Doctoral Education in Context

Perspectives from Africa

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CHAPTER 5

The role of the doctoral qualification in socio-economic development: A case study of a university in Benin

Estelle Bancole-Minaflinou

Benin Republic is in West Africa. It has a population of 13 million. There are four public universities in Benin. The University of Abomey Calavi (UAC), the University of Parakou (UP), the Agricultural University at Ketou (UK) and the National University of Sciences, Technologies, Engineering and Mathematics of Benin (UNSTIM). In 2022 more than 711 candidates were registered in seven doctoral schools in the country. The doctoral programme offers further education that helps a student become an expert in their field. A doctoral programme typically takes three to five years to complete and involves independent study and research in a focused area of interest. Doctoral programmes in Benin include course work and research that culminate in a final dissertation.

The **University of Abomey-Calavi** is the principal public university in Benin. The University comprises six university centres across the country, each housing a variable number of faculties, schools or institutes, and chairs. It has 40 training and research entities (TRE), including 20 schools or institutes, eight faculties, three chairs and nine doctoral schools. Student enrolments in 2021 amounted to 68 472. The university has 944 academic staff members.

1. Introduction

For a long time in Benin and many other African developing countries, primary and secondary education were understood as the key to development and poverty alleviation due to the 2000 World Bank policy document (World

Bank, 2000). The World Bank renounced this position not long after, recognising higher education's importance for socio-economic promotion. So, for the past two decades, local postgraduate enrolment both in master's and PhD programmes has grown steadily to become an expanding sector.

The belief that such programmes should be central to Benin's development efforts, by offering the potential of training highly skilled staff that can bring about needed changes for better governance and sound management, quickly turned into a 'nightmare'. This ultimately led to the 'Actes des Conférences du Collège des Ecoles de l'Université d'Abomey-Calavi' conference in 2018, the aim of which was to take the bull by the horns by striving for effective solutions.

The British Council and the German Academic Exchange Service (DAAD) in collaboration with the African Network for Internationalization of Education (ANIE, 2018), undertook to investigate research and doctoral training across six sub-Saharan African countries. The study shed light on the progress being made and mainly the challenges cropping up regarding the growing quality of PhD provision (Cross & Backhouse, 2014). Though Benin was not included in the sample, conditions in this country seem unexceptional. Tight budgets that lead to poor research capacity, poor quality supervision, weak internet access, poor equipment and libraries, compounded by massive expansion have naturally lowered the quality of higher education which results in weak research output and ultimately to unemployment or informal work. Apparently, these hurdles look like signs of failure. But if the battle of producing better trained graduates that can positively impact economic development and prosperity in this part of the world is to be won, these hurdles must be addressed.

The present chapter aims first to investigate and explore the perceptions of doctoral students and supervisors about the quality of current doctoral programmes. Second, a programme is designed that can stand the chance to meet the practical demand of the labour market, by bridging the gap between academic education and professional employment. For this to have better results, why not build this right into the lower levels of higher education qualification (i.e. diploma certificates and bachelor's degrees)? In fact, the professional trajectory envisioned for PhD holders, that is, to be employed as professors at universities, has changed in recent years because many PhD graduates find work outside academia (and research institutions). That raises the question: can – and should – doctoral level studies also be designed to prepare graduates for employment outside academia (Ortega & Kent, 2018)?

The main objective of this study is to assess the value of doctorate programmes to decision-makers and the general public in Benin by finding a new approach to postgraduate education (at master's and doctoral levels) to

train future professionals, including researchers, by generating knowledge that can contribute to development and transformed into innovation and wealth creation.

Generating from the twofold purposes, the present study attempts to answer the following questions:

- What are the supervisors and doctorate students' perceptions about the current situation of doctoral programmes in Benin?
- What doctoral programmes can meet the students' professional needs and the demand of the labour market first and as a result help drive development?

Quantitative and qualitative data were collected to provide insights into these questions. Ethical clearance to use the data in this publication was granted by the Research Ethics Committee of Stellenbosch University (Project number 2273).

1.1 Background

As a former French colony, Benin inherited its educational system from France. Benin educational authorities have sought to give this system its own identity since independence in 1960. The medium of instruction is still French but English has been introduced and taught across the seven years of proficiency level as a compulsory subject. The universities (state and private), which house all the units of higher education, are organised into faculties, professional institutes and doctoral schools.

With the introduction of the licence/master/doctorate (LMD) structure (Décret No 2010-272 du 11 Juillet 2010), the system was reshuffled. The main objective is to use modern methods of training to facilitate the mobility and professional integration of lecturers and students. It offers the opportunity of aligning the training at university level with market needs while involving possible future employers inside and outside academia and making the whole process flexible, even in the case of doctoral graduates in research, or other institutions, outside academia. The implication is that both instructors and students should adopt a more professional approach to teaching, learning, evaluation, and management, emphasizing innovative and effective methods.

Most of the universities in Benin teach English across the different levels and the largest one, the University of Abomey-Calavi, was officially declared bilingual in 2003 (cf. the Orientation Law of the National Education 2003-17) including faculties, institutes and doctoral schools. There are nine

such organisational units in the University of Abomey-Calavi, including the Pluridisciplinary Doctoral School of Humanities, Communication and Languages, which is the setting of this research according to the 2016 rectorate by-law.

The fields of study housed in this school are geography and territory management, sociology and anthropology, linguistics and communication, psychology and educational sciences, anglophone studies, history and archaeology, modern letters, and philosophy. In each of these fields, a master's programme of one year and a doctoral programme of three years are offered. During a period of almost two decades, 2004 to 2019, many doctoral and master's degrees were awarded in these eight fields of study.

Though there is no official source yet, it can be observed that many of the graduates are unemployed or just doing informal jobs. Some of these graduates have complained that, apart from the current unemployment due to economic recession, there are discrepancies between their profiles, their skill sets, and the needs of the job market.

The following is an overview of the situation of higher education in other parts of the world which can be instructive for elaborating on the Benin case.

2. Literature review

2.1 Doctoral programme management: Perceptions of doctoral students and supervisors

The past few decades have seen a worldwide increase in doctoral programmes training, and Africa is no exception. Cloete et al. (2018) provide evidence of the issue through their HERANA project profiling eight African universities. The statistical data were revealing. They believe that universities can be instruments for development agendas, but through sharing expertise and capacity-building, rather than through the production of new scientific knowledge. In fact, according to the study, governments, policymakers and university leaders believed that doctoral education could be a driver of economic development and a generator of solutions to the many developmental challenges of African countries. Solutions had to be found to contribute to ongoing research output, evolving from the traditional apprenticeship models to more collaborative ones (McKenna, 2017). In Europe, doctoral education is seen in terms of the Lisbon Strategy as a major contributor "to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth

with more and better jobs and greater social cohesion" (European Parliament, 2009).

However, Pyhältö et al. (2016) found that there is sometimes a misfit between doctoral students themselves and their working environment in terms of the wrong department, issues with supervisors and uncertain career prospects that ultimately result in student attrition. They also found that between supervisors and doctoral students there are not always similar perceptions of the factors that contribute to a successful doctoral process. For instance, while students put more emphasis on social support and interaction with researchers, supervisors have identified funding, and student characteristics such as motivation, internal locus of control and self-direction as key ingredients for completing a doctoral degree. In addition, they contend that at times, student needs are not accurately provided for under supervision. For instance, a supervisor offering person-focused or pastoral support, where students are looking more for support with the project management. Discrepancies such as these may contribute to student dissatisfaction with their supervision and may have an impact on completion rates.

In fact, a poor relationship between supervisors and doctoral students can affect the whole doctoral project negatively. So, a key element to successful doctoral studies is good relations between the candidate and the supervisor. Frick et al. (2014) report various strategies supervisors can use at different stages of the doctorate process to support and mitigate risks by making the doctoral programme a human training programme that enhances criticality and creativity.

2.2 Professionalization of doctorate programmes

Because of the many challenges higher education is facing worldwide and in sub-Saharan Africa, professionalization of the training itself in terms of the alignment between university education and training and the world of work or professions outside universities appear unavoidable.

Do Africans only need to produce graduates who possess skills needed to secure good jobs and be able to commercialize research or effective leaders and professionals who can generate knowledge that can contribute to the developmental needs of a country? (Frick et al., 2017). Caution must be taken here, for the issue is more complex than one can expect and calls for nuance. There is no doubt that not all research findings can be commercialized, or all PhDs be translated directly into 'jobs'. Certainly, some PhDs in some fields do indeed

lead to patents and commercialization, but the situation differs significantly depending on the fields of study and skills training.

This gives rise to many models to make doctoral education more responsive to new labour and educational market demands. Here again there are strongly different views on the issue. Barnacle (in Frick et al., 2017) believes that considering the purpose of the PhD from a purely economic point of view promotes a *consumerist orientation* to education and removes candidates from their socio-cultural context and plays down their roles as responsible and creative scholars. As for Frick et al. (2017), they wonder what will become of the future of the PhD, which is supposed to be a forward-looking process of knowledge production, if industry partners are allowed to lay claim to what suits them and or is relevant to their needs, or in determining PhD processes and products.

So, with the skills development movement of the early 1990s, stemming from dissatisfaction with education–job match, employers' discontent with the type of education produced by universities and ultimately to find solutions to poor resourcing of the sector worldwide, universities were forced to review their higher education offerings, mainly in master's degrees. (Chevalier, 2000)

The skills proposed by some European universities in this regard may seem compatible with the Salzburg Principles (2005). Seven categories of doctorate skills were identified by (Poyatos, 2012). Some were classical ones such as 'ethics and social understanding' and 'research skills and awareness' but some were more relevant to the fast-moving world, such as 'time management', including 'writing and publishing skills'. To be more productive, other skills such as 'teaching personal effectiveness/development', 'team working and leadership', and 'career management' are also considered important in the training of graduate students, as well as the development of 'entrepreneurship and innovation' though used at lower levels of university education (Irish Universities Association, 2008).

The Catholic University of Leuven, Belgium (2012) promotes the acquisition of doctoral skills development to help doctoral students gain employment by helping them to evaluate their competence on certain 'non-academic skills' and 'transferable skills' such as 'communication and management'. The 'transferable skills' are divided into five categories: (i) intellectual competencies, (ii) self-management, (iii) relational competencies, (iv) leadership and change management, and (v) academic and technical competences (Gatfield, 2005).

Considering information generated by an Erasmus-funded project on the modern doctorate, Lee (2018) isolated some of its features. She argues that the modern doctorate focuses on knowledge transfer as well as knowledge creation and includes the professional doctorate where the focus is on practice but not

restricted to that. It allows research methods that other programmes might consider unacceptable such as action research (Armsby et al., 2017). Muller (2009) identified this modern doctorate as a transformational process which includes notions of employability outside academia that focus on knowledge transfer as well as knowledge creation.

The Standards and Guidelines for Postgraduate Studies in East Africa, developed by the Inter-University Council for East Africa (IUCEA 2018), aim to harmonize and enhance the quality of higher education and research across the region. The guidelines focus on fostering collaboration and ensuring consistency in postgraduate programs among East African universities.

In sub-Saharan Africa, including Benin, postgraduate unemployment, specifically among doctoral than master's or bachelor's graduates, has been and remains a real challenge and concern for all stakeholders in the field. The widely known causes are poor quality and relevance of qualifications, lack of quality staff, lack of skills sought by employers and the discrepancy between university education and the world of work (ANIE 2018). The ANIE study put forward eight key conclusions and recommendations among which featured the following: quality of programmes must not be jeopardised in the context of rapid expansion; higher education systems need to seek balance between concentration and diffusion of doctoral programmes; countries should aim for a broad disciplinary spread in doctoral studies; strong linkage should be developed between universities, communities, industry and government.

Kelly (2014) identified possible challenges to the quality of doctoral education in some African countries, namely corruption in governance and management as well as in student admissions, including cheating in examinations, sexual harassment by academic and supervisor staff and plagiarism in theses and publications.

A developing country like Benin is far from being an exception. Therefore, there is an urgent need to improve doctoral education, to develop knowledge that may help solve local problems and eventually drive development.

3. Methodology

The current study is exploratory in nature, considering the experience, perceptions and attitudes of the supervisors and enrolled graduate students and alumni of the Pluridisciplinary Doctoral School of Humanities, Communication and Languages at the University of Abomey-Calavi in Benin. Challenges evident in current practices were identified to shed light on a type of supervision with relevant goals that stands the chance to address developmental

needs. A qualitative method was used. This consisted of conducting interviews to gather participants' views, attitudes and perceptions about current practices and suggested changes. The second phase used a quantitative method, that is questionnaire administration to both enrolled graduate students and alumni of the school.

3.1 Sample

In the sampling design used for this study two types of participants were identified:

i) eight supervisors, one from each of the eight study fields hosted by the school.
ii) and twenty postgraduate students: ten alumni and ten enrolled doctoral students.

The research was conducted in 2019 in the doctoral school where I am the deputy director, head of academic affairs.

3.2 Instrumentation

Interviews

The aim of the qualitative data analysis is to achieve a thorough understanding of the phenomenon under investigation. Qualitative interviews were chosen "to seek in-depth understanding about the experiences of individuals and groups, commonly drawn from a sample of people, selected purposively" (Scott & Usher, 2006, p. 147). So, a face- to-face, individual, audio-taped interview with the researcher was organised. All the interviews were conducted within a week. To minimize dropout and because of their busy and tight schedules, I chose to interview the eight supervisors, who willingly voiced their perceptions and attitudes in response to the questions listed below in a fair-play atmosphere. Some of the questions, probes, prompts and intuitive questions were formulated based on the researcher's own experience as a supervisor in the school. Each interview lasted twenty to thirty minutes. This open-ended interview method was designed to compensate for the limitations of the self-completion questionnaire method. Postgraduate students were not interviewed because of time constraints.

The questions related to:

i) Supervisors' self-assessments of their supervisory work (adapted from Lee & Kamler, 2007). The following issues were raised: availability/ enthusiasm; building a scientific and social community; critical thinking; skill development; networking; mentor for life.

The questions were:

- Have you been available and enthusiastic about your job as a supervisor despite the hurdles?
- Do you think that building a scientific and social community should be part of supervisory work and how can this be built into the job?
- How far do you use critical thinking as part of your supervisory skills?
- Do you think it is part of our job to introduce our students to scientific networking?
- Do you think that mentorship for life should be part of our supervisory work?
- What changes can you suggest in our doctoral programmes in Benin that can address the developmental needs of the country? Or how can our supervision strategies be improved so that they could result in more employable graduates and address developmental needs?

Questionnaire

Based on the purpose of the study and the two research questions, the investigator developed two questionnaires that were completed by ten postgraduate students and ten alumni of the school.

Graduate students' questionnaire: The participants were asked to fill in a questionnaire containing seven items. This questionnaire comprised of Likert-scale items and three or four multiple item questions. The items were as follows: satisfaction with doctoral studies; purpose in undertaking these studies; relationship with supervisor(s); supervisor contribution; expected challenges; knowledge and skills needed for a relevant qualification and finally suggested changes. Ten questionnaire sheets were distributed but only eight were completed and collected. (Refer to the questionnaire in Addendum A)

Alumni questionnaire: The participants were asked to fill in a similar questionnaire, but for two questions, which are about the current professional challenges related to their doctoral studies; and the knowledge and skills (the attributes) needed by for doctoral graduates to contribute to the achievement of the developmental goals of the country. (Refer to the questionnaire in Addendum B). Ten (10) questionnaires were distributed but only eight were ultimately collected.

3.3 Data collection and analysis procedures

Data collection lasted one week to allow participants enough time to reflect carefully before responding to the questionnaire. The items were analysed according to their nature and graphs were designed to illustrate the data to highlight the two main research questions.

To ensure the content validity and reliability of the instruments used, the investigator discussed the issues at stake with experienced supervisors who had worked in the field. They were asked to judge the appropriateness and relevance of each instrument item, bearing in mind the overall purpose of the study. This exercise led to the reformulation or cancellation of some questions in the questionnaires for clarity and conciseness.

4. Results

The results of this study have shed light on the two research questions. They are presented, analysed and interpreted below.

4.1 Interview results

The data are drawn from interviews with eight (8) supervisors from each field of study. Some quotations were deliberately included to make raw data available and to illustrate the different issues.

Table 1: Supervisors' self-assessment results

Issues discussed	**N = 8**	**Per cent**
Availability/enthusiasm	5/8	62.5%
Building a scientific & social community	3/8	37.5%
Critical thinking (active questions)	2/8	25.0%
Skills development (work-focused skills)	2/8	25.0%
Networking (introducing students to scientific network)	1/8	12.5%
Mentor for life	4/8	50.0%
Total	8	

Though it is not common to, for example, use percentages in analysing qualitative data such as interview recordings – because in nature there is no quantification or very little – I chose to use this method so that a broad view of a social reality can be seen as an external objective reality.

The interview results show that, notably, most of the interviewed supervisors (62.5%) shared that, not only were they available to their doctorate students but they were enthusiastic as well, despite the various hurdles. Very few of them (25%) were able to integrate critical thinking into their supervisory designs and strategies. In fact, Minaflinou (2015) found that to mould students to face the challenges of the 21st century, the life and work-focused skill of critical thinking should be part and parcel of the instructional strategies right from the lower levels of learning. However, this study recommends for example that in this part of the world, new assessment modes should be found in the academic field at university level, that go beyond recalling or restating memorized information. Many interviewees confessed that more effort is needed to introduce these components below doctorate level.

Lee (2018) identified critical thinking as one of the approaches of the modern doctorate as it emphasises intellectual rigour, offers opportunities for thinking in new ways, encourages the ability to analyse and recognise flaws in arguments and is identified by the supervisor's intent to analyse and enable the candidate to analyse what is being planned or presented.

Only three out of the eight supervisors interviewed were aware that building a scientific and social community offers a golden opportunity to promote collaboration through exchange of best practices. Since access to the internet still needs improvement, only one supervisor reported having introduced his students to their scientific network. Half of the interviewees said they are still in contact with their previous students and are aware that they should be their mentor for life.

The following are three samples of the supervisors' quotations. They are expressive of their perceptions.

> *I'm not satisfied with my supervisory works. I wish I had more time to invest into it. The workload is a handicap … My deep conviction is that the work is not properly done and therefore has not been yielding the expected dividends. We need regular training and more sharing to break our own isolation, for instance setting up a supervisors' forum. We cannot blame students alone … . There are many hurdles today. We need to reshuffle our doctoral programmes to make them meet our challenges among which unemployment*. (Prof. Guy [pseudonym], supervisor, my own translation)

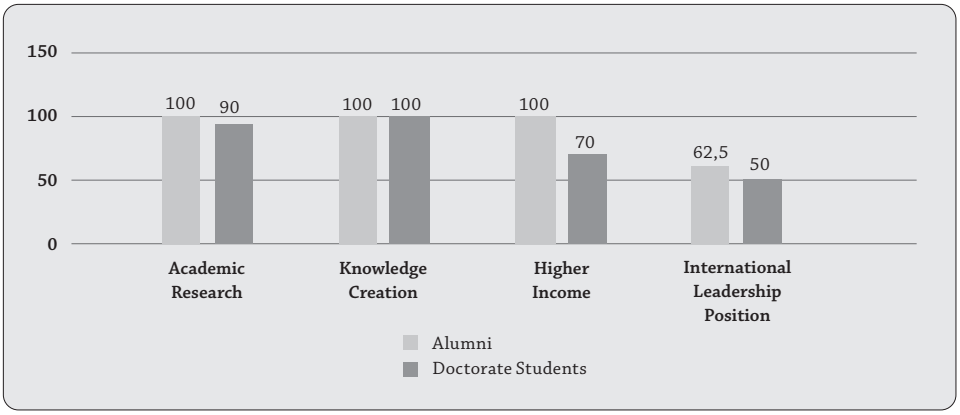
I enjoy my supervisory work in spite all the challenges … Building a scientific and social community through a scientific network is a very good idea. Our tasks are manifold and we need to be committed to the job. Our main key challenges is how to make our doctoral programme relevant to local, regional and continental needs by promoting innovations and entrepreneurship in our students. Sustainable development should be our main priority. Our programme needs change! (Prof. Kodjo [pseudonym], supervisor)

My job as a supervisor is one of the most exciting and demanding one as well. Apart from the many constraints we've been battling with, our main challenge is our own training in this world of perpetual change. I can see why our educational authorities are putting pressure on us. Policy shapes practices. Our practice should change so as to make our doctoral programmes a key instrument to a sustainable development. Deep reflections are needed in the field for effective actions to be taken. (Prof. Sylvia)

4.2 Results of doctorate students and alumni questionnaires

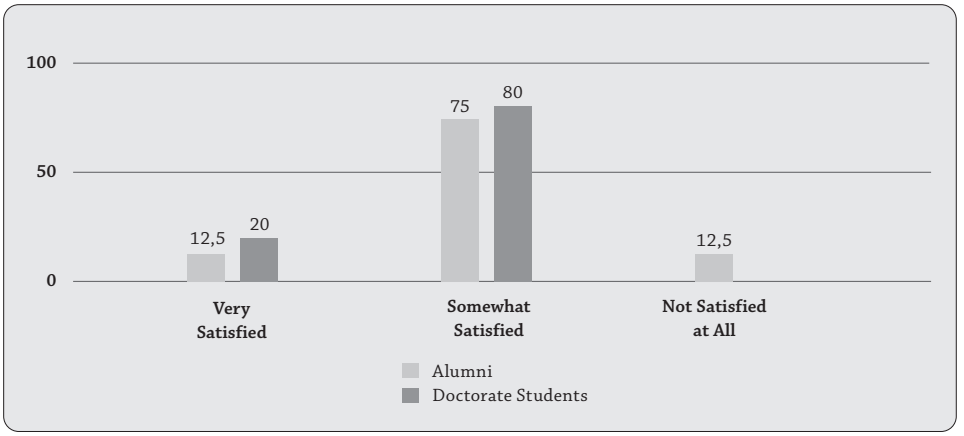
An effort was made to compare the alumni and enrolled doctoral students' results. The following figure shows the comparison between both groups on the question of how they understand the purpose of doctorate studies.

Figure 1: Purpose in undertaking doctorate studies



Apart from the variable of 'reaching international positions' which scored average (62.5 and 50%), all the other variables 'academic research and lecturing position', 'contributing to knowledge creation', and 'a ladder to attain a higher income' scored highly (100%, 90%, 70%). So, nearly all the respondents see the purpose of PhD studies in a similar manner.

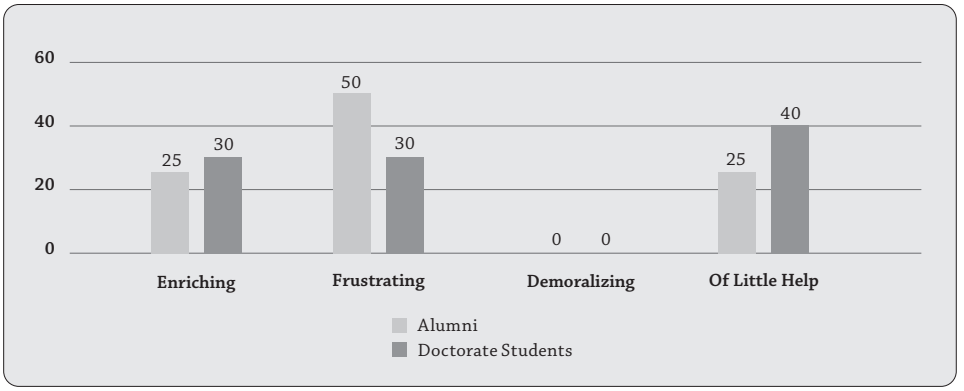
Figure 2: Level of satisfaction



As for the level of satisfaction, both types of students were somewhat satisfied (75 and 80%). Very few of them (12.5 and 20%) were 'very satisfied' or 'not satisfied at all'. The level of satisfaction is average.

The process of effective and rewarding supervision requires that the supervisor knows and plays their role. The following figure shows the relationship between both types of students.

Figure 3: Relationship with the supervisor

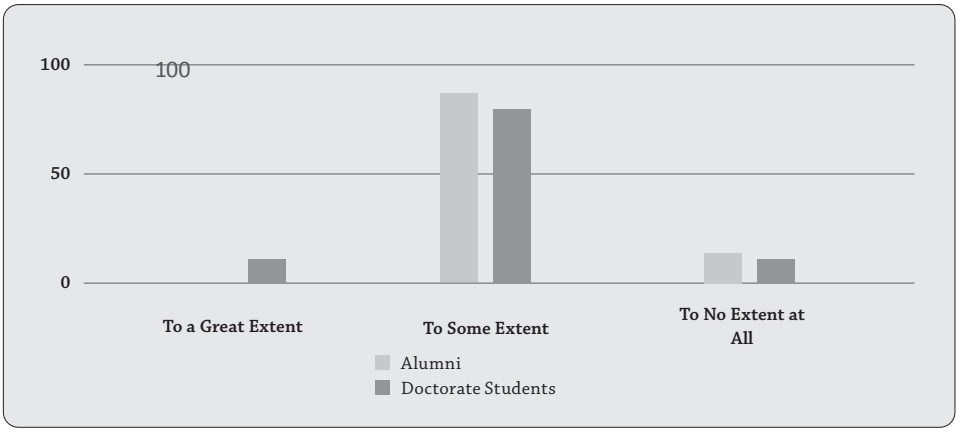


Both alumni and doctorate students found that their relationship with their supervisors was 'frustrating' (50 and 30%), while few of them found it 'enriching' (25 and 30%) and up to 40% of enrolled students and 25% alumni described it as 'of little help'.

To the question regarding the extent to which the supervisor contributed to the completion or the advancement of the thesis, 75% and 60% indicated that it is was 'some extent', while 25% and 30% admitted it to be a 'minimal extent' and only 30% and 25% suggested that it was to 'a great extent'. Evidently, supervisory work in this part of the world still needs improvement to be effective. I, as deputy director in charge of academic affairs, with the head of the school and a select team of supervisors, have been engaged in deep reflections in the last few years on effective changes that could be submitted to the educational authorities for approval and implementation.

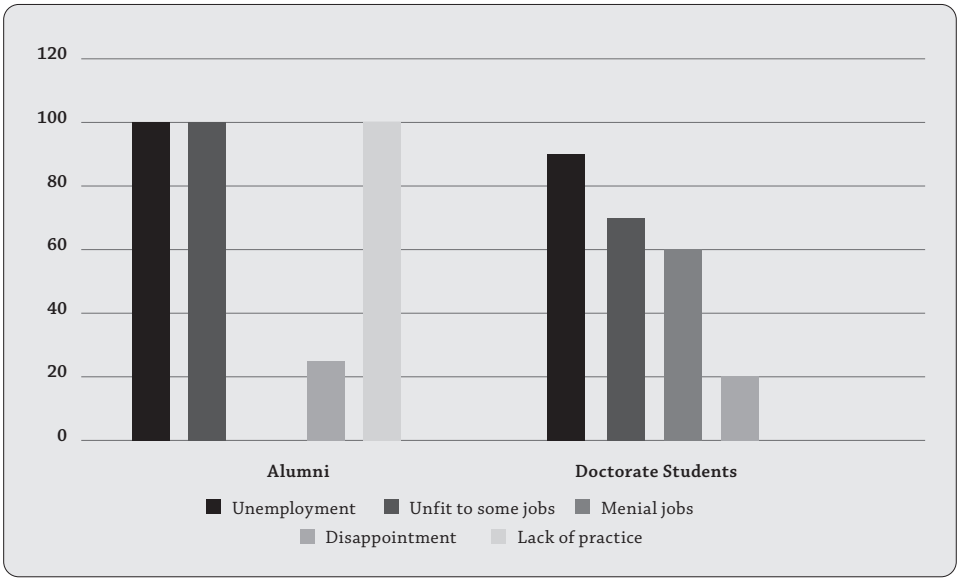
The following figure shows how far in the opinion of the 18 respondents the doctorate programmes of both types of students prepared them for knowledge, attributes, skills and behaviour needed for the labour market.

Figure 4: Knowledge and skills needed



Most of these students (70% and 65%) admitted that they were aware that the qualification has not prepared (former students) or is not preparing (current students) primarily to meet job market needs. They indicated that preparation for the needs of the world of work is appropriate for their doctoral studies only 'to some extent'. None of the alumni chose the option 'to a great extent'. The following figure reveals the expected challenges of present doctoral students and the current challenges of alumni.

Figure 5: Expected and current challenges



Nearly all the variables (unemployment, unfit for some jobs, opportunities for only menial jobs, lack of practice) scored very high. Alumni scored 100%; 100%; 100%, while disappointment scored 20%. Doctorate students scored (90%, 85%, 65%, while disappointment was 20%).

All were aware of the challenges to overcome. Fortunately, 'disappointment' scored very low (25%; 20%). It means that though they are aware of the apparent hurdles, these people were still optimistic and expected that if some changes were implemented, changes in terms of programmes, improved supervisory strategies, government policy that can shape good practice, a new dawn could be expected.

Figure 6 shows that all the respondents (100%) confessed that they 'strongly agree' that changes are unavoidable.

4.3 Limitations

Some limitations should, however, be identified. First, only humanities and social sciences fields of study were considered. It would have been more advantageous to investigate hard sciences disciplines that use different paradigms. Second, the investigation was conducted through a relatively small sample:

eight supervisors and eighteen PhD holders and PhD candidates. A larger sample could have yielded more representative results.

5. Discussion

This section discusses the two main research questions: first, what are supervisors and doctorate students' perceptions of the doctorate programmes in this doctoral school? And second, how can doctoral programmes help graduate students meet their professional needs and satisfy labour market demands and eventually help drive development?

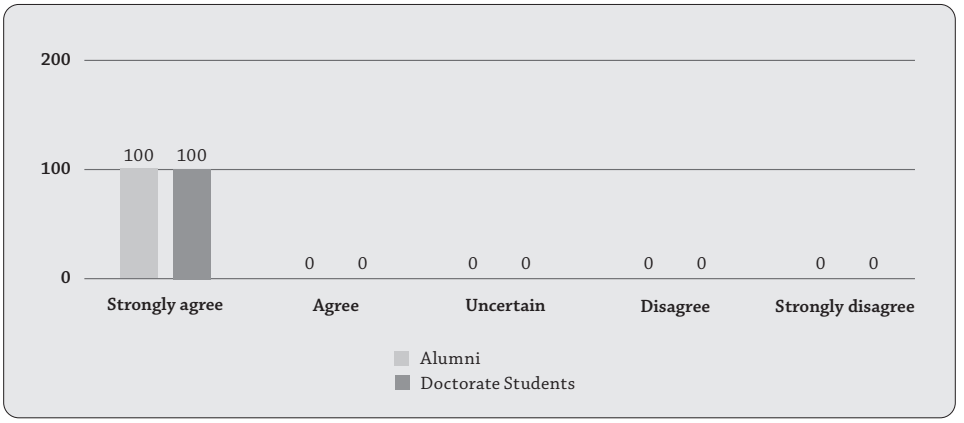
5.1 Supervisors and doctorate students' perceptions of the programme

The data collected from the supervisors and the enrolled students and alumni of the doctoral school have provided insight about higher education in one university in Benin.

Both the currently enrolled students and recent graduates held the same view about the purpose of the PhD. Their purpose in undertaking doctoral studies was to have an academic research and lecturing position, to contribute to knowledge creation, to attain a higher income and to reach international leadership positions. This finding is backed up by Blume (1995, p. 30–31) and Heen (2002, p. 85) who contend that the outcome of doctoral research should enable graduates to find employment, prepare them for academic careers and develop generic research or other skills or even prepare them for careers outside of the academy. It is a matter of concern that few of these Beninese graduate students have the ambition to apply their competencies in international leadership positions in their field. Is it a lack in self-confidence or ambition? The supervisors who were interviewed maintained that the PhD programme currently lacks work-focused skills. The problem is how to equip doctoral students with transferable skills and specific skills so that they can undertake consulting jobs, for example, and eventually occupy senior appointments in government, in NGOs, in research organisations, in industry and business, and in universities.

The level of satisfaction of doctoral students and recent graduates with the quality of their PhD programmes is average probably because of the many hurdles to overcome among which is the relationship with the supervisor. Most of the doctoral students and graduates found it frustrating and of little help, but not demoralizing. In fact, ineffective interaction with the supervisor leads to negative research experience. The finding corresponds with published literature (Cross & Backhouse, 2014; Pyhältö et al., 2015; McKenna, 2017). This is

Figure 6: Suggested changes



confirmed by most of the supervisors interviewed in this study who maintained that not only have they not been able to build a scholarly and social community which is key to doctoral education success today, but even introducing students into the scientific network seems unfeasible. It is not surprising, therefore, that few students indicated that their supervisor contributed greatly to their thesis advancement or the completion of their PhD studies. So, playing the role of mentor for life seems, according to some respondents, not to be part of the agenda of their supervisors. This is not surprising because the traditional apprenticeship model for doctoral supervision, still widely practised, is ineffective to meet the challenges of a developing country like Benin. The importance of a scientific and social community in a doctoral programme cannot be overlooked, for all students need to feel part of a supportive and inclusive environment to feel safe enough to participate and have a sense of being seen, listened to and valued. It is an arena where students can take risks and test out new ideas (McKenna, 2017). Hence the urgent need for continuous improvement of doctoral education to meet the needs of an employment market wider than academia (Ortega & Kent, 2018).

5.2 The doctoral programme's contribution to socio-economic development

The data collected in this study show that most supervisors maintained that the development of work-focused skills is not officially built into their training programmes. Recently graduated PhD holders indicated their doctoral qualification had not enabled them to attain the knowledge needed, attributes,

skills and behaviour to help plan and manage their own career development. The current doctoral students are of the same view, and they expressed that if changes could be made over the short term to improve the situation, the benefit would be welcomed by all.

However, the prevailing model assumes that at the PhD level, candidates are supposed to have already acquired academic knowledge and skills at master's level (Université d'Abomey-Calavi, 2018). But the reality is that many candidates have not had equal opportunities as they probably come from various undergraduate programmes and diverse backgrounds. Therefore, the suggested programme should integrate course work, the aim of which is to establish a common base of subject knowledge and skills for all, so that those who have limited research experience and other shortcomings can gain insight into good research principles and best practices and any required competence needed in the workplace.

Meanwhile, in reviewing some innovative responses to the challenge of delivering good doctoral education in Africa, from the introduction of 'sandwich' programmes to collaborative models, Cross and Backhouse (2014) contend that such innovation is not only in the curricula and structures of the programmes, but in the judicious use of partnerships to compensate for resource limitations, to strengthen the capacity to lobby for change.

In Benin, it may entail introduction of course work in the form of seminars, workshops, exchange programmes, online or distance learning to the PhD programme of the school, resulting in "a shift from the master-apprentice model to the professional model of doctoral education" (Bartelse et al., 2007, p.7).

A one-year probation will be made compulsory for each candidate with a project to be submitted at the end that contributes in a productive way to the enterprise development. This project should be part of the requirements of the final thesis defence. It means that more emphasis must be put on the development of entrepreneurship and innovation skills for doctorate students to contribute to local needs and, as a result, drive socio-economic development. Such proposed professional development of doctoral candidates can play a role in paving the way for a wide range of career choices by bridging the gap between training and the job market.

For this to be possible, an academic and social community that provides a supportive and collegial environment and a combination of supervision and mentoring strategies must be built. This may call for two supervisors, an academic and a professional one who work hand in hand for a common shared purpose (Samuel & Vithal, 2011). The suggested new model of supervision

would require training of supervisors. In fact, the interview data revealed that the supervisors recognise the need for regular supervisory training. In our fast-paced world, even experienced supervisors need training to keep up to date, for the field of research ethics and intellectual property is a growing one (Turner, 2015). Supervisor training/development activities may include online or distance programmes (e.g. CREST programmes), short seminars/ workshops, empowerment programmes, informal experience, resource and expertise sharing, supervisors' forums (as suggested by one of the interviewed supervisors), opportunities for supervisor group reflections etc. In other words, a platform must be set up for all supervisors to exchange best practices and provide opportunities to build up or rejuvenate regional and international partnerships with funding organisations. To be effective today, supervision must be a collective effort in an atmosphere of trust, collaboration and support.

These suggestions for the renewal of the doctoral programme will probably be widely welcomed but achieving them would require concerted effort. Fortunately, the educational authorities in Benin are aware of ethical issues, quality assurance and innovation. Two agencies, the Agence Béninoise de l'Assurance Qualité de l'Enseignement Supérieur (ABAQES) and the Agence Béninoise de Valorisation de la Recherche et de l'Innovation Technologique (ABeVRIT) were recently rejuvenated and given the mandate of upholding and enhancing high standards and best practices and to popularizing research in higher education in Benin (Décret No 220-342 du 20 mars 2016; Loi No 94-009 du 28 juillet 1994).

It is recommended that the doctoral programme changes suggested in this chapter are submitted to these bodies to be validated, popularized and integrated into general policies for doctoral schools.

Further research must be carried out on the correlation between PhD training and employment for instance: What type of research should doctoral candidates undertake, for what practical problems and for what solutions?

6. Conclusion

Improving doctoral education in a developing country so that it can play a role in social- economic development is a real challenge. This study has tried to shed light on the state of doctoral programmes in one of the doctoral schools in Benin. The findings from the supervisors, current graduate students and alumni of the school showed the following: the stakeholders agree that the situation of doctoral education in Benin is at a low ebb and needs urgent change for quality improvement, so that high-level graduates who can contribute to

the country's development by helping to address challenges and initiate innovations can be available.

In this chapter, I have introduced a new, more professional doctoral programme that integrates course work and professional probation into the curricula to improve its chances of meeting the needs of an employment market wider than academia.

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ADDENDUM A

Doctorate students' questionnaire

Dear Students,

I'm sending this questionnaire to you to seek your opinions about the role of the doctoral qualification in the socio-economic development of Benin, as part of the fulfilment of the requirement of an end-of-training assignment in the field of research in doctoral programme. Feel free, and be as truthful as possible, to tick the options that reflect best your viewpoints. This will go a long way to improve practice in our field of research. In advance, thank you.

1. What is your purpose in undertaking doctoral studies?
   a. For academic research
   b. For knowledge creation
   c. For higher income
   d. For international leadership

2. What is your relationship with your supervisor?
   a. Satisfied
   b. Somewhat satisfied
   c. Not satisfied at all

3. How can you qualify your relationship with your supervisor?
   a. Enriching
   b. Frustrating
   c. Demoralizing
   d. Of little help

4. How far has your doctorate programme prepared you for knowledge, attributes, skills, behavior needed for the labour market?
   a. To a great extent
   b. To some extent
   c. To no extent at all

5. What are your foreseen challenges?
   a. Unemployment
   b. Unfit for some jobs

c. Menial jobs
d. Disappointment
e. Lack of practice

6. If changes are implemented, hope is still possible.
   a. I strongly agree
   b. I agree
   c. I'm uncertain
   d. I disagree
   e. I strongly disagree

ADDENDUM B

Alumni's questionnaire

Dear Students,

I'm sending this questionnaire to you to seek your opinions about the role of the doctoral qualification in the socio-economic development of Benin, as part of the fulfilment of the requirements of an end-of-training assignment in the field of research in doctoral programme. Feel free, and be as truthful as possible, to tick the options that reflect best your viewpoints. This will go a long way to improve practice in our field of research. In advance, thank you.

1. What is your purpose in undertaking doctoral studies?
   a. For academic research
   b. For knowledge creation
   c. For higher income
   d. For international leadership

2. What is your relationship with your supervisor?
   a. Satisfied
   b. Somewhat satisfied
   c. Not satisfied at all

3. How can you qualify your relationship with your supervisor?
   a. Enriching
   b. Frustrating
   c. Demoralizing
   d. Of little help

4. How far has your doctorate programme prepared you for knowledge, attributes, skills, behavior needed for the labour market?
   a. To a great extent
   b. To some extent
   c. To no extent at all

5. What are your current challenges?
   a. Unemployment
   b. Unfit for some jobs

c. Menial jobs
d. Disappointment
e. Lack of practice

6. If changes are implemented, hope is still possible.
   a. I strongly agree
   b. I agree
   c. I'm uncertain
   d. I disagree
   e. I strongly disagree