' voices a distribution of knowledge from international and Norwegian guidelines and a selection of methodology literature addressing the development and writing of research plans. What are potential funding sources' written criteria for project descriptions? How detailed are their recommendations and assessment criteria, and how do they comply with the informants' experiences and suggestions? The same questions are directed to selected books on research methodology.

**Directions or guidelines** for project descriptions from five different research funders are selected. They are from the Faculty of Educational Sciences, UiO, Norwegian and English text; the Research Council of Norway; the Swedish Research Council; the European Research Council, ERC; and from the United Nation's (1973) *Research Proposals: A Guide for Scientists, Technologists and Research Institutes in Developing Countries*<sup>27</sup>. The texts from the Faculty of Educational Sciences, UiO, are of special relevance when Norway is the case. The other texts are related to general applications and applications within educational sciences.

**The traditional parts of a research plan;** theme/topic, research problem or -question, methodology, progress plan, needed resources and references; are mentioned in the five different guidelines. The UN guide (1973) uses the terms scope and objectives. The guide contains a logically structured introduction to a project plan for a whole range of research and innovation disciplines, containing all parts mentioned above, adding historical background information, and stressing the point that the objectives or problem to be studied should be mentioned and explained in the introductory section. The second part of the guide contains an example of a project plan.

The other guidelines provide brief descriptions of the main parts and the relationship between them. The terms objectives, purpose, aims and goals, and

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27. Home pages and documents for the mentioned texts are, in the same order as mentioned in the main text: <http://www.uv.uio.no/english/research/doctoral-degree/phd/application/>, 19.09.2011; <http://www.uv.uio.no/forskning/doktorgrad-karriere/forskerutdanning/soknad/>, 19.09.2011; [http://www.forskningsradet.no/en/Researcher\\_project/1\\_195592882768](http://www.forskningsradet.no/en/Researcher_project/1_195592882768), 19.09.2011; <http://www.vr.se/inenglish/researchfunding/applyforgrants/callforproposals/opengrant...>, 04.06.2011; 2010; ERC, 2010; UN, 1973. Research methodology books are referred to as they are discussed.

research problem are used. The Research Council of Norway points out that the objective should promote scientific renewal and development of disciplines and/or generate new knowledge about issues relevant to society ([www.forskingsradet.no](http://www.forskingsradet.no)). Sections on theory and previous research discussed by the informants are covered with terms such as historical background information (UN, 1973), state of the art (ERC, 2010), other research and previous findings ([www.vr.sve](http://www.vr.sve)) and background status of knowledge ([www.forskingsradet.no](http://www.forskingsradet.no)).

The Faculty of Educational Sciences, UiO, describes as a quality criterion “familiarity with the problem area and documented knowledge of central research within the field”. Description of quality criteria are, however, only found in Norwegian guidelines to PhD applicants (Programrådet, undated). However, the guidelines presented in Norwegian and English are clearly different. The Norwegian guidelines have links to two other documents; 1) Two pages containing further information and a list of recommended literature, whereof several are in English (Programrådet, undated); 2) a ten page long guide to project planning and how to write a thesis in Norwegian, comparable to the UN guidelines (1973), (Hovdhaugen, undated). The English guidelines are very short and have no links. This leaves English-speaking applicants with considerably more sparse information if the homepages of the faculty are their only guide to the PhD application. A telephone or e-mail to a relevant administrative employee would perhaps lead them to the list of recommended literature. The three successful PhD applicants participating in this study used the opportunity to contact administrators or colleagues, and one of them was able to read Norwegian. Two of the applicants wrote the application in Norway, while the third did not visit Norway at all during the application process. It seems that the faculty would be able to improve the quality of the English guidelines with rather minor efforts and resources.

**Overriding criteria.** “Read and follow the instructions in the call for applications of specific research programmes.” This sentence is in line with informants’ recommendations. Concerning overriding criteria, most application documents prescribe that ethical issues, gender equality and, when relevant, environmental consequences of the planned study, are discussed in the research plan. The selected application documents are rather general. However, some of them stress the importance of reading the “call for papers” and related documents thoroughly when addressing a specific research programme. Different programmes may have different focus. As examples three different research programmes on behalf of Norwegian funding institutions are examined:

- SIU, the Norwegian Centre for International Cooperation in Higher Education, has until recently administered the so-called NUFU program, which was a programme for cooperation between universities in the South and in Norway for post-graduate education and research. In addition to the above mentioned overriding criteria, the NUFU programme document (2007–2011) focuses on synergy, sustainability and regional network cooperation (NUFU 2007–2011). Currently the NUFU programme has been replaced by the NORHED programme (The Norwegian Programme for Capacity Building in Higher Education and Research for development), administered by the Norwegian Agency for Development Cooperation (NORAD). This new program contains similar overriding criteria as the NUFU programme, but with more detailed instructions concerning gender equality and empowerment of women (<http://www.norad.no/en/support/norhed>).
- RCN, the Research Council of Norway, administers a number of programmes, amongst them the Programme for Practice-Based R&D<sup>28</sup> in Pre-School through Secondary Schools and Teacher Education (2006–2010). Its work programme contains a number of prioritised research areas. In order to succeed, applications needed to be situated within relevant areas.
- RCN also administers the third in a series of collaborative programmes between universities in West Balkan countries and Norway<sup>29</sup>. Much like the former programmes, the current HERD (2010–2013) programme focuses on the following extra overriding criteria, which need to be addressed in an application; synergies, ethnicity or to enhance minority participation, regional co-operation, sustainability and potential environmental benefit.

**Length of research plan.** Comparing the selected application documents reveals not only several similarities but also differences. Thus, the prescribed length of a research plan differs from between 5–10 pages including literature list ([www.uv.uio.no/english](http://www.uv.uio.no/english)) to the most extensive recommending a maximum of 15 pages excluding ethical issues, tables and index (ERC, 2010).

As discussed and documented, application guidelines and related documents give necessary, but not always sufficient information and perspectives for an application to succeed. As with all texts, they are also subject to the applicant's interpretation. Having a certain amount of familiarity with the local mentality

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28. R&D: research and development

29. The cooperating universities of this anthology applied for and succeeded in receiving project financing jointly under the two former programmes, but did not apply for the third and current one (SØE 06/02, 2002; WB 04/06, 2006).

of the project funder concerning their current research policies and discourse/s as well as administrative routines may be advantageous, as also mentioned by informants.

**Methodological texts.** Informants have also argued that methodological knowledge is necessary in order to develop and write a high quality research plan, and several books and articles are recommended, as may be seen in the reference list. In the following a few texts are mentioned specifically.

Two books are particularly suitable as introductory literature for international Master students and PhD applicants. Befring (2004) provides an introduction to research methodology and statistics from the point of view of a very experienced Norwegian professor in special needs education. It contains a chapter on how to write research plans and reports. Similarly, Gall, Gall and Borg's handbook on educational research (2007) gives a thorough introduction to a steadily increasing number of methodologies, as new editions arrive. Part Two is dedicated to planning a research project. These books have been used by international Master students at our Department of Special Needs Education, UiO, for many years, and more often than not occur in reference lists of PhD research plans.

Phillip and Pugh's (2010) main contribution is their easy-going discussion of the emotional ups and downs often experienced during a long-term research process. The book is addressed to Master's degree students, PhD research fellows and supervisors alike. The authors have dedicated two chapters to discussions of equality for research students of so-called non-traditional and ethnic minority groups.

When it comes to PhD studies and senior research project applications, introductory literature is not sufficient. Possessing thorough knowledge and an understanding of the chosen methodology with its possibilities and limitations is necessary. A combination of classic or basic literature and current perspectives on all relevant aspects of the applied methodology, from design to analysis, may contribute to generate new knowledge and new research practices within the scientific discipline. Informants have offered a number of suggestions regarding applicable literature within different research methodological areas. It may be added that Robson (2002), Corbin and Strauss (2008) and Siverman (2006) represent fairly new editions of classical overview and in-depth methodology literature. Stake's short and concise presentation of the art of case study (1995) is "an evergreen". Further, even though it is not entirely new, Alexander's extensive work on culture and pedagogy (2000) is an example of how to apply

a renewed and extended perspective on comparative educational research in an actual large-scale study. The latter book is a reminder of the necessity of examining the state of the art within the relevant field of study.

As much as reading of methodological texts is a necessary part of preparation, additional studies of successful research plans may promote a better understanding of how methodological issues are applied in one's own research plan. Access to a selected number of "model research plans" is therefore recommended.

Some senior researchers state that there is a wide range of quality of research plans amongst international and Norwegian applicants alike. However, they also emphasise that international applicants experience more barriers in their application process as well as during their PhD studies. The more limited access to Norwegian research discourse during application and PhD studies appears in higher threshold to practical, administrative information, less awareness of applied research instruments, as well as difficulties in gaining "initiation" into the generally accepted academic discourse, including familiarity with the steadily emerging flow of concepts. PhD research fellows are mentioned specifically as having limited access to research seminars in English. Neither research fellows not senior researchers pointed to the enrichment that international research fellows represent in the Norwegian research community. It is therefore a question whether or not the local research community makes full use of the specific experience, knowledge and initiatives that international PhD research colleagues from all continents possess.

The majority of international PhD applicants are situated within their local academic culture during the application process. Similarly PhD research fellows and cooperating researchers in international projects stay in their local culture and home country during most of the research process. Some projects deliberately aim at knowledge exchange and joint upgrading within a common international research. One example is the WB 04/06 project. *Development towards the Inclusive School: Practices – Research – Capacity Building: Universities of Belgrade, Ljubljana, Sarajevo, Skopje, Tuzla, Zagreb & Oslo* (2006), with its research topic: *Comparative Classroom Studies towards Inclusion*. In this project research meetings have alternated between the participating universities, one each semester. Each meeting consists of a visit to a selected research project school, presentations and discussions of papers related to the joint research project, and a combination of an internal project seminar and an open lecture day of an internationally renowned researcher within an important area of the joint research field. Another example is a current NUFU project *Capacity*

*Building in Teacher Education for Children with Disabilities and Special Needs* (2007), aiming at upgrading academic staff in accordance with requirements for researchers at the PhD level. The project prepares possible applicants for developing and writing research plans through running PhD seminars about the development of research proposals, academic writing, validity issues, quantitative and qualitative approaches, teaching methods and use of visual media in higher education. Study trips are arranged to UiO with access to its library and academic staff members' advice in the process of developing research plans. Five scholars have been admitted to the PhD programme at the Department of Special Needs Education, UiO; three of them with scholarships from the NUFU project.

The request of senior researchers, reported amongst findings, for a permanent arrangement for promising international PhD applicants in the form of a preparatory fellowship to UiO aiming at developing and writing research plans, with access to library services, seminars and a certain amount of supervision, may be regarded as a continuation of the two projects mentioned above.

## **Possibilities and barriers in developing and writing a qualified research plan**

A main conclusion of the presented information and discussions is that it takes a long time to make a high quality research plan. The road from theme to research topic or question may be long. A wide spectrum of knowledge needs to be acquired and the ability to argue and structure a logical text is necessary. There must be focus on a broad range of relevant theory and insight into the state of the art of the research topic. All relevant aspects of methodology need to be examined in relation to the research topic. A feasible financial plan, including possible technological or other investments as well as a realistic time plan, is necessary. Any prescribed reference system should be used correctly and consistently. Precise and good English language skills are required. Thus in order to produce a qualified research plan, high demands are placed on the applicant as well as on the funding institution.

When it comes to the applicant, work experience after having completed their Master's degree may be preferable, as PhD and senior researchers also argue. However, if one has ambitions to pursue doctoral studies, it is a good idea to start searching for a research theme as soon as possible and follow this up with

a further search for relevant theory, local and international research contributions and methodological advances, as well as keeping an open and reflective mind regarding one's own relevant practice. Applicants preferring to continue with further studies within the topic of their Master's thesis may already have a solid foundation to start developing their application. Several researchers have found their theme of interest in their professional work. Some applicants have a strong interest in trying out new fields of study and methodological challenges. A number of promising Master students are encouraged to apply for research assistant positions or participate in joint research collaborative project applications, either locally or internationally. These are different "windows of opportunities" for research trainees. The responsibility for producing a relevant, high quality research plan rests on their shoulders.

When it comes to funding institutions, it is in their interest to attract qualified research trainees who may contribute to fulfilling the institution's goals and visions.

Developing international research is an important goal of the University of Oslo, which claims in its strategy plan that it will increase its contribution to academic developments on an international scale (Strategy2020; Strategy2020, 2010). It is thus in the interest of the university to remove or reduce any barriers in the information stream and other services that may support applicants to PhD research fellowships or other research cooperation projects for international and Norwegian applicants alike.

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