

PhD supervision of students from developing countries: students and teachers perspectives

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Introduction

As part of the ongoing globalization, universities and other institutions for higher education in Western countries receive an increasing number of students from abroad, including students from developing countries (Ryan and Carroll; 2005; Biggs and Tang; 2007). This is also the case in Denmark. Thus, Danish Ministry of Science, Technology and Innovation (2009) reports that the number of international students at Danish universities increased by 76% from 2000/2001 (2968 students) to 2008/2009 (5234 students). In this statistic, the number of students from the category "Other countries", which mainly includes countries in Africa and South America, increased even more, namely by 163% (from 162 to 426 students), whereas the number of students from Asia decreased slightly (from 455 to 415 students).

Many of the students coming to Denmark from developing countries, especially those from Africa, are in one way or the other recruited in relation to projects implemented by Danida (Danish Development Assistance under the Danish Ministry of Foreign Affairs) in their home country, and they receive scholarships for their studies through Danida. Their stay in Denmark is usually organized through the Danida Fellowship Centre (DFC), which takes care of practicalities such as travel, accommodation, visa and other administrative issues and payment of allowances, and introduces the students to Danish life and culture. However, when it comes to the university students, and in particular the PhD students, their introduction to the university and their guidance through the study programme is

very much in the hands of the individual university, department and supervisor to which they are attached.

PhD studies in Denmark for students from developing countries are often arranged as so-called “sandwich programmes”, where part of the study takes place at the Danish university (usually the initial part of proposal development and the final part of data analysis and thesis write-up) whereas the data collection part takes place in the candidates home-country. The planning and implementation of PhD studies for students from developing countries is generally more complex and challenging than for students from Denmark, both for the student and the supervisor. This is partly because of the practical arrangements related to travel, accommodation and field work, but probably also to some extent due to the fact that the students come to a culture and academic environment which is considerably different from what they are used to. Very few studies have addressed the challenges met by PhD students from developing countries and their supervisors at universities in Western countries. One such study, which investigated barriers to communication and interaction between Chinese PhD students and their supervisors at Australian universities (Chen et al.; 2003), identified major problems and cultural conflicts faced by the Chinese students in adapting to the academic culture in Australia.

In the present project, practical and educational experiences related to supervision of African PhD students within health related topics at the University of Copenhagen (UC) were investigated. African PhD students attached to the cross-faculty “Copenhagen School of Global Health” and their UC supervisors were recruited for the study. The study used a questionnaire approach, with open questions about challenges experienced in the individual’s PhD study. The responses are analyzed and discussed with a view to identify issues which can improve the quality of supervision and course of the PhD study for students from Africa/developing countries.

Problem formulation

PhD supervision of students from African countries: What are the practical and educational experiences of students and supervisors, and how can these experiences be used to improve the quality of supervision and the course of the PhD study.

Methods

UC registered PhD students from Africa, carrying out their study within a health related topic, as well as their supervisors, were identified. This was accomplished by asking around in departments within the faculties of Life Sciences and Health Sciences known to be engaged in health related research in Africa, and by consulting the network for PhD-students under the cross-faculty “Copenhagen School of Global Health”. When identified, the supervisors were first approached and informed about the survey and its implications (orally or by email), and after acceptance to participate they received a *Supervisor Questionnaire* by email. The PhD students were thereafter approached (orally or by email), and they were given similar information and an electronic copy of the *Student Questionnaire*.

The questionnaires had, on the first page, brief information about the background of the survey and how the questionnaires should be filled in and returned. The respondents were asked not to show their answers to their students/supervisors. The respondents were also assured that completed questionnaires would be kept confidential, and that during writing of the report all responses would be made anonymous and presented in a way that would not allow the expressed views or experiences to be linked to particular respondents (neither supervisors nor students).

In addition to an initial section asking for personal background information, the questionnaires contained mainly open questions about challenges experienced in relation to the PhD study. The *Supervisor Questionnaire* asked questions related to PhD proposal development and PhD study progress for the specifically mentioned PhD student, and to experiences with PhD students from Africa/developing countries in general. The *Student Questionnaire* asked questions related to the students experience with practical issues related to the PhD arrangement, the PhD proposal development and study progress, and the PhD supervision. Ten PhD students who fulfilled the criteria (i.e. registered at UC, being from Africa, studying a health-related topic) and their supervisors were identified within the two faculties, and these were given a questionnaire. Nine of the students (and their supervisors) responded, and these comprise the study population for this report. The tenth student did not respond despite several reminders, and this student and the supervisor were therefore excluded.

The returned completed questionnaires were scrutinized and responses were analyzed. It was tried as much as possible to quantify responses. However, due to the open nature of most of the questions, a more qualitative

approach of summarizing responses (as objectively as possible) in combination with citation of individual statements judged to be particularly important or representative was also taken. Citations are shown in italics (with “St” indicating student number, and “Su” indicating supervisor number). In order to anonymize the report as much as possible, no country names are given. For the same reason, in case of female students the words “she” and “herself” have been changed to “he” and “himself” when citations are given from the supervisors questionnaires.

Results

Characteristics of the students and their supervisors

The nine interviewed PhD students had the following characteristics:

- All were from countries in which English is the official language (and the university teaching language)
- Three were females and six were males
- The mean age was 37 years (range 32-40 years)
- They had basic university training in biology, veterinary medicine, human medicine, biostatistics, and/or health education
- They were registered at four different UC departments: two at the Faculty of Life Sciences, and two at the Faculty of Health Sciences
- At the time of the interview they had been registered as PhD students for a mean of 27 months (range 20-41 months)
- The PhD studies were all funded by grants from Danish organizations (mainly from Danida, through DBL or ENRECA)

The nine PhD students had seven different supervisors (i.e. two of the supervisors had two students each). These supervisors had the following characteristics:

- All except one were senior university staff (professors, associate professors, senior researchers), one was assistant professor
- They had been supervisors for a mean of 19 PhD students each (including present students) (range 1-45). Most students also had Danish co-supervisors, and co-supervisions are included in the above and below given figures

- They had on average supervised many more PhD students from Africa (mean of 12) than from Denmark/Europe (mean of 6). Some also had a little experience as supervisors of PhD students from Asia
- The reason given by the supervisors for having PhD students from Africa was that they were employed in departments that had a strong focus on capacity building in developing countries, and that they were themselves engaged in research on topics of particular health relevance for Africa

Experiences of the PhD students

Practical matters in relation to the PhD arrangement

All PhD students had been involved with the UC and their supervisor through previous or ongoing collaboration between the supervisor and the students home institution. Six of the students had participated in the PhD preparatory course on Research Methodology at DBL before registration for the PhD study. All nine studies were arranged as “sandwich programmes”.

In addition to the official UC internal supervisor (and sometimes Danish co-supervisors) all students had a local supervisor in their home country, either from a university (3 students) or from a ministry or research organization (6 students). The local supervisors appeared to mainly be involved in arrangement of field data collection, and sometimes in scientific discussions during the late phase, but the students generally indicated that most supervision was provided by the Danish main supervisor.

All students indicated that they would not have liked to register for a PhD study at a university of their home country, mainly because of lack of adequate facilities, because supervisors would often not be available when needed, and because it would take much longer time to complete the study. It was also mentioned that it was easier to concentrate at UC (away from home) and that it was good to learn how things are done in other institutions.

- *“No. I think I like it better in Copenhagen because I am sure that if I submit my work I will get to graduate a few months after submission. In my home country it can take over a year to even get external examiners to assess your work and you can not be sure they will respond” (St1)*
- *“Home supervisors are not always available when you need them as experienced by those registered here. It takes a year or more just to get registered” (St2)*

- *“No, there was no availability of a competent supervisor and adequate facilities to support smooth and successful implementation of a PhD project” (St4)*
- *“I would not have preferred to register at home university. The reason is lack of adequate capacity and support in home universities. I mean lack of human capacity, infrastructure e.g. good libraries and access to electronic information. Because of this PhD programmes might take 4-5 years” (St7)*

All, except one student, had spouse and child/children, but only one had been able to bring spouse and children to Denmark. Among those who had left the family at home, most indicated that the situation was difficult but that they had managed to make reasonable arrangements. It was indicated by one that it was better to concentrate when the family was not around, whereas another worried a lot about the family at home and had difficulties concentrating because of this.

All indicated that they had been given a good introduction to life in Denmark, by DFC, DBL and/or their department (in particular DFC was commended). However, they also all indicated that the introduction to PhD student life at UC had been poor and insufficient, and that information on web-pages and in many emails received was only in Danish.

- *“DFC did a good job by organizing programmes that introduced us to life in Denmark” (St1)*
- *“There was a comprehensive introduction to life in Denmark and Danish culture arranged by DFC. However introduction to UC and student life at UC was inadequate. Apparently this part is done at the section/research group level which I think is not enough. I think PhD students should also be introduced to the whole university/faculty and department levels so that they get familiarized with overall important issues/activities (including administrative)” (St4)*
- *“The main problem was at the faculty/university level where I received a lot of letters/emails in Danish language, it was tough especially for someone new to the language like me” (St5)*
- *“Unfortunately this is something difficult to get in UC if you don’t speak Danish. It is obvious even most of mails circulated within PhD mail group are written in Danish” (St6)*

Few other comments were given, but difficulties in getting PhD courses during the limited stay at UC (a problem of timing), and the wish to get a family visit during long stays at UC, were mentioned.

Proposal development and progress of PhD study

Four of the students indicated that their study was part of a larger project involving other students and/or researchers, whereas this was not so for the other five students. All said that they had suggested their study topics themselves, but that the supervisors had helped shape and focus the study. They were all very satisfied with the assistance and support provided by the supervisor during proposal development. They also all indicated that their educational background provided a good support for carrying out their PhD study (which was often related to their Master study or to earlier work they had been involved in).

- *“I had the idea and research interests of the topic and my main (internal) supervisor helped me to conceptualize and amalgamate all the ideals to come up with the topic”* (St3)
- *“It was my original idea but I discussed it with local and Danish supervisors before we reached a final agreement on the nature of the project”* (St8)

Students who had attended the RM course at DBL said that this course had provided a good foundation for their PhD study, and one student said he would have liked such a course before embarking on the PhD study. The students did not consider any problems regarding the English language in relation to their PhD study, but several mentioned that their limited understanding of Danish was a problem at some seminars and presentations. They all considered their writing skills to be good, except one who indicated a need for improvement. With regard to proof-reading and set-up of the thesis they all expected that their supervisor would read through and support.

- *“The main language problems have been some of important letters and emails being in Danish (this was really a problem in the beginning)”* (St5)
- *“Well, I think the supervisors will always edit your write-up before submission”* (St5)
- *“I have seen several students getting their theses read and commented by supervisors. So, I don’t consider it a problem”* (St6)

Most students expected to be able to complete the study within the given 3-year period, but some had experienced delays especially in relation to

field or laboratory work, and some flexibility was expected (two of the students had in fact spent more than 3 years at the time of the interview). Six of the students expressed that they did not feel that they had experiences and competences from their home country which were not sufficiently valued during their PhD study, whereas three students did not answer or had misunderstood the question. The students generally expressed that they socially thrived during the stay in Denmark, and especially the activities of DFC was commended in this respect.

- *“The time is enough if there are no delays in the field work. Normally the field work is delayed due to logistical problems”* (St3)
- *“I very much enjoy the long list of activities offered by the DFC at cheap price or free. . . .you can’t ask for more, can you!”* (St5)
- *“I lived at DFC where there are many international students and this made my life easier”* (St8)

PhD supervision

Eight of the students indicated that their supervisor had experience from previous work/projects in their home country (the ninth student had a Danish co-supervisor with such experience). All students indicated that their Danish supervisor would visit their PhD project in their home country at least once as part of the supervision. Seven of the students indicated that they had scheduled meetings with their supervisor during stays in Denmark, but that they could also pop in any time if need arose. Two students did not have scheduled meetings, but would go for consultations when necessary. All students indicated that they benefited from the meetings with the supervisor:

- *“I am able to pop in to see him any time needed and we also have schedules for meetings to discuss my work with my other supervisors”*(St1)
- *“Generally, the meetings are very beneficial and help me to progress on the work. Sometimes the meetings are inconclusive and I have to go back and try and solve the problem and then meet again to discuss”*(St3)
- *“He is very helpful person. I normally come out with new ideas after the meeting that help to push me forward”* (St5)

The students described their relationship to their supervisor by using the terms good, very good, excellent and fantastic. None of them indicated any barriers in understanding between student and supervisor.

- *“My relationship with my supervisor is good, she is like a mother to me; and the collaboration is good. I hope we can continue to collaborate even after the PhD”*(St3)
- *“So far I haven’t experienced any barriers or misunderstandings”*(St4)
- *“No barriers at all. This is because we meet regularly and discuss everything in a friendly manner”*(St8)
- *“The Research Methodology course at DBL really is a very good equipping course”*(St9)

Experiences of the supervisors

Proposal development for the specific student

According to the supervisors, they - in most cases - played the major role in the initial identification of research topic, but the students took part and were much engaged in the actual proposal development.

- *“The student developed the idea himself based on my suggestions. He had many innovative suggestions to approach the research question”*(Su1)
- *“I think it is fair to say that the idea mainly came from me. During development of the proposal we worked together”*(Su2)
- *“He played a limited role in the initial brainstorming and the development of the idea but did formulate much of the proposal himself”*(Su8)

With a single exception, it was the view of the supervisors that the students demonstrated reasonable/sufficient knowledge on research methodology (study design, scientific reading and writing, computer skills, literature search, statistics, etc.) during preparation of the study proposal. The benefits of the DBL Research Methodology course were especially commended in this respect. One supervisor indicated that his PhD student (who had not participated in this course) would have benefited from a preparatory course in research methodology. About half of the supervisors indicated that they had spent more time and effort on assisting this particular student during preparation of the study proposal, than they generally do with Danish/European PhD students. However, generally the supervisors pointed out that there is a lot of variation from student to student in this respect, both among African and Danish/European students.

PhD study progress for the specific student

The supervisors were generally satisfied with the progress so far made by their students. Experienced delays were due to practical issues such as maternity leave, problems with laboratory assays and field work logistics, as well as funding problems. In one case the student was delayed because of other work obligations at the home institution. The supervisors also expressed satisfaction with the students' ability to carry out qualified and independent work during implementation of the PhD study. They moreover indicated that they had not spend noticeably more time and effort on supervision of this particular student than they generally do for a Danish PhD student.

- *“The student was very independent and well organized during data collection. Reporting was timely and adequate for supervisor to follow up on”*(Su1)
- *“The field work has progressed highly satisfactory and according to schedule. We have some problems with laboratory assays and this is delaying our progress”*(Su4)

Most supervisors indicated that the students consulted them readily when difficulties were faced in the study, and they indicated that the students were open and ready to discuss methodological, scientific and practical matters in relation to the study. However, in three of the cases the supervisors indicated that they felt some reluctance from the students in these respects.

- *“The student has been very open and good at coming forward to discuss problems and barriers to progress”*(Su1)
- *“He is very open and willing to discuss problems, to re-phrase and change things if necessary. He is one of the most un-stubborn PhD students I have supervised”*(Su4)
- *“Not too often. The student is probably not used to have access to what he perceives as senior staff”*(Su5)
- *“He doesn't by himself, but I go to his office a couple of weeks, and then we usually decide on meeting. He is a bit reluctant to bring up issues - so it is only when I ask”*(Su7)

Despite the generally expressed openness of students in scientific discussions, most of the supervisors also noted certain issues, perhaps rooted in the educational culture from the student's home country, which they considered would have negative/inhibitive consequences for the student's career, such as lack of critical view and submissive behavior. Despite these issues,

however, supervisors unanimously expressed that they had not felt any barriers in understanding due to differences in social/cultural background.

- *“I have experienced a lack of critical view on published literature. The student wish to refer to any published literature no matter the quality. He is also very submissive, meaning that he will not question my suggestions or comments”*(Su2)
- *“He is a bit timid and humble and speaks in a very low voice”*(Su4)
- *“Yes, the educational system in his home country does not favour independent initiatives”*(Su5)
- *“Yes, although he is capable, he is reluctant to express his own views, and usually wait to hear mine”*(Su7)
- *“I think the lack of ability of re-thinking the project, which has become necessary, might be rooted in culture differences”*(Su8)

In the view of the supervisors, most of the students thrived socially during their stay in Denmark. However, it was also indicated that one student was much affected by having left a small child at home, and another was rather shy and did not easily socialize.

General experience with PhD students from Africa/developing countries

The supervisors agreed that PhD students from Africa/developing countries would benefit from preparatory courses in research methodology, e.g. to the level offered at the DBL Research Methodology course. It was indicated that some PhD students even lacked essential skills in the Word table and spelling functions and in preparing graphs in Excel, and courses were suggested.

- *“Yes, absolutely. However, Danish students would also benefit from this”*(Su4)
- *“Writing skills are often a problem (although this is often also a problem for Danish students)”*(Su5)
- *“In general, yes, very much. However, many Danish students are also methodologically weak”*(Su7)

Language was not considered a barrier for the performance of PhD students from English speaking African/developing countries, but for students with French, Portuguese or other language backgrounds, it is often a major challenge. The need for additional assistance in proof reading and thesis setup, although it would be helpful, was considered a luxury, and was generally taken care of by the supervisors themselves.

- *“From English speaking Africa I have not felt any language problems, but from Asia it is certainly a very big problem”*(Su2)
- *“Not if they are from English speaking parts of Africa. It can be a barrier for students from French or Portuguese speaking countries. They may have problems expressing themselves in writing during the write-up of the thesis, especially the Discussion can be a problem”*(Su4)

Although arrangements for PhD students from Africa/developing countries are often more complex than those for Danish students, it was the opinion of the supervisors that there should not be special arrangements for these students, e.g. there should not generally be longer time allocated. On the other hand it was considered important that the programmes had some flexibility to allow for delays.

- *“The students from developing countries normally write the thesis in Denmark, where there is no family or work to disturb. This potentially gives them more time to concentrate in the writing phase”*(Su2)
- *“In general, I find it reasonable, but it would be great with more flexibility”*(Su4)
- *“On average I have probably used slightly more time on students from abroad than the Danish students, but there is a big overlap in time used on students from the two groups. Very few of our African students have completed within three years and there has always been ways of solving this”*(Su6)
- *“I don’t think we need to introduce special arrangements. However, three years is generally too short”*(Su7)

The mentioned potential constraints related to PhD students from Africa/developing countries was generally not considered to lead to poorer quality of their PhDs. In fact, the quality of selection of potential PhD students was considered to be the main determinant for the quality of the resulting PhD. The supervisors also mentioned that PhD students from Africa/developing countries have certain advantages when carrying out their studies in their home country, namely that they have good knowledge about the culture and language of study communities and the local disease patterns, as well as a good insight of internal political issues prevailing at their home institutions.

- *“Poor selection of students may lead to poor quality output”*(Su1)
- *“The thesis itself can be of high quality, but one can speculate how independent the student has worked and consequently how ‘strong’ the candidate will be in future employments”*(Su2)

- *“I am not sure that the quality of the foreign students on average has been lower than the Danish students. If slightly so, I think it is because the selection procedure of students from Africa varies and our personal knowledge of the students prior to taking them on, on average is lower than for the Danish students”*(Su5)
- *“On average, the African students may be doing less well, but that is because of inadequate selection. The problem is, if we leave it to the collaborating institution to select. Be fuzzy about the candidate suggested by the collaborating institution - argue that we need the young smart student who is really committed to research”*(Su7)

Finally, under “additional suggestions” the supervisors repeated a number of issues, such as importance of providing the students with proper research methodology skills, importance of involving students in scientific discussions, journal clubs and seminars, and the importance of selecting the right candidates. Also a desire for closer North-South institutional links with stronger collaboration within PhD education (and possibly joint Danish/African degrees) was mentioned.

Discussion

Only ten UC registered African students were identified as current PhD students with a health related topic at the time of the survey. Nine of these answered the questionnaire and were therefore enrolled in the study, together with their supervisors. All PhD students had been enrolled for a considerable period of time (mean of more than two years). The majority of students were sponsored by Danida (through DBL or some of the Danida sponsored research programmes such as ENRECA). One reason for the relatively low number and advanced stage of students is a recent change in Danida policy with regard to PhD sponsorships to students from developing countries. According to these, PhD students now have to register at a university in their home country (with a local internal PhD supervisor). The PhD students can still have a co-supervisor from a Danish university, and they can carry out the study as a “sandwich programme”, but the overall practical and scientific responsibility has to be with the local university. Danida argues that this arrangement will strengthen and provide recognition to the local universities. This new policy has been (and still is) to some extent rather controversial among the potential supervisors at the Danish and local African universities, as well as among potential African PhD students,

and especially the brighter students tend to avoid this kind of arrangement. Since this new type of PhD arrangement appears to have a different range of challenges, and since the arrangements are rather new, it was decided to only include UC registered students in the present study.

The PhD students were characterized by being rather old when compared to Danish PhD students, with a mean age about 10 years higher. This appears to be related to the selection procedure. Often the African students are employed after their first academic university degree, and then - when an opportunity appears for a scholarship for further education (usually abroad) - the students themselves or their employer seeks this opportunity (and if accepted, the student is often granted study leave). The post-graduate students are therefore usually not coming directly from university but have a period of practical work behind them when they start post-graduate studies. This can be advantageous in the sense that they may have developed some practical skills, but on the other hand it also means that they have been away from study-life for some time and that they have become older. The late obtainment of the higher degrees appears particularly wasteful when considering that retirement age in public institutions in many African countries is only about 50-55 years of age. It also means that a high proportion of the post-graduate students from Africa have family with children (which can be a particular burden for female students, as seen in one case in the present study).

The students were characterized by all being from English speaking countries (with English used as the language for higher education), and according to both students and supervisors the English language as such did not appear to cause any problems in relation to the PhD study. It was clear that several of the supervisors had experienced considerable language problems earlier with PhD students who had a French, Portuguese or Asian language background. The background in a British educational culture was probably a major cause for the relatively few cultural problems encountered, both by students and supervisors, as the British is not as distant from the Danish educational culture as e.g. the Asian. It cannot be excluded, however, that the respondents to some extent omitted cultural conflicts in their written answers, and that oral interviews would have revealed a clearer picture of these. Cultural barriers have been reported as a particular cause of conflict and misunderstanding between Asian students and their teachers/supervisors in Western countries (Ryan; 2000; Chen et al.; 2003; Carroll and Ryan; 2005). Although the educational culture in English speaking African countries is highly influenced by the British system, it is generally

in a rather old-fashioned version (and probably influenced by traditional cultural values) with a high degree of rote learning, lack of critical view, and distance and respect towards superiors, which is generally characteristic of the educational system in many developing countries (Ryan; 2000). This was, however, not reported to be a major problem in the present study, but yet appeared to cause some irritation among the supervisors.

The UC supervisors were characterized by having intensive experience with health related research in Africa. All had spent considerable time in Africa, and in general they considered their PhD students as playing an important part in or supplement to their own research. Although the UC supervisors apparently spent more time on these students than they were expected to (by the university), they did so because of interest and because it added value to their own research career, and they did not see it as a burden. The UC supervisors all paid visits to their students during field work. The local supervisors in the students home countries generally played a minor role. They were mainly involved in administrative issues, and in practical arrangements in relation to the field work. There may be a number of reasons for this. The African countries generally do not have a strong research base (relatively few trained academics, poor library facilities, financial problems, etc.), and university staff have to concentrate on the many undergraduate students. Moreover, the PhD field work was often carried out in relation to other research already initiated by the UC supervisor, who therefore had a particular interest in the PhD study. In the future it is likely that the local research base will become stronger, and that the local university staff will get more time to engage themselves deeper into the supervision of research students. However, the new policy of Danida, forcing scientific and practical responsibility to local universities and supervisors, will probably do more harm than good to the vulnerable African scientific community. Moreover, as also indicated in the present survey, many African students would not like to register for PhD studies at universities in their home countries, because they are well aware of the poor conditions and facilities under which they will be required to study.

DFC was much commended for the good work they did with respect to the practical and social arrangements and to introducing the students to life and culture in Denmark. On the other hand the PhD students felt that introductions to UC and departments were poor (not the responsibility of DFC). This introduction needs to be improved to make the students feel welcome and part of the academic life. With regard to the UC and faculty levels, the recently established network for PhD-students under the cross-

faculty “Copenhagen School of Global Health” would be an obvious forum to take up this issue, at least for students within health related topics. The supervisors could probably do a good deal to improve on the departmental introduction, and should therefore be made aware of the need. The PhD students also complained that relevant information on UC or departmental home pages was only available in Danish, that they at times received letters/emails from UC or their department in Danish, and that departmental meetings and scientific seminars were at times were held in Danish. Improvements in language policy, to make use of English wherever international students are involved, are important to make students feel welcome and part of the environment in an international academic institution.

The PhD students all indicated that they had a good and close relationship to their supervisors. They also felt a strong dependency on their supervisors and were convinced that their supervisors would guide them through the study in case of any problems arising. Some were even convinced that their supervisor would assist with proof-reading and setup of the thesis during the final part of the study. This dependency and confidence appeared stronger than what is usually seen for Danish students, and probably to some extent have a cultural background (Ryan; 2000; Carroll and Ryan; 2005). However, it should not be undervalued in this relationship that the supervisors are also to some extent dependent on their students, in order to be able to report positive outcomes to the funding agency, and in keeping a good relationship to the collaborating institutions in Africa, for the nourishment of their own future research projects and career.

There was some disagreement between several of the PhD student/supervisor couples as to the ownership of the original idea for the PhD study, in that they both indicated that they had fostered the idea. However, when it came to the further development of the study proposal there was general agreement that the students did the major part of the work but in close consultation with the UC supervisors. Most of the students (6 of the 9) had participated in the PhD preparatory course on Research Methodology held by DBL, which was generally highly valued by both students and supervisors. The supervisor of one PhD student who had not participated in this course indicated (without being asked specifically) that the student would have benefitted from this course. The Research Methodology course (providing training in study design, scientific reading and writing, computer skills, literature search, statistics, etc., topics which are often not sufficiently covered by the curricula at universities in developing countries) has been held reg-

ularly at DBL for 15 years. However, due to budgetary cuts from Danida, the course was held for the last time in 2008.

It was realized by the supervisors that the African PhD students often took a little longer time to finish their study than the three years allocated. This was especially due to delays related to practical problems in the field and/or the laboratory. However, the supervisors agreed that there should not be made special regulations or requirements for students from developing countries in general, but rather there should be some degree of flexibility allowing for extension in case the rather complex arrangements would take longer than expected. The supervisors also agreed that the various constraints met in relation to students from Africa/developing countries (practical, cultural, educational) did not result in a poorer quality of their PhD's in general. Rather, the supervisors stressed that the quality of the PhD was closely related to the quality of selection of the students. It was emphasized that it was important not just to accept the candidates recommended by the collaborating institutions, but to particularly select young and bright candidates.

In conclusion, both PhD students and their supervisors expressed general satisfaction with their relationship and the course of studies. Cultural and educational differences, although they were recognized, were not major issues in the student/supervisor relationship and did not appear to cause obvious barriers to mutual understanding and study progress. However, a number of more practical issues were identified which should be considered in order to improve the quality of supervision and the course of the PhD study for students from Africa/developing countries:

- There is a need for a better introduction to UC, faculty and department, in order to make students feel acquainted with the facilities and as a part of academic life.
- There is a need for a clear language policy, stressing that communication to foreign students (web-sites, letters, emails) should be in English, and that English should be used in meetings/seminars where these students are expected participate.
- Training in Research Methodology, either as a PhD preparatory course or as courses to be taken during the early part of the PhD study, is particularly useful for many students from developing countries.
- It might be useful to give international students an introduction to Danish educational culture, including attitudes to knowledge and learning,

teaching styles and approaches, and relationship between student and teacher, to ease understanding and avoid unnecessary barriers.

- Due to the often rather complex setup of PhD studies for students from Africa/developing countries, there should be room for some flexibility in both financial and administrative arrangements for these students (but the general requirements and regulations should be the same as for Danish students).
- Just like students from Denmark, students from Africa/developing countries vary in quality. The quality of the PhD thesis produced is generally closely related to the quality of selection of the PhD candidate. The selection procedure is therefore of utmost importance for the final product.

All contributions to this volume can be found at:

http://www.ind.ku.dk/publikationer/up_projekter/2009-2-1/

The bibliography can be found at:

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