



**EVALUATES AFTER HAVING SUPPORTED:
LESSONS FROM THE ASSESSMENT OF TRAINING
WORKSHOPS FOR TEACHER'S STAFF OF TWO LOW-
COST PRIVATE SCHOOLS IN SLUMS OF NAIROBI,
KENYA**

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ABSTRACT: Education has been regarded as one important aspect to reach human capital development. Several aspects of education have been researched, and an important part of them have focused on the effectiveness that teachers training programmes have over improving students' learning outcomes and improving teachers' pedagogical and methodological skills. The following report provides an evaluation of the educational assessment that Educafrica, a Chilean NGO, provided for Destiny and Saint Martin's School, two low-cost private schools located in Mathare and Kibera slums in Nairobi, Kenya. The teachers' training programme that Educafrica were designed and implemented considering some relevant findings and suggestions that different studies have made regarding teachers' training strategies, which basically points out the importance of addressing real needs of participants. An analysis of the effects over teachers and students is done, as well as the indication of some suggestions to improve the way these workshops should be implemented. At the same time, the final part of this report presents an evaluation of the goals related to the increase in teachers' effectiveness in the use of instructional time, which together with the training in methodological strategies were the main objectives of the Educafrica's intervention in both schools.

KEYWORDS: *Educafrica, education, teachers' professional development, training programs, workshops, Kenya, Kibera, Mathare.*

1. Introduction

In 2003, Kenya decided to make a change in the provision of primary education for all its citizens, by adopting a universal and free primary school education policy known as Free Primary Education (FPE). The implementation of the aforementioned policy allowed all six-year-old children to attend school for free during the eight years that primary education in Kenya lasts. School enrolment rates increased from 5.93 million children in 2000 to 10.2 million in 2013, with a Gross Enrolment Rate (GER) of approximately 100% student per year.¹ However, the school system and infrastructure to support the FPE policy has not yet reached all the areas in Kenya, especially in the informal settlements that may be found across the country known as *slums*. As mentioned in Oketch *et al.* (2010), a large number of children living in these slums have had problems in accessing free public schools in the places where they live.

As a consequence, children in the slums are being sent to low-cost private schools, which have become a fundamental pillar within the education system in Kenya. These schools charge a small amount of money to parents who want to send their children to school, and they are usually owned and/or administered by communities, religious groups or privates (Ngware, Oketch & Ezech, 2010). Most of them are characterized by a not-so-adequate infrastructure to function as a school: precarious schools with small and few classrooms; bad conditions of classrooms such as not enough light, desks or chairs; big student-teacher ratio; unqualified teachers, etc. Despite these facts, low-cost private schools have been emerging as a response to the lack of free schooling that the Government is intending to provide, in which slums'

households are sending their children to these schools to receive their primary education.

Low-cost private schools have been a target of national and international aid and cooperation, provided either by states or NGOs (national and international). At the same time, this assistance has adopted several forms, being one of them the provision of educational support and training for the teachers of these low-cost private schools. Educafrica Foundation, a Chilean NGO, is providing training to teachers in two low-cost private schools: Destiny School in Mathare Slum, and St. Martin School in Kibera Slum. The educational assistance that Educafrica is carrying out consists in training the teachers with new learning and teaching methodologies, so then they can be applied in lessons with the main objective to improve students' learning outcomes.

The purpose of the present report is to evaluate the work that Educafrica has been doing in both schools regarding the educational assessment being given to teachers. This assessment basically consists in doing workshops with the teachers, in which different teaching techniques and methodologies are taught to the teachers with the purpose that they apply those learnt methodologies in their lessons. In this regard, this report aims to identify the main strengths and weaknesses of the teachers training workshops, and it also aims to provide some recommendations to improve Educafrica's policies.

2. Theoretical Framework

The worrisome low literacy levels of students in Kenya have been reported by several education stakeholders. The UWEZO survey showed that amongst children from third grade, only 28% are able to read a Grade 2 English text, and 36% are able to read a Grade 2 Kiswahili text (Hoogeveen &

¹ Millennium Development Goals Report, Status Report from Kenya, 2013, p. 7

Andrew, 2011). On the other hand, and with the same purpose of looking into these low literacy rates, the Kenyan Ministry of Devolution and Planning, and the African Population and Health Research Centre have described and pointed out the main reasons of these bad literacy levels: the high educational differences across the country, the levels of school abandonment amongst students, the high student-teacher ratio, the lack of commitment on behalf of the teachers, etc.

2.1. Pedagogical strategies and their impact on learning outcomes

Teachers are one, if not the most, important and crucial element to nurture the education system of any country. As recognized by David Ole (2015), “a country’s nation building lies in the hands of its teachers. No matter how good the curriculum, infrastructure or teaching aids are, at the end of the day, it is the teachers who make a difference in preparation of the learners” (p.1). He calls for a change in the education system in Kenya, aiming to improve the quality of education through effective teacher educational programmes, acknowledging that teachers are the main input in any educational system as they are the ones in charge of educating the young population, contributing to enhance the human capital of societies and preparing them to face future challenges (Ole, 2015). In his research, he recognizes that teachers’ education should include knowledge on the actual subject to be learnt or taught, and consequently, teachers then should integrate their skills and knowledge in a useful way, concerned not only with what they teach but on how they teach. Teachers who provide education to students must be, at the same time, equipped with the best knowledge and pedagogical skills to carry out their teaching labour and to assure a good quality in education that improves learning outcomes. Pedagogical skills are fundamental to be taken into account by teachers, as they can ensure that the learning process can be performed in the best way possible. Besides remarking that teachers’ education programmes should consider a course work that allows teachers (as students) to observe and learn from different teaching practices in other schools, he states that is fundamental that trainee teachers understand and reflect upon themselves as learners, working in collaboration between them to give each other constructive feedback on teaching practices and subject learning.

According to Guskey (2002), “what attracts teachers to professional development, therefore, is

their belief that it will expand their knowledge and skills, contribute to their growth, and enhance their effectiveness with students” (p. 382). These positive outcomes seen on teachers are then transmitted to students, who improve their performance and their learning process. In 2002, Guskey conducted a research in which he describes the process of teacher change through teacher development programmes. He suggests a model structured on a temporal sequence of events that explains how the process of change happens and presents evidence of studies which support this model. Acknowledging that effective pedagogical teachers’ training has an impact over student’s learning outcomes, he proposes a model that takes into account the major outcomes of teacher development: in the classroom practices, on their beliefs and attitudes and changes in students’ learning outcomes. Regarding these outcomes, he says that most of teacher development programmes assume that teachers’ attitudes and beliefs are the first things that change. However, this aspect only happens after changes in students’ learning outcomes are noticed. In that sense, the process through which teachers’ development happens considers three sequential stages: first, the practices that teachers carry out in their classrooms; then, the change in those practices leads to a change in students’ learning outcomes; finally, these last changes lead to a change in the teachers’ attitude and beliefs. After these stages occur, teachers will keep their attitude towards becoming better education drivers. Finally, Guskey (2002), indicates important implications that should be taken into account for carrying out teacher development programmes: teachers’ change is a gradual and difficult process, and that is fundamental to ensure that teachers receive a regular feedback on student learning processes.

2.2. Teachers’ training programmes in Kenya: what the evidence says

Regarding the effects that teachers’ education programmes have had over the improvement of the quality of education, which at the same time has positive outcomes on improving students’ achievements, several researches have been done in many countries around the world, and an important part of them have been done in Kenya. Although their different theories and approaches based on evidence come from different studies in the field, research questions and research designs and methodologies, most of them conclude that an effective coach, train or teaching to teachers on

pedagogical skills (in the broadest understanding of the concept), and /or strengthening their knowledge on the subjects taught by them, gives the instance for students to improve their learning outcomes. In this line, Hardman *et al.* (2009) explores the impact of a national teacher development programme in Kenyan primary schools. This programme involved an in-service and distance-led teacher training, and it was initiated by the Ministry of Education, Science and Technology (MoEST), supported by the Department for International Development (DFID). This programme is called the “School-based Teacher Development (SbTD) programme”, which aimed to improve education quality through teachers’ development, by teaching them pedagogical skills that promoted active learning. The programme was designed as to have a “cascade effect”, where teachers known as Key Resource Teachers (KRT) were trained with the purpose that then, they lead school-based professional development within their subject area in their schools. The program was supported by an advisory teaching system (Teacher Advisory Centre - TAC), where the tutors from those TAC were also trained in order to provide an effective group-support to the KRT, as well as to conduct classroom observations in schools where the KRT were working at. The study analysed the implementation stage of the programme through several methods such as observations, surveys, video recording and a close monitoring process. The findings suggest that teachers’ training programmes do have an impact on improving their pedagogical skills.

Another study conducted by Hardman *et al.* in 2011, explores the lessons and challenges drawn on teachers’ development programmes implemented in Kenya, Uganda and Tanzania, providing suggestions on how to design an effective programme given the several problems found on their implementation, and other constrains such as their educational systems’ limited resources. The educational reform that these countries have gone through provides a comparative case study across the three of them that guides the study, in which the main focus is to look at importance of pedagogical processes and the variations that it has according to classrooms realities and teachers’ capacities. In the case of Kenya, the study refers to the analysis of the SbTD programme implemented by the MoEST and the DFID. In spite of implementation problems mainly related with resources and their allocation and considering the distance-led approach of the programme, the impact and evaluation of the SbTD

programme has shown positive outcomes and changes in pedagogic practices of teachers. Referring to a 2010 UNESCO report, Hardman *et al.* (2011) points out that a well-organized in-service training teachers’ development programme has enhanced teachers’ competence to deliver a quality basic education. As a lesson, the study concludes that better outcomes can be achieved if programmes like that are implemented along a continuous monitoring and a face-to-face training delivery. In this last aspect, the labour that Educafrica has been carrying out meets the lessons drawn by Hardman *et al.* research, as the training and the teaching of new methodologies being taught to the teachers in the workshops are followed by regular and face-to-face meetings, as well as they are promoting teaching methodologies through active learning (learning centres, shared reading, etc.).

In 2014, Benjamin Piper *et al.*, conducted a research on the way that instructional coaching to teachers in Kenya may contribute to increase the quality of education. The study focused on in-service training given to teachers in Kenya, based on a growing research in the field mainly in the United States that suggests that providing effective instruction to teachers can improve their pedagogical skills, and consequently, students’ learning outcomes. The research was conducted along the implementation of the Primary Mathematics and Reading (PRIMR) Initiative, of the Ministry of Education, Science and Technology (MoEST) of Kenya, carried out in collaboration with USAID/DFID. The initiative aims to increase the teaching and pedagogical skills of teachers of formal and non-formal schools in Kenya through the coaching and instruction to Tutors in Teachers Advice Centres (TAC) and Instructional Coaches. Is important to note that the TAC are entities depending of the MoEST, therefore they only provide teacher support to teachers who work in the public education system. Instructional Coaches were hired by the PRIMR programme to perform the same role of the TAC tutors but in non-formal schools (low-cost private schools). Furthermore, the research design took into consideration the lessons drawn by the previous experience of the SbTD programme, that aimed to improve the quality of education under the same logic as the PRIMR: by providing instruction and coaching to tutors, so then they can transmit what they learnt to school teachers.

The research was conducted over the school spectrum covered by the PRIMR programme (1385 schools in Kenya), randomly assigning tutors or

instructional coaches to school clusters with a ratio of 10:1 for TAC tutors and 15:1 for Instructional Coaches. Tutors and Instructional Coaches received training in pedagogical skills, aiming to improve literacy and numeracy outcomes, so then they will train the school teachers with the same methods and techniques previously taught. Also, every certain time, Tutors and Instructors had to perform classroom observations in their assigned schools. Their findings suggest that the training given to the Tutors and Instructional Coaches was effective regarding the improvement of teachers' knowledge and pedagogical skills of formal and non-formal schools. However, this impact was much stronger over the teachers pertaining to the non-formal schools, given that their teaching ratio was lower than the formal schools, letting to a better impact of the teaching training and coaching. Furthermore, the study suggests that effective training to teachers can have a positive impact on students' learning outcomes.

Concerning about whether the FPE policy effectively reaches the non-formal settlements (slums) in Kenya, and regarding the quality of education being provided, Ngware *et al.* (2013), in partnership with the African Population and Health Research Centre, conducted a research in which they studied different schooling patterns and the quality of education being received by the children living in slums. Within this purpose, they also studied what were the main classrooms teaching and learning processes that determined learning outcomes in students, considering teachers' characteristics such as qualification and experience. The study involved a mapping of several relevant stakeholders, whose contribution was captured by surveys and focus groups. Also, the research design was done considering the previous literature and reports done over the quality of education and the student's current learning levels across Kenya. Their findings indicate that the skills acquired by teachers during training programs are important for teaching and learning processes, contributing to improvements in students' outcomes, especially when teacher training and development are based on content and pedagogical knowledge.

Based on the vast evidence that has shown the important aspects of quality of education in teaching and learning processes, another study conducted by Moses Ngware *et al.* (2014), also in partnership with the African Population and Health Research Centre, was done over the analysis on how the teaching instruction was in Kenyan classrooms, and then they

generated relevant information on education policies advices regarding the quality of teaching and learning. By reviewing previous literature concerning teaching and learning processes, and also literature regarding the experience of teacher development programmes done in Kenya, the study aimed to contribute to the education debate and its quality. Through interviews and classroom observations (including video recording), they were able to explore the way that teachers taught and how students were exposed to learning opportunities. Their findings suggest that different learning outcomes are a consequence of different classroom interactions and teaching approaches. Furthermore, and given the empirical evidence used for the study, they suggest that the dominant methods of teaching, teachers' knowledge, non-basic teaching aids (such as classroom materials), head teacher supervision of lessons and social relations within school communities contribute to learning achievements. They highlight the importance of pedagogical skills upgrading for teachers and a continuous in-service training is fundamental to reinforce the teachers' pedagogical skills.

The way or different teaching methods that might be adopted by teachers have also been object of studies in order to determine if those differences are reflected in learning outcomes. In 2014, Ngware *et al.*, concerned about the quality of the education being given in Kenya and that the instructional delivery is fundamental to determine the extent up to which the teaching process has an impact on learning outcomes, researched about how do the different teaching styles (individual, seat work, recitation and whole-class) explain the differences in academic performance of primary school students, with the purpose of finding out the best teaching practices. Their findings are relevant for this report, as they were able to determine that teaching methods which involve visual aids (charts, illustrations) are important for learning as their correct use can improve learning processes. Also, they noted that there is a lack of community building amongst teachers in which more experienced teachers can share their experiences with younger teachers. Even a limited interaction between teachers showed an improvement in students' tests scores, highlighting the fact that this mutual collaboration is important for learning outcomes. Finally, they suggest that an in-service teacher training programme should be encouraged as a way to reinvigorate teachers' pedagogical skills, which finally makes a contribution in students' learning outcomes.

In 2015, an interesting study aiming to design an effective teacher programme in Kenya was carried out by Margaret Dubeck *et al.* Based on the bad literacy levels reported by the 2011 UWEZO report, the study points out that an emphasis should be done in improving learning outcomes in students and in that regard, teachers should learn language and pedagogic skills to teach students how to read. Following that, the study aims to provide outlines for the design of a literacy intervention, which would be successful in improving reading outcomes. They provide ten recommendations based on the existent literature on teachers' development programmes, and also, on reasons beyond literature which are that teachers should not be seen as education policy implementers but rather as partners, that language abilities should be seen as assets, and that the recommendations do not demand a big amount of resources. The design of the literacy intervention should follow the recommendations given, and also, it has to be simple, well-defined, it should not interfere with teachers' responsibilities and with relatively few activities. The intervention considered workshops for teachers with several teaching methods, videos about children exposition to teaching, lessons demonstrations, etc. Also, it considered the provision of a teacher manual containing resources for teachers to be applied during lessons, lessons aimed to develop fundamental literacy skills and optional bonus activities to do with children. Teachers were also given material to be applied during lessons in order to increase the amount of text that students see in their classrooms, and they were also given permanent and ongoing support and monitoring. An important aspect of the intervention is that it considered teachers' feedback, which was given through weekly summary sheets, focus groups and individual interviews and through teachers' knowledge surveys. The findings of the study showed that children began to engage more with the activities being imparted by teachers, which will have as a consequence that their literacy skills will improve. Also, it found that teachers' knowledge on literacy and pedagogical skills improved, and a change in their instructional behaviour was noticed.

The studies and reports above mentioned will provide the theoretical framework which will guide the present report, as all of them focus on the way that educating teachers can lead to a better education quality and to improve students' learning outcomes. Their findings are fundamental to establish whether the intervention that Educafrica has been doing in

providing teaching training to the teachers of Destiny and St. Martin's schools, is going on the correct path.

3. Methodology

3.1. Educafrica's workshops in Destiny and St. Martin's schools.

Educafrica carried out teacher training in Destiny and St. Martin's schools, with the objective to make a change in the way that teachers are currently teaching their students, looking to improve students' learning outcomes. As it has been identified previously by Educafrica, the most common teaching practice amongst the teachers is to stand in front of the class and write down the lessons content on the blackboard, and students just take notes on the content written by the teacher. There is almost no interactive engagement with the students, which directly impact their opportunity to learn because they rapidly lose concentration on the lesson's content. In that regard, Educafrica has detected this teaching flaw and is looking forward to making an impact on how the education is being provided, by teaching several new teaching methodologies throughout teacher's workshops, in order to reinforce the learning processes of students with more interactive and participatory teaching methods. The intervention is being carried out under the assumption that these new methodologies could have a significant impact on student's engagement level and, therefore, on learning outcomes and students' life skills.

A previous survey applied to the teachers from both schools, found out that they wanted to receive training in pedagogical strategies and new methodologies for teaching. They were shown a set of twelve different strategies and techniques, from which they had to choose the best three according to how important they considered them to be.

After analysing the results of the survey, Educafrica then came up with several workshops which included these pedagogical and methodology support. Teachers had to choose different methodologies that they wanted to be trained in, according to the difficulties that they were facing during their lessons. These workshops were carried out in both schools, where teachers belonging to different educational levels were receiving training according to the methodologies chosen by them, which are below described. The frequency of each workshop was at least once a week, as sometimes they were done twice a week.

The following tables show the different teaching methodologies that were taught to the teachers' staff of both schools, within each educational level (pre-school, lower primary and upper primary).

Destiny School:

Preschool/ECD	Lower Primary	Upper Primary
Learning Centres	Material making	Material making
Daily Reading	Shared Reading	Daily Reading
Shared Reading	Small Groups	Small Groups

St. Martin's School:

Preschool/ECD	Lower Primary	Upper Primary
Material making	Material making	Discussion
Learning Centres	Learning Centres	Problem Solving
Daily Reading	Daily Reading	Projects

Below, there is a description on what the above-mentioned workshops consists:

i) Daily Reading. Reading is a vital activity for every human being. It helps to develop the mind, imagination and creativity, to discover new things, to deal with everyday life situations such as reading instructions or filling application forms, etc. In this context, the Daily Reading methodology aims to improve students' reading comprehension. This method relies on the idea that students should voluntarily choose what they want to read. Then, the proper way to assess this methodology is through conversation, debates or discussions inside the classroom, so students are able to realize that there are different understandings and opinions on what they read.

ii) Discussion. The Discussion methodology aims to encourage students to freely talk about a certain topic, in order to learn how to mutually respect each other while having a group discussion: to listen to each other, to talk when given the instance to do it, to respect other student's opinion or ideas, etc. This methodology requires the presence of one facilitator, which can be the teacher or a student, and also, it requires to create the proper environment in which students can freely speak without any kind of constrains.

iii) Problem Solving. The purpose of this methodology is to teach students how to combine different skills and concepts, so then they will learn how to solve problems by using them. The way that this methodology is being taught to teachers is based

on the problem solving model formulated by György Pólya in his book "How to Solve It" (1957), which is based on four steps: understanding the problem, creating a plan to solve the problem, implementing the plan, and reflecting on the problem.

iv) Shared Reading. This methodology is based on an interactive reading of a book or a big text, so all students have the opportunity to read out loud part of the text while being guided by the teacher. As students participate in share reading, they start to perceive themselves as readers and they start to get the feeling of learning. This methodology is intended to foster the students' motivation to read, to improve their vocabulary, to promote a community feeling inside the classroom and to improve writing and reading skills.

v) Shared Writing (Interactive writing). The Shared Writing methodology consists in the collective text composition between teacher and students, with both contributing their thoughts and ideas to the process. The role of the teacher is to keep note on the text composition, writing the text as it is composed. This methodology allows students to gain competence and confidence in their writing skills, while it allows the teacher to demonstrate the usually internal thinking process that takes place when writing. It also helps to provide the rich oral language modelling that stimulates literacy development.

vi) Small Groups. This methodology consists in creating small groups of students within the classroom (maximum eight students per group), where the learning process is stimulated by dialogue and collaboration between the students. Students are the main drivers of the learning process, and the teacher's role is to facilitate, coordinate and inspire students to participate and to give their opinion.

vii) Teaching and Learning Materials (Materials). This methodology intends to help to establish links between what happens in the school and what happens in the social environment, that is, to provide contextualization. Children learn best when they are given the opportunity to engage with abstract concepts in concrete ways, and didactic materials give students the chance to learn both visually and kinaesthetically. By making learning to read or do math a sensory experience, children are more likely to gain the initial skills they need in order to continue benefitting from their education.

viii) Learning Centres: Maria Montessori advocated for an autonomous learning, whereby the students are the ones in charge of their own learnings, given some materials to develop them. The students explore the materials, use them as they see fit, with

the guidance and company of the teacher, who is nothing more than that to them. Thus, the children decide what to learn, how to do it, and enjoy the learning experience which they are in charge of.

As shown, there was a wide variety of strategies that addressed the development of multiple skills in students, with the advantage that they could be applied in different subjects and educational levels. The idea was to expand the range of knowledge of teachers about different methodologies, safeguarding the adaptability and suitability to each particular situation.

Now, regarding the implementation process, the workshops were done in the schools with small groups of three or four teachers, and they lasted for approximately an hour. Their structure consisted basically in two phases: a first one focused on theoretical knowledge, where main concepts and ideas were discussed, and a second one focused on practical training of each strategy, where teachers had the opportunity to apply the methodologies through role-playing and other strategies. Then, they had the chance to practice each methodology inside their classrooms and receive feedback from their own peers. Volunteer coming from Education was the one in charge of carrying out the teaching workshops.

3.2. Educafrica's workshop assessment.

In order to evaluate how the teaching support provided by Educafrica was impacting the teachers' pedagogical skills, surveys and lessons observations were applied.

The surveys were done in both schools with the purpose to measure the impact of the new methodologies being taught by Educafrica in the workshops, to establish whether teachers find them useful, to see how is their satisfaction level regarding the workshops and if they have any suggestion to the way the workshops have been carried out.

Observations on teachers giving lessons and paying attention to whether they applied the new methodologies, were also carried out on both schools, with the purpose to give them feedback and try to foster a correct implementation of the new strategies.²

3.2.1 Data collection.

The surveys were applied to the whole teachers' staff of both Destiny and St. Martin's School. The total number of surveys done were 23, of which 10 cases correspond to Destiny and 13 to St. Martin's school. They were applied in the first week of August 2016 by an Educafrica's volunteer and it consisted on a self-applied survey of 24 questions, considering items with Likert scales with level of agreement and frequency, as well as multiple choice items about ideal conditions of teaching support. Finally, they were asked to write comments, suggestions or feedback to improve the workshops. The main purpose was to obtain the teachers' perception in the following areas:

- a) Administrative and teaching aspects: this part focused into the way that the workshops were done, such as frequency, duration, usefulness, etc. This part of the survey was meant to be answered by indicating the level of agreement or disagreement with different statements.
- b) Learning and impact of new methodologies: this section aimed to see whether the workshops were having a positive impact, looking into the teachers' perception of the utility of the workshops. Also, it tried to see whether teachers were applying the new methodologies, the frequency of their application, which was the most applied methodology and to see if teachers considered these new methodologies useful or not. The questions were meant to be answered by indicating the frequency level of some statements.
- c) Ideal conditions of teaching support: this part looked into formal aspects of the workshops, in order to see if teachers were satisfied with their duration, time of the day in which they were done, location in which teachers would prefer to do the workshops and from who they would like to receive teaching support. The answers were meant to be given by choosing one answer from multiple choices.

Regarding classroom observations, an observation sheet was designed and used to evaluate the teachers' current practices at the beginning, middle and end of their lessons, based on 28 indicators related to these three lessons' periods. This observation sheet also aimed to observe the pedagogical practices that were recommendable to

² However, the frequency in which they were carried out was not the optimal, as it was not possible to observe all the lessons from both schools, and the observations carried out tended to be done more frequently in one school (Destiny) and only in some educational levels. In spite of this limitation, the amount of observations done may be considered as sufficient evidence to see if teachers are using the new methodologies that the workshops are aiming to provide.

foster. An Educafrica's volunteer carried out the observations and trained other teachers to do the same with their peers. For purposes of recording and scoring the indicators assessed, a scale with four criteria was defined (Yes/No/Sometimes/NA) and a numeric score was assigned, allowing Educafrica to obtain average scores and other descriptive statistics. Also, there was an open space at the end to record additional comments if considered necessary.

3.2.2 Data analysis.

The collected data through the survey was processed and analysed in order to obtain the frequency of each variable, in terms of percentage of total responses. No missing data was reported; hence, it was not necessary to do any kind of adjustment in calculations. In case of questions whose answer involved two or more alternatives, as a checklist, the total amount of responses was summed up, and then the alternatives were sorted out by their frequencies.

In case of the classroom observations, we calculated the averages and frequencies of each of the criteria according to each indicator. Further down, a table that summarizes the main results of observations carried out is presented.

4. Results and discussion

4.1 Workshops assessment survey

The results, in general, show that the teaching training is having a positive impact on teachers in both schools, as they reported that the new methodologies can improve their pedagogical knowledge and, therefore, students' learning outcomes.

Figure 1

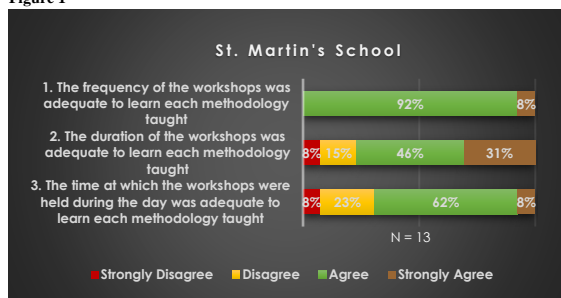
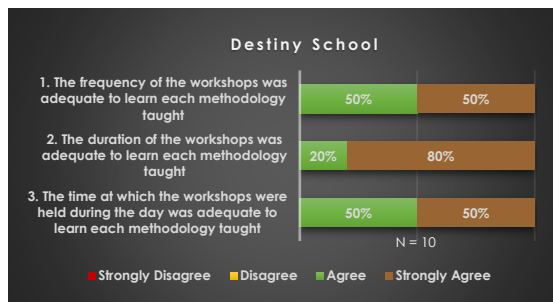


Figure 2



In relation to the administrative aspects, figures 1 and 2 show that the evaluation of teachers is very positive in both schools, although there is a higher degree of agreement in Destiny School with the frequency, duration and moment in which the workshops are carried out. Anyway, it is necessary to point out that there are few cases in both schools, hence, the variations depend almost on one or two answers.

Figure 3

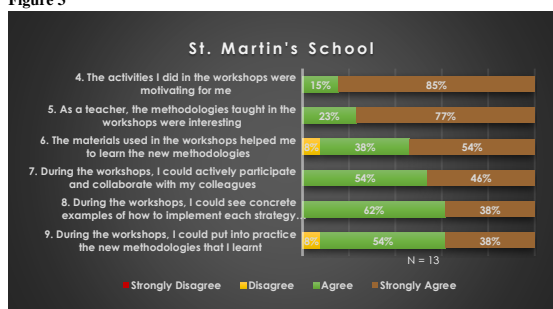
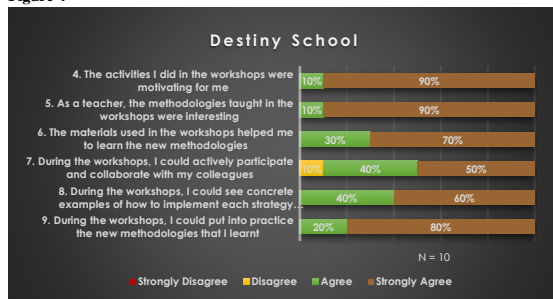


Figure 4



Considering the pedagogical aspects of the workshops (see Figure 3 and Figure 4), such as the level of motivation, interest, effectivity, opportunities to collaborate and instances to practice the new strategies, both schools also had a very positive perception. However, in Destiny school again there is a higher level of agreement, which could draw the attention to the possibility to develop new strategies in workshops. In case of St. Martin's, it would be important to consider its lower level of agreement for future improvements.

Figure 5

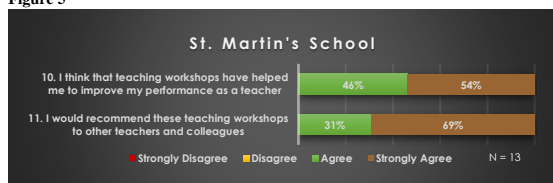
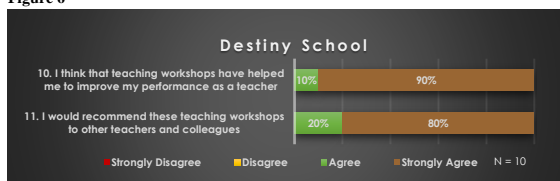


Figure 6



By looking at figures 5 and 6, it is easy to realize that the vast majority of teachers in both schools manifested a high level of agreement with the statements regarding the fact that workshops helped them to improve their performance, and also, to the degree in which they would recommend it to other teachers. This shows a positive general perception about the workshop's contribution to their own professional development.

The impact of the new methodologies was also well evaluated by the teachers. When asked about what methodologies they apply during their lessons, the most used in Destiny School was the Daily Reading (47%), while in Saint Martin's school was Discussion (65%). Concerning the rest of the methodologies, teachers in Destiny School also applied Small Groups (27%), Learning Centres (13%) and Materials (13%). On the other hand, in St. Martin's, besides Discussion, teachers also applied Learning Centres (12%), Materials (12%), Problem Solving (6%) and Shared Reading (6%).

When asked about which of the new methodologies they think that contributes the most to improve students' learning outcomes, 40% of St. Martin's teachers indicated Discussion and a 30% said Materials, while the rest of the teachers declared Daily Reading as the most contributing. In Destiny school, however, occurs a different situation, because for 46% of the teachers, Daily Reading is the most valued methodology. Then, 15% and 23% of the teachers said that Small Groups and Materials, respectively, contributes to improve students' learning outcomes. The rest mentioned Discussion and Learning Centres.

Figure 7

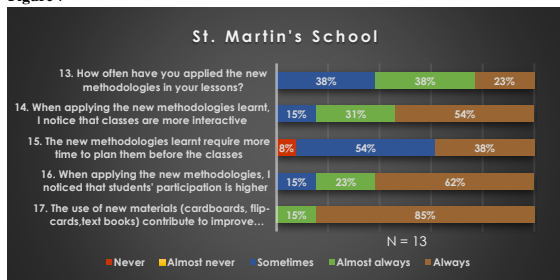
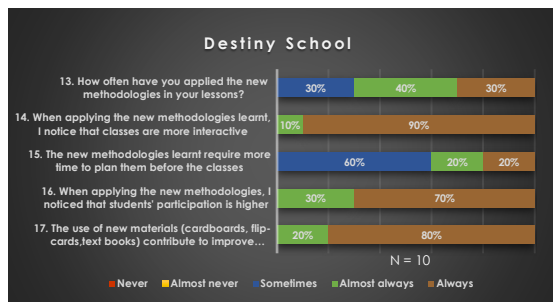


Figure 8



However, taking into account the teachers' perception about how often they apply the new methodologies and the impact that they have been having in terms of lessons' interactivity and students' level of participation, it is observed that in both schools, the vast majority of teachers declared that always³ and almost always they apply the strategies, and that they are frequently having an impact on students' participation. Also, both schools showed very similar results regarding the great amount of time that the planning process of these new methodologies require.

Finally, concerning the desirable conditions of the teaching workshops and the teachers' preferences, 40% of the teachers in Destiny School and 85% of the teachers in Saint Martin's School would prefer to receive teaching support once a week, which means that they are keen to be trained with a certain periodicity. This result is consistent with the current workshop frequency that is being implemented by Educafrica in both schools. Concerning the duration of the workshops, 40% of the teachers in Destiny School and 54% of the teachers in Saint Martin's School would prefer to have a 45-minute workshop session. The future workshops should take this teachers' preference into account. Regarding the place where teachers would like to receive the teaching support, 80% of the teachers in Destiny School and 69% of the teachers in Saint Martin's School prefer to do the workshops in their own schools. This might be due to the fact that the school is a familiar environment for them, so they might feel more comfortable in learning in the same environment in which they teach. Finally, when asked from whom they would prefer to receive teaching support, 30% of the teachers in Destiny School would prefer to receive teaching support from other professionals of education, such as high school or university teachers, and 23% of them would prefer, as a second option, to receive this support from volunteers from national or

³ Always here doesn't means literally always but all the times that it could be possible to implement each of the methodologies, not taking into account the classes where it wasn't.

international organizations. On the other hand, 24% of the teachers from St. Martin's school would prefer to receive teaching support either from their peers or from other professionals of education (these preferences share the same amount of acceptance). 22% of the teachers chose as a third preference that they would like to receive teaching support from volunteers of national or international organizations. This could be a sign that it would be recommendable to combine or complement the conduction of the workshops with both Educafrica's volunteers and other professionals from the local context.

4.2 Classroom observations

As mentioned above, classroom observations were carried out in order to assess whether the teachers were applying the new methodologies, and to observe if some methodological aspects were being done by teachers, such as prior knowledge activation, on-time lessons starting, and feedback provided to students.

Is important to mention that these observations were mostly performed in Destiny School, and also, most of them were done over the same classes and teachers, therefore, it is necessary to look quite carefully at the results shown here. However, it shed lights on the real impact that these workshops are having over the teachers and their pedagogical and methodologies learning process.

or at least sometimes. Considering all classroom observations made, which reached the sum of approximately 60, carried out by 9 different observers, the results show that in most of the indicators, teachers do effectively carry out the expected actions regarding the way how the lessons should be done. Only certain aspects were observed as not fulfilling the expected results, such as making challenging questions to students, to encourage students to ask questions about the lessons, to validate what students learnt, teaching assessment, to give feedback and mistakes correction, information about the activities to be done, formulating questions according to what students are saying and listening to students' ideas. These aspects are meant to be improved within time, as more workshops will be implemented in the future with the expectation to correct these minor flaws in teaching. It is important to constantly provide feedback to the teachers in these aspects, so in that way they can improve the way they carry out their lessons especially in teachers-students' interaction. These are the main aspects that need to be improved in order to make an effective teaching, and in this regard, it is important to say that an improvement can be expected as the teachers strictly believe that the new methodologies can improve the way that lessons are given and consequently, can improve students' learning outcomes.

Table 1

	No	Sometimes	Yes	Total
BEGINNING				
The teacher makes sure that the learning environment is suitable for learning	0%	0%	100%	100%
The teacher starts the lesson on time	2%	5%	93%	100%
The teacher communicates the goals of the lesson	5%	9%	86%	100%
The teacher activates prior knowledge	8%	6%	86%	100%
MIDDLE				
The activities are planned according to the goals	0%	0%	100%	100%
The activities are according to the content	1%	0%	99%	100%
The teacher is available to the students	0%	1%	99%	100%
The teacher walks around the class	0%	5%	95%	100%
The teacher makes challenging questions to the students	5%	10%	85%	100%
The teacher encourages students to ask questions about the lesson	7%	27%	66%	100%
END				
The teacher allows students to validate what they learnt	12%	5%	83%	100%
The teacher assesses what was taught	12%	6%	82%	100%
The teacher gives feedback and corrects mistakes	12%	1%	87%	100%
TEACHER				
Informs the meaning of the activities to develop	9%	26%	65%	100%
The instructions are clear	2%	3%	95%	100%
Gives examples about how to perform a task or activity	6%	2%	92%	100%
Oversees the work of the students	1%	2%	97%	100%
Formulates questions or comments according to what the students are saying	7%	13%	80%	100%
Uses the mistakes as chances of learning	4%	9%	87%	100%
Listens carefully to the ideas of the students	11%	12%	77%	100%
Uses the strategy learnt the previous week	4%	2%	94%	100%
The strategy is according the theory learnt	5%	5%	90%	100%
The strategy is useful for the lesson	4%	1%	95%	100%
The strategy helps the students to understand a content better	4%	0%	96%	100%
The strategy was well prepared	3%	2%	95%	100%
The materials needed for the strategy were present since the beginning of the lesson	2%	3%	95%	100%
The activities encourage the individual or group work of the students	1%	6%	93%	100%
The activity was well implemented	2%	9%	89%	100%

As can be seen in Table 1, most of the indicators in the observation sheet were identified continuously

5. Final evaluation of goals associated with the use of instructional time

Regarding the goals initially that proposed to increase the effectiveness in the use of the instructional time on the part of the teachers of both schools, it should be mentioned that these were satisfactorily fulfilled in the course of the implementation of the programs carried out by Educafrica.

First, in relation to the objective of increasing the use of instructional time in the teachers of both colleges, making it possible for more than half of them to allocate 60% or more of the instructional time to academic activities, it can be argued that, according to The last measurement that took place at the end of the last term of 2016 in both schools, almost all the teachers use, on average, 80% of their time in performing academic activities, which is a very positive indicator in this matter. This allows us to corroborate that, at both Destiny School and St. Martin's, Educafrica's work has had a positive impact, although it is not possible to attribute to it only improvements in teaching performance. In that

sense, there has been an effort by the entire community to promote greater efficiency and effectiveness in the use of teaching time, valuing the importance of this resource scarce but at the same time fundamental to promote student learning.

However, notwithstanding the foregoing, it should not be forgotten that they are averages, which often hide the variations that occur between teachers of the same school (as seen in the highest and lowest peaks found in Both schools, see graphs 3-6), so it is important that all teachers perform similarly in this regard; otherwise, it may happen that only some students will benefit from this progress, to the detriment of those who are under the tutelage of an educator who still cannot use his or her teaching time properly.

Nevertheless, insofar as the results of the last Snapshots applied were practically identical to those obtained in the mid-term evaluation, that is, the use of time by teachers improved enough to reach the initial goal, nonetheless, it has not progressed in the last few months, which is why there will be no additional graphs to support the information, but with those already included in the report the distribution of time and the participation level of the students in the classes.

6. Conclusions

The researches and studies mentioned in this report, have provided relevant aspects of educational assessment and teaching training that are seen in Educafrica's labour. Most of them are conclusive in the sense that educational programmes focused on teachers training have had a positive impact on improving students' learning outcomes. In this regard, the studies done by Hardman *et al.* (2009; 2011), show that pedagogical processes are extremely important for good education outcomes. The in-service programmes that were analysed in his researches show that promoting active learning to teachers and students positively impact students' learning outcomes, as well as teachers' pedagogical skills. Also, it concluded that this positive impact can be improved when teachers are constantly monitored and are given a face-to-face training. In this regard, Educafrica's intervention is going along with the discoveries made by Hartman *et al.* (2009; 2011), as for instance, the workshops are focused on instructing the teachers with new pedagogical methodologies; observations about whether the teachers are applying these methodologies is being done and furthermore, a collaborative feedback is being given to the teachers, where instances of self-

reflection upon their work are constantly being done. However, there are some aspects amongst these activities that should be improved in order to provide a better intervention. There is a need to develop a better monitoring system to properly determine the impact of the workshops, and to improve the frequency of observations of the workshop application. In that way, there would be more certainty about the effectiveness of the workshops and if their contents are currently being applied by teachers while doing their lessons.

Following the studies done by Piper *et al.* (2014) and Ngware *et al.* (2013; 2014), where they researched upon teachers' training programmes and how classroom interaction determines learning outcomes, it can be seen, again, that the work being carried out by Educafrica follows the findings and suggestions given by these authors. The new methodologies taught in the workshops are contributing to improve pedagogical skills in teachers, promoting active learning that then is applied over students. Educafrica began to work with teachers recognizing that that type of teaching has been acknowledged as effective in improving learning processes. Furthermore, Educafrica has also been doing what the aforementioned studies have pointed out as effective learning for teachers: giving in-service teacher training, meaning a full-time presence in the schools with the purpose to reinvigorate the pedagogical skills that teachers are learning in the workshops.

When looking into the results regarding the administrative aspects of the workshops, teachers in both schools agreed that the workshops are contributing to improve their pedagogical skills. In fact, when asked "I think that teaching workshops have helped me to improve my performance as a teacher", teachers from both schools agree or strongly agree with that statement (in Destiny School, 10% agree and 90% strongly agree; in St. Martin's School, 46% agree and 54% strongly agree). They believe that the workshops are contributing and helping them to become better teachers. If teachers start to change their mind set upon this belief, there are high chances that they will start improving the way that they impart their lessons, which will consequently improve the learning outcomes of their students. This is showing that the guidance and support that Educafrica is doing with the teachers in Destiny and St. Martin's School is going into the right direction. However, and according to the model proposed by Guskey (2002), teachers will keep improving their skills

once they perceive that their students are performing better. Given the fact that the intervention of Educafrica regarding the new methodologies started less than a year ago, a good indicator of students' performance will be seen when taking their final exams at the end of academic year, especially the KCPE. These results should later be compared with the students' performance of previous years. If there is an effective improvement of students' performance, teachers will have the feeling that they are effectively contributing to their education, and from that moment they will start to change their attitudes and beliefs, considering themselves as good teachers. At the end, this cycle will definitely contribute to both schools' performance in terms of improving the quality of education that they are actually giving to children.

In terms of establishing whether these new methodologies are having an impact on classroom interaction, the survey results also show that teachers had begun to apply these methodologies throughout all the educational levels. They recognize that the new methodologies have been a high contribution for them, that these methodologies have made their lessons more interactive, that using material while teaching improves students' learning and that students have improved their participation in class. Overall, the impact of the methodologies in terms of improving class interaction shows that these working scheme carried out by Educafrica follows the findings that Ngware *et al.* (2013) made regarding the different ways that teachers and students interact during lessons, and that the students' learning outcomes will be influenced by the way in which teachers develop these several ways of interaction. By using materials such as card boards, flip boards or textbooks, students engage more actively in the learning process and they improve their educational outcomes.

In spite of all these positive aspects found in the labour being done by Educafrica, the real impact of the teaching training process will be seen as long as the students finish this educational year, and after comparing students' general performance with previous results. If improvements are noticed, this fact will emphasise the teachers' confidence, making them to change their beliefs according to Guskey's model of changing. Also, another aspect that Educafrica should take into account is to build up a more permanent monitoring over teachers regarding their pedagogical skills and methodologies application. Even though observations were carried out, they were not done in an even way in both

schools. This limitation is important, as the classroom observation results do not really reflect if the new methodologies were applied properly and frequently in both schools as most of them were done in Destiny School. Regardless the positive results seen in teachers' practices, there should be a space for improvement in this sense, suggesting that a more planned observation scheme should be implemented. Another important aspect to determine whether the teachers are effectively learning the new methodologies being taught is to consider a teacher evaluation. This would be important because in that way, Educafrica can have certainty if the teachers are really learning the content and importance of the new methodologies, and to shape their course of actions if results show to be negative. For instance, a knowledge test can be applied to teachers twice a year to determine if teachers are really understanding the new pedagogical knowledges being taught.

The workshops that are being applied are focused on changing the teaching paradigm, showing the teachers that students are prone to effectively learn when lessons are more interactive, engaging their attention in a much better way. At the same time, this shows that Educafrica is convinced that teachers are the main source of learning for the children, especially in disadvantaged contexts like Kibera and Mathare slums in Nairobi, Kenya, and upon that conviction they are striving to make the teachers to become better professionals, providing them with effective tools to teach and to carry out their educational role. This action line is consistent with most of the educational research that has been done, especially in Kenya, in terms that teachers should possess high quality assets such as pedagogical knowledge. That is an important element that will bring improvements in students' learning outcomes, and at the same time, it will contribute to make a big change in the quality of education that is currently being seen in Kenya.

Teacher's training programmes have shown that teachers who are equipped with new tools such as methodological and pedagogical knowledge, can effectively contribute to improve the learning outcomes of students and the quality of education. Well prepared teachers are better qualified to face any educational challenge, and they can become a great contribution to educational systems when they are properly trained and instructed in improving their teaching skills. Besides, it is also important to make the teachers to understand that learning processes will highly depend on the interaction that

happens inside the classrooms. A teacher who does not encourage their students to participate, or a teacher who just limits his or her teaching methods to stand in front of the class, write the class content on the blackboard and expect students to copy it, will clearly undermine the potential learning of students because they will not feel engaged with the learning process. Therefore, teachers should be aware that these practices, if are not combined with more interactive strategies, do not effectively contribute to improve students' learning outcomes.

Different approaches and methodologies focused on interactive learning should begin to be mainstreamed amongst teachers, in order to expand the positive impacts that these methodologies have over students' learning outcomes. The implementation of teacher's workshops in which new methodologies such as Daily Reading, Shared Writing and Learning Centres are being taught, are meant to make significant changes in the way that teachers carry out their lessons. These changes in the teachers will then have an impact on students' learning outcomes, and as soon as this successfulness starts to be perceived by teachers, the

changes would indeed have an impact on improving the quality of education being given in both schools.

Educafrica should keep working in training teachers, improving certain administrative aspects related to teachers' observation processes and teachers' evaluation regarding their knowledge of the training being given. In this regard, Educafrica could eventually turn into an organization similar to the Teachers Advisory Centre (TAC), but oriented to provide training to teachers belonging to low-cost private schools. Many studies have pointed out that these TAC, sometimes, are not being effective in training teachers because of the bad resources allocation in terms of human capital and work distribution. With the current resources that the Foundation has, teachers' training should remain in the same course of action, and throughout its implementation some improvements ought to be done, such as a more structured monitoring scheme. However, the labour that Educafrica is doing is showing that teachers are effectively learning, making them to change their ideals in terms of providing better education.

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