

IMPACT EVALUATION OF TWO MASTER COURSES ATTENDED BY TEACHERS: AN EXPLORATORY RESEARCH IN ANGOLA

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Abstract

The present research aims to evaluate the impact of two master courses offered by one public higher education institution in Angola on the professional development of Angolan teachers and also on the broader educational community. The two courses were attended by 393 teachers. The data of 45 answered questionnaires and six verbatim transcripts of individual semi-structured interviews were analysed. According to the teachers perspective the courses contributed to teachers' personal growth and changes of practices, as well as improved students' learning (micro context of impact). Although to a lesser extent, impact on broader contexts was also identified, indicating that changes occurred also within other teachers and elements of the surrounding school community (meso context of impact) as well as the community of educational research (macro context of impact). The results in discussion are of relevance for further investment on post graduation courses (master level) for teachers offered by higher education institutions. Outlined recommendations could potentially contribute to impact enhancement (and understanding) of academic post-graduation courses' attended by in-service teachers, particularly those integrated in recent higher education systems of post conflict countries, such as the Republic of Angola.

Key words: *teachers' professional development, teacher education, post-graduation, master courses, impact evaluation, Angola.*

Introduction

The importance of investing in teacher education programs towards more and better Education has been recently reinforced by the United Nations within the adoption of the fourth Goal of the Sustainable Development Goals (2015-2030), namely “*Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*” (UNESCO, 2016, p. iii). This global aim sets the baseline for the roadmap of efforts stated in the document *Education 2030 Framework for Action*, which entails ten specific targets and more than fifty indicative strategies, being of particular relevance for the present research the second indicative strategy of target 4.c: “*Review, analyse and improve the quality of teacher training (pre-service and in-service) and provide all teachers with quality pre-service education and continuous professional development and support*” (UNESCO, 201, p. 24).

In order to accomplish the Education 2030 Agenda it is crucial that the increasing access to education is accompanied by more investments in teacher education programs, particularly in disadvantaged regions with an uneven distribution of professionally trained teachers: “*The absence and/or inadequacy of continuous professional development and support for teachers (...) are key contributing factors to the low quality of learning outcomes. Successful education systems that ensure quality and equity have focused on a professional development continuum that supports teachers’ own learning and improvement through careers.*” (UNESCO, 2016, p. 24)

In alignment with the Education 2030 Agenda, The African Union Commission (AUC) defined the Continental Education Strategy for Africa – CESA 2016-2025, assuming as a central goal the development of strong and efficient educational systems in each African country (African Union Comission [AUC], 2016).

Research Background: Teacher Education in the Republic of Angola

Since the instauration of peace in April 2002, Angola was able to expand its educational systems (Bourguignon Silva, 2013), achieving a growing schooling rate above 50% in the last decade (Ministry of Education of Angola [MEA], 2014). As a consequence of this “Big Push in Universal Education” the current public teacher education system (Table 1) has been under a rising pressure to increase the number of qualified professionals in order to cover the needs and overcome problems related to the quality of the teaching strategies, such as low learning outputs. As a response to this problem the Angolan Ministry of Education conceptualized, in 2007, with technical support of international cooperation agencies, the *Plano Mestre de Formação de Professores* [Master Plan of Teacher Education] (MEA, 2008), which entails several measures considering initial (pre-service) teacher education, in-service (modular) teacher education programs, as well as long distance programs. Despite these efforts, the need of qualified teachers continues to be uncovered. According to the Report “Educação Pública de Qualidade para Todos” [Public Education with Quality for Everyone] (MEA, 2014) a total of 245.979 teachers were employed in 2012. In the same year 12.854 new teachers were graduated, which represents only 5.2% of the total number of teachers. Therefore, it is of crucial importance to continue the investment on the expansion of *qualified* education programs for teachers that are already *in* the system.

Table 1. Public teacher education in Angola.

(cf. Government of the Republic of Angola, 2001; Women’s Commission for refugee women and children, 2003; Cangoi and Castanho, 2016).

Designation	When?	Where?	For what?
Medium level	10 th – 13 th grade (2nd cycle of secondary education)	Institutos Médios Normais Centros Básicos de Formação Institutos do Magistério Primário	... to teach at Pre-school level and/or at Primary Education level (1st to 6th grade) in regular education, adult education or special education
Higher level	bachelor degree (3 years) graduation degree (4 -6 years)	Institutos Superiores de Ciências da Educação” (ISCED) Escolas Superiores Pedagógicas	... to teach at secondary education (7 th to 13 th grade) in regular education, adult education or special education

Research Focus: Investigating the Impact of Teacher Education in Angola

In alignment with the current international, and in particular African, political commitment in investing in teacher education, it is important to look closer at the existing teacher education programs of Angola in order to evaluate to what extent those programs are making a difference and to draw recommendations which may help the involved institution in enhancing the quality and the impact of the teacher education courses. While specific measures are being taken at pre-service and in-service (modular) teacher education under the scope of the “Plano Mestre de Formação de Professores” (MEA, 2008), there is no particular strategy considering academic post-graduation courses attended by teachers. However, considering that the network of public higher education institutions has been growing considerably in Angola during the last 13 years (Carvalho, 2012), these education programs of higher level need also to be reviewed and analysed since it is expected a growing contribution of these institutions to the qualification of Angolan teachers.

In this sense, the present research is focused on investigating the impact of two master courses (2nd edition) attended by 393 Angolan teachers and which were offered by a particular Instituto Superior de Ciências da Educação (ISCED) of Angola. The goal is to delineate recommendations considering the development of academic in-service teacher education programs.

Impact Evaluation of In-service Teacher Education Programs - Theoretical Framework

Globally in-service teacher education programs aim to provide opportunities to extend teachers’ professional learning, leading to professional development. According to King (2013) teachers’ professional development can be defined as “*the growth of teacher expertise leading to a change in practice which results in improved pupil learning*” (p. 3). While this definition entails three nuclear concepts associated to the global aim of in-service teacher education, namely teacher growth, change of teacher practice and learning improvement of students, the research around the impact of teacher education programs implies a broader and more holistic approach, due to the complex nature of professional development, and also to the fact that teacher development, may affect many others, besides the teacher and his/her students. In order to promote a deeper and extended understanding of the phenomena several theoretical frameworks have been developed, being some of them focused on impact of non-academic in-service teacher education programs (for example Guskey, 2002; Kirkpatrick, 1959; Stake, 1967) and others on the impact of academic post-graduation courses for teachers (Cruz, 2005; Cruz, Pombo, & Costa, 2008; Thornhill, 1985).

In this particular research the three-level-impact model developed by Cruz and co-workers (Cruz, 2005; Cruz, Pombo & Costa, 2008) – Table 2 – was adopted in order to analyze the effects of two master courses attended by Angolan teachers. The model was adopted because of two reasons. First, it was conceptualized within a longitudinal (ten year) study of post-graduation courses for teachers (Cruz, Pombo & Costa, 2008), which enhances confidence on the framework. Second, it considers several educational stakeholders and therefore adopts a pluralist perspective. The authors of this research stand along with Aguninis, Shapiro, Antonacopoulou, & Cumming (2014) who state that “*impact comes in different forms*” (p. 626).

Table 2. Impact contexts of teacher post-graduation courses.
(cf. Cruz, 2005; Cruz et al., 2008).

Context of Impact	Definition	Stakeholders	Extension
Micro	Practices and processes associated to teaching and learning of a particular discipline and/or level	Teacher Students	Classroom
Mezo	School Practices related with the work that the teacher develops with peers inside his/her school (for example, department colleagues) and his/her close community (for example, parents)	Teacher colleagues Parents School staff Persons from the local community	School(s) Institutions of Teacher Education and Educational Research Local communities
Macro	Educational practices associated to the broader community, including at the research and/or political level.	Policy-makers Educational researchers	(Inter) National Education community

Methodology of Research

Data Gathering Procedures and Instruments

Data was gathered through the application of a questionnaire and the realization of semi-structured interviews. Two major data gathering calls (DGC) were organized. The first lasted four days (July 2016). The coordination of the HEI invited the master students (a total of 447, being 393 of them teachers) to come to the installations in order to participate on a research project related with the master courses. During those four days, three schools from the same city of the two courses were visited, in order to apply the questionnaire. The second DGC corresponded to one specific day (also in July 2016) and happened at one school of a neighbour province from where came several master students. The research team travelled to that school (nearly 200 km away) to apply personally the questionnaire and to realize some interviews with the graduates that appeared at that particular school. Within the two DGC it was possible to gather from the teachers a total of 45 questionnaires and realize six individual interviews.

The applied questionnaire was adapted from a previous exemplar used to evaluate the impact of a Portuguese master course for teachers (Pombo & Costa, 2009). The adapted version was discussed with two educational researchers specialized in impact evaluation, being one of them familiar with the Angolan context. The obtained questionnaire was then applied as a 'pilot version' to three Angolan master students (sent by e-mail). According to the obtained feedback from the three respondents some improvements were made. The final version of the instrument is organized in three parts and has a total of 35 questions (including close questions, multiple choice questions, questions with Likert scales, and also open questions).

The interviews were of semi-structured nature. In order to support the interview process an interview script was elaborated in alignment with the focus and specific goals of the research and supported on the consultation of institutional documents related to the two master courses (such as internal regulation of the courses, internal annual reports, and data bases of the graduates' classification at the curricular units and at the public defence of their dissertation). The interviewed teachers were selected on a voluntary basis among those that attended the DGC and therefore integrate the 45 teacher sample. The mean duration of the interviews was 23 minutes. All interviews were audio-taped and fully transcribed.

Participants and Sample of the Research

As referred above the present study is focused on the teachers that attended one of two master courses ministered by one public HEI in Angola between 2011 and 2016. One course was in the area of curricular development (CD) and was attended by 237 graduates. The other course was in the area of science teaching (ST), namely Biology, Physics, Mathematics and Chemistry and was attended by 210 graduates. From the 447 graduates, 393 were teachers. Table 3 describes the profile of the six teachers that participated as interviewees. Table 4 describes the sample of 45 teachers, based on the valid responses obtained through the questionnaires.

Table 3. Participants (P) description.

	Professional Profile	Master Course	DGC
1	Graduated Math teacher with five years of experience at secondary (2 nd cycle) level.	ST (11-16)	1st
2	Graduated Biology teacher with 27 years of experience. Currently teaching at secondary (2 nd cycle) level. Within the master degree started to coordinate her school department.	ST (11-15)	1st
3	20 years of teaching experience. Graduated in Pedagogy. Worked several years as a Primary teacher. Continued in further education and started to work as teacher of Portuguese language (secondary level). Currently she has a full time job as a supervisor of ten pre-service teachers at a “Magistério Primário”.	CD (11-15)	1st
4	Graduated in teaching of History. He has been a teacher for 14 years combining this profession also with military work. Recently he applied to a vacancy as professor at a private university. His vocation is to be a teacher and he wants to change on a full time basis to this profession.	CD (11-15)	2nd
5	20 years of teaching experience. First as a primary teacher, then graduated in Psychology and worked as a secondary teacher (1 st and 2 nd cycle). Currently Psychology teacher at one private HEI.	CD (11-15)	2nd
6	19 years of teaching experience. Started to teach Maths and Physics. Graduated in Teaching of Physics. Taught at secondary level during several years. Currently working at a Higher Education teaching Physics for future engineers.	ST (11-14)	2nd

Table 4. Sample characterization.

Age	(N=45): 35 to 44 (57.4%); 45 to 54 (38.3%); 4.3% older than 55 years old.
Gender	(N=45): 51.1% female; 48.9% male
Graduation Profile	Main Domain (n=16): Pedagogy (37.5%), Sciences of Education (25.0%) and Biology (37.50%) Year (n=44): 1999 (9.5%); 2004-2007 (34.1%), 2008-2010 (50.0%); 2011 (6.4%).
Master Profile	Main Domain (N=45): Teaching of Sciences (46.7%); Curricular Development (53.3%) Year of conclusion (n=32): 2013 (6.2%); 2014 (34.6%); 2015 (53.0%); 2016 (6.2%)
Teacher Profile	Years of Teaching experience: Mean = 16; Mode: 14; min.: 3; max.: 30 Current Levels of Teaching: Primary teaching (3.8%); secondary teaching first cycle (18.9%), secondary teaching second cycle (41.5%), higher education (35.8%) Current teaching situation: Full time (93.3%); Part time (6.9%)

Data Analysis

Descriptive statistical analysis (using SPSS® version 21) as well as content analysis was used to analyse the data. No inferential statistic was done, since (i) the obtained sample size is below general recommendation (Ampudia de Haro, et al., 2016) and (ii) it was not possible to use a probabilistic sampling technique (random sampling). Therefore, representativeness of the sample could not be assured. The research assumes an exploratory nature and is conceptually oriented by principles and theoretical frameworks associated to investigation of descriptive and interpretative nature (Gray, 2014; Laureano, 2011).

The analysis was oriented by five specific research goals: (RG1) Identify impact evidences of the master courses at micro level, according to the teachers' perspective; (RG2) Identify impact evidences of the master courses at meso level, according to the teachers' perspective; (RG3) Identify impact evidences of the master courses at macro level, according to the teachers' perspective; (RG4) Establish a global master course balance crossing initial teacher's motivation with achieved learning/development according to the teachers' perspective.

The Researcher's Role and Ethical Considerations

The research was conceptualized and developed by three persons, although having different roles, due to the fact that two of them had been contacting with the teachers along the master courses. One element, external to the ISCED, was involved as a supervisor of eight teachers, while the other was involved in the management of the courses. Therefore, only one of the three researchers, namely the one with no professional relation to the HEI and no previous contact with the teachers, interacted directly with the informants during the data gathering process, by delivering the questionnaires and realizing the interviews. The research project, as well as its specific goals was explained to the informants. Before delivering the questionnaires and conduct the interviews the researcher explained that gathered information would only be used for investigative purposes and that anonymity was guaranteed. It was also explained that the respondents could refuse at any time to give particular information or to abandon the process if they wish to do so. Some teachers that were interviewed indicated that they would like to have a copy of the audio-file of their interview, which was given, after being signed a document (informant consent) by both persons involved in the interview, namely the teacher and the researcher. Finally all teachers were informed that the findings of the research would also be presented during an open seminar at the HEI and that all were invited to participate (August, 2016).

Research Results

In the present section impact evidences of both master courses according to the teachers' perspective are presented (micro, meso and macro level), followed by the global balance of the master course. These results emerged from the analysis of the interview transcripts and the responses to 15 questions, out of the 35, of the questionnaire that was applied.

The Master Courses Impact within the Teachers' Classroom (Micro Context)

All six teachers that were interviewed recognized that the master course changed them as professionals, how they 'think' and 'act' as teachers within their classroom. Three teachers focused on conceptual growth, assuming "enhanced ability of reflection and perception of concepts and phenomena" (T1), "more knowledge of didactical principles of teaching history" (T4), and "broader perspective of the discipline taking into account students motivation" (T6). Two colleagues focused their reflection on the practices they changed. T2 stated that she implemented more experimental sessions, such as DNA extraction and experiences related

to fermentation as well as observations at the microscope. T5 described how he started to implement specific strategies, such as seminars and debates, in order to align teaching strategies and learning outputs. Finally, T3 gave an enthusiastic statement involving both dimensions (theoretical and conceptual) of her professional growth:

“The way I observe classes, correct teaching plans and give seminars about ... methodology, lesson planning and on the matrix of the proofs .. Everything is better [...]. Very Much [better] indeed! It was just combine [the learning of] the graduation and the Master course, make a ... braising ... and now we are eating from it! (Laughs) [...] Yes, Yes ... Yes. It was very good. It was very good ...”

These changes, related to practices and processes of teaching and learning, were also evident on the broader sample of 45 teachers. Indeed 93.6% of the respondents indicated that they changed as a consequence of the master course. A total of 57 examples of ‘changes’ were given, of those examples, 57.9% were focused on changes of the teacher at conceptual and emotional level, 35.1% corresponded to changes at teaching practices and 7.0% corresponded to improved learning outputs of students. Table 5 shows one illustrative answer for each ‘category’ and subcategory.

Table 5. Types and subtypes of the master courses’ impact at micro level.

4.1. Teachers’ change on conceptual and/or emotional aspects (n=33)
<p>Acquisition of scientific knowledge which sustains changes in practice (n=11): e.g. “The way I teach the discipline of curricular development, I learnt a lot about this scientific area”; Changes in self-perceptions and esteem (n=12): e.g. “I am more secure and concrete in my interventions”; Changes in planning classes (n=6): e.g. “I began to prepare plans for my classes”; Higher sensitivity towards students’ needs/individuality (n=4): e.g. “I now understand better the students’ difficulty considering the aspects that I investigated”.</p>
4.2. Teachers’ change on teaching practice (n=20)
<p>Changes on interaction with students (n=5): e.g. “Increased ability to interact with students reminding me that they all bring already some knowledge”; Changes on teaching strategies (n=15): e.g. “I Introduced several field classes”; “lecture strategies orientated study and academic times”.</p>
4.3. Changes on students’ learning (n=4)
<p>e.g. “I was able to improve the reasoning ability in my students”.</p>

*The Master Courses Impact within the Surrounding
Educational Community (Mezo Context)*

46.8% of the 45 teachers stated in the questionnaire that they did not realize any change or intervention with colleagues or on the surrounding community. Less than half of the respondents, namely 42.6% stated that they implemented some type of action as a consequence of attending the master course. A total of seven examples were given, being five of them related to working with peers of the same department or the same school (e.g.: *“implementation of laboratory practices in our classes with my colleagues at school, before this no lab classes were being implemented at school.”*) and two examples corresponded to the organization of scientific meetings at school.

On what concerns to the interviews, all six teachers emphasized the difficulty in implementing changes that go beyond classroom level. Four teachers stated that they offered to the school where they implemented the study a print-copy of the scientific report from their research projects, which included some concrete recommendation for school directors. Although, none of these teachers was able to clarify if any of those recommendations was

implemented, explaining that they lost contact after finishing their research. Despite these difficulties, some relevant examples considering impact at meso level were given. For example, T6 described during his interview how he approached five colleagues from his institution and how they started to share exercises and ideas considering the teaching of several disciplines at civil engineering. The description of T5 goes also in the same direction. He described how he, as a head of department, started to stimulate peer sharing and group discussion of the curricular plan and how teaching strategies were (re)oriented as a group effort. T3 recognized that she did not make any initiative with her colleagues. However, she emphasized that her students were future teachers, future colleagues, and maybe even future school directors. Therefore, she believed that what she learnt during the master course, and then implemented with her students' would perpetuate along time, and beyond her classes. Finally T4, assumed that his research project didn't have any direct impact on the teaching practices of colleagues, but it led to 'cleaning operations' of one school and the surrounding community involving teachers, students and school staff. And in his perspective this was an important impact considering the environment and the education towards sustainability.

*The Master Courses Impact within the (Inter) National Education Community
(Macro Context)*

On what concerns to impact at macro level, all six interviewees explicitly stated that the outputs of their master research were of high relevance for the policy makers at educational level, deserving higher investments on the dissemination of the results, namely to the research community. All teachers stated that they at least intended to disseminate their research outputs, but only two of them were able to realize this intention by participating at conferences. Four teachers explicitly manifested their desire to keep up with the contact with the Higher Education Institution and to develop their identity as an educational researcher:

[Another] example that we learn from it [the supervisor], a specific example, was the improvement of the pre-project research and doing the research. I've thought to continue to do research but I have not putted into practice yet ... it is still a dream ... I am dreaming about it" (T3).

On what concerns to the 45 teacher sample, 63.8% of the respondents answered that they did not have the chance to disseminate orally or in written form their research. Moreover, considering the question "Do you keep contact with your HEI?" 61.7% answered no. But *all* the teachers considered that maintaining a connection to the HEI would be of benefit, in order to continue to learn (40.0%), to disseminate their research results (25.0%), to continue to realize research in education (25.0%) or to continue to improve their teaching practice (10.0%).

A global balance of the master course: crossing initial motivations with perceived achievements

All six teachers that were interviewed remembered that they were highly motivated in attending the courses. Expectations were quite high since it was the first public post-graduation course for teachers:

"First the very course itself was an asset ... it allowed to potentiate a large number of people ... we may say that it was the first course taught at 'massive scale', although there was already one previous for ISCED teachers ... our was the second edition [...]. We are from the second edition, but I consider as if it was the first, because it was more inclusive to all ... it was very good. So, considering that it was the first course launched for everyone it was very important... of course there were difficulties" (T6).

From the interviews it seems that one of the main reasons beneath the enrolment in the master courses were associated with the desire in improving their professional practice, being those expectations globally fulfilled. The issue was more of 'getting the glass only half-full'.

All six teachers stated that they learnt a lot, but they wanted and needed even more. Four of the six teachers explicitly manifested the desire of more development and more learning (T1, T4, T5, T6). For example, T2 stated that her initial motivation was to learn “practical and laboratorial activities” and that she learnt some activities, but she would have appreciated if there was an opportunity to learn an even broader range of experiments. T4 assumed several initial motivations, namely at theoretical level and also at teaching practices. However what he learned about curricular development and leadership was mainly through his project and not during curricular units, where he expected more expertise.

On what concerns the sample of 45 teachers and the initial motivation in attending the master courses, the most important motivation corresponds to “improve professional practice” with a mean value of 3.82, within a four level Likert scale (3 = reasonably important and 4 = with high importance). Considering the master learning goals, stated at the official regulations of both courses, it seems that “Promote innovation at professional practice” was the most developed one, with a mean value of 3.73 on a four level Likert scale (4= highest development).

Table 6. Top-down serialization of the teachers’ motivation in attending the master course.

Motivation	Mean	Standard deviation
Improve professional practice	3.82	0.66
To progress within the career	3.80	0.41
Develop professionally	3.59	0.79
Bridge educational gaps of the initial (graduation) program at scientific/theoretical level.	3.55	0.93
Bridge educational gaps of the initial (graduation) program at pedagogical-didactical level.	3.51	0.89
Obtain an academic degree (master)	3.38	0.89
Change profession	1.38	1.29

Table 7. Top-down serialization of main the learning outputs of the master course.

Learning Goals of the two master courses	Mean	Standard deviation
Promote innovation at professional practices	3.73	0.49
Promote the advance of scientific knowledge in Education	3.59	0.58
Learn to use research methods and techniques	3.58	0.63
Promote the advance of learning in Curricular Development (CD)/Science Teaching (ST)	3.42	0.85
Contribute to changing educational policies of my country	3.43	0.87
Contribute to the promotion of innovation practices of my colleagues	3.39	0.87
Develop the ability to plan, design and evaluate research projects in the educational field	3.30	0.90
Develop teacher training skills	3.21	0.83
Apprehend and develop concepts in specific areas of knowledge	3.12	0.88

Discussion

Figure 8 sums up the results obtained considering the master courses impact on the educational contexts according to the three level impact model of Cruz (2005) and co-workers (Cruz, Pombo & Costa, 2008). While at classroom context, micro-level, all six interviewed teachers assumed changes on themselves or on their students, when focusing outside classroom

contexts, namely on colleagues or for example parents or other individuals from local community, only two teachers were able to give specific examples. A third teacher argued that considering her professional contexts, namely that she was teaching pre-service teachers, changes on her classroom practices would ‘simultaneously’ be reflected at ‘meso’ level. Finally, considering influence on policy makers and/or educational researchers, only two teachers indicated that they felt they ‘left a mark’ by disseminating their research results in scientific congresses. Similar pattern, namely the ‘drop’ of impact from micro – to meso and macro level was present at the broader teacher sample (N=45). While 93.6% of the 45 teachers stated that they changed within their classes, the extension of impact drops more than 50.0% when focused on impact beyond their individual growth or those of their students. Only 42.6% stated that they intervened at meso level as a consequence of the master course. Finally 36.2% stated that they had the chance to discuss their research results with a wider community of educational researchers/policy makers.

Despite the global positive balance of the courses, which seem to have contributed to “improved professional practice”, the desire in obtaining more pedagogical support for disseminating their research outputs and ‘nurture’ the identity of a more qualified professional, as well as educational researchers, was strongly manifested by the Angolan master teachers, signalling that much work has to be done not only in future editions of the master courses, but particularly with the already post graduated master teachers.

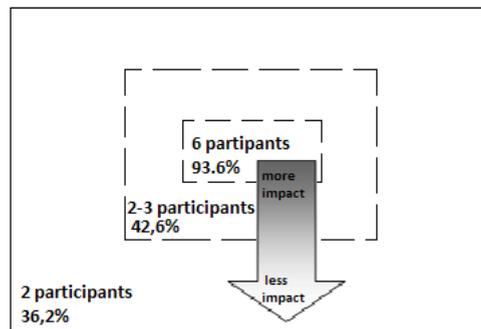


Figure 8: Illustrative scheme of the two master courses impact on the Angolan educational context according to the teachers' perspective.

An extensive literature review did not reveal any research considering the impact of post-graduation courses (master or doctorate level), ministered by Angolan public higher education institutions, on the professional development of Angolan teachers and on the surrounding community. This scenario may be a consequence of the historical background of the country, since public teacher education of higher level is in its emergent state. Therefore it is of crucial importance to continue with the research of ongoing and future academic post-graduation courses attended by Angolan teachers. The application of the same framework to these future researches would allow comparative analysis and could contribute to further understanding of the processes associated to teacher personal growth and change as a result of academic post-graduation courses in Angola.

Only one perspective, namely those of the teachers that attended the course, was discussed. A broader impact evaluation implies integrating the perspective of other stakeholders such as employers, students, as well as the teaching staff of the master course itself. Like previously stated, impact comes in different forms. Therefore, in order to have a more accurate view considering the extension of impact it would be important to observe these capacitated professionals in their daily practices analysing their interventions as well as the resources they produce on a longer time span. Good examples of similar studies considering non-academic courses were already developed in Angola and other African contexts (Bansilal & Rosenberg, 2016; Mauaie, Ito, & Arroio, 2014, Cangoi & Castanho, 2016) and can be adapted to investigate the impact of the post academic courses for Angolan teachers.

Conclusions

The impact of two master courses on the Angolan education system was evaluated at three different, but interrelated educational contexts (micro, meso and macro level). Although its exploratory nature, findings allowed to tackle some important aspects and to perceive that these master courses attended several needs considering the professional development of the teachers. According to the teachers' voice, there was impact, but more is wanted, and more is needed. The obtained findings, as well as the research process itself, allowed to draw the following recommendations, particularly relevant for Angolan HEI responsible for teacher education: (R1) develop strategies particularly focused at supporting peer work and collaborative work with communities, since 'impact' seems to drop particularly from micro to meso contexts, (R2) develop ad-hoc programs to academic post-graduation courses supporting the maintenance and expansion of the innovative practices implemented by recently post-graduated teachers, such as workshops for writing papers and organize scientific meetings; (R3) conceptualize consistent impact evaluation strategies considering data gathering related to the teachers right from the beginning of the post-graduation courses and that integrate observation of practices within and after the course.

While modular, non-academic teacher education programs, may contribute to continuous professional development, academic post-graduation courses for teachers may go further, since they contribute to the generation of educational researchers, and therefore create the opportunity in extending the scientific knowledge about education. In this sense, it is of crucial importance to continue the investment in researching the quality and the impact of academic-post graduation programs, particularly in post conflict countries, like Angola, in order to meet the targets defined at international Education 2030 Agenda as well as the CESA 2016-2025 plan. The three level impact model used in the present research may constitute a helpful resource in this effort.

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