

# RESEARCH BRIEF

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## COMPETENCIES OF PRE-SERVICE TEACHERS AND TEACHER EDUCATORS IN THE FOUR TEACHER COLLEGES SUPPORTED BY THE BETTER PROJECT IN MOZAMBIQUE

### INTRODUCTION

Effective and engaged teachers are the key to high quality education and provide a crucial role in a country's ability to provide improved learning outcomes for children and to contribute towards increased gender equality. This research brief examines the role of teacher training in providing a high quality education for girls and boys in Mozambique, specifically focusing on the results of a Competency Study undertaken by CODE and Associação Progresso Mozambique as part of the BETTER project. The study aimed to shed light on pre-service teachers' and their educators' knowledge and skills in the foundational area of language education. This brief will then outline CODE's response to this study, with a series of recommendations and an action plan for how to address some of these challenges in order to create a truly engaging, high quality and gender responsive education system at the levels of both policy and practice.

By conducting in-depth studies and sharing our analysis, learning, and recommendations to a wider audience, CODE seeks to expand the impact of our programs. We aim to support a climate of sharing good practices that align with Sustainable Development Goals (SDGs) 4 and 5, in order to transform girls' and boys' education through high quality, gender responsive pedagogy.

### TRANSFORMING TEACHER TRAINING IN MOZAMBIQUE - THE BETTER PROJECT

The Better Education through Teacher Training and Empowerment for Results (BETTER) is a seven- year, Global Affairs Canada and CODE co-funded project to support pre-service teacher training in Mozambique. Implemented by CODE and its Mozambican partner Associação Progresso from 2015 to 2022, the ultimate goal of BETTER is to improve the quality of education for primary students by improving the quality of teacher education at four Teacher Training colleges in Cabo Delgado, Tête, Niassa, and Maputo provinces. Working in close coordination with the Mozambican Ministry of Education (MINEDH), BETTER aims to reinforce the use of student-centered and gender responsive pedagogy in the project teacher training colleges and primary schools, strengthen teachers' skills to teach language and literacy, improve supervision and coaching for aspiring teachers during their practica, strengthen school management in placement schools, and improve the quality and quantity of materials to support language and literacy instruction.

Mozambique, whose colonial past and post-independence civil war has made it one of the world's poorest countries<sup>1</sup>, has made great gains in educating its citizens. Between 2009 and 2014, the net enrollment of 6 year-olds rose from 67% to 82%, the pupil-teacher ratio shrunk from 69 to 62, and gender parity in Grade 1 stabilized at 0.94.<sup>2</sup>

<sup>1</sup>UNDP, *Human Development Report 2015*, lists Mozambique as number 180 of 188 countries indexed.

<sup>2</sup><https://www.globalpartnership.org/blog/more-children-learn-mozambique>

Mozambique's Education Strategic Plan for 2012-16<sup>3</sup> aspired to build on the momentum of these gains to promote equity and improve the quality of education. However, by 2015, it was clear that 'most of the Strategic Plan's targets [would] not be met.'<sup>4</sup> While virtually 100% of 6-10-year-olds matriculated in grade 1, only 70% reached grade 3. The 2013 National Assessment showed that the children who did make it to grade 3 were not necessarily receiving quality education, with less than 7 percent of them demonstrating basic literacy skills.<sup>5</sup>

The low quality of teacher education is a key challenge faced by the education sector in Mozambique. According to the World Bank<sup>6</sup>, there was a high level of absenteeism amongst teachers, with 45% not at school during monitoring visits, and low results in teacher assessment in mathematics, language and pedagogy (29%), which, according to the study, are the two most important determinants of pupil learning outcomes.<sup>7</sup> Results shared during the Annual Review Meeting of the Education Strategic Plan (ESSP) in March 2017 confirmed the continued decline in the quality of education. MINEDH reported that while admission rates surpassed the goals for 2016, the retention rate of primary students continued to decline. In 2016, only 62.8% of the students (62.4% among girls) enrolled in grade 1 reached grade 3. Furthermore, only 4.9% of the pupils assessed as participants in the National Reading Evaluation in 2016 could read fluently and comprehend what they read, compared to 6.2% of pupils in 2013. This means that although most Mozambican children presently enroll in primary school, the vast majority of them leave primary school without gaining basic literacy and life skills that could benefit their socio-economic wellbeing.

### PRE-SERVICE TEACHER TRAINING - THE KEY TO DELIVERING HIGH QUALITY EDUCATION

Aligning with SDG 4, CODE believes that it is not enough to have girls and boys in school, it is crucial to provide them with a high quality and gender responsive education, one that all children can access and in which they can thrive. In order to achieve this, transformation is needed at all levels, in classrooms, in teacher training colleges, in communities, and at the national level.

Well-trained and knowledgeable teachers are the foundation of high quality education. They must be able to understand theory, have the practical skills to use interactive and engaging pedagogy to teach in classrooms, and also have strong skills and competencies in areas that they will teach. In order to achieve universal primary education, there has been a scramble to find qualified teachers. When girls and boys make it to school, they often end up with teachers who do not have the foundational skills and the proper pedagogical training to provide a quality education and too many children leave school without the skills that they need to succeed in life. A recent Education Commission report (2019) argues that:

*Teacher quality is the most important determinant of learning outcomes at the school level, but in many countries teachers are in short supply, isolated, and not supported to provide effective teaching and learning (p. 9).*

The demand for teachers and the low pay and quality of the work environment in many countries, including Mozambique, has meant that many of those who go to teaching college have not always completed a quality education themselves and lack skills in key areas such as language. In Mozambique, this is compounded by the fact that Portuguese is the mother tongue of only a small minority of people in the country, and few people speak it on a regular, everyday basis despite it being the language of instruction in the country's schools. Strengthening teachers' skills, training, and foundational knowledge is crucial to delivering effective education. UNESCO writes:

*...research has shown that teachers, more than any other constituent group in education, determine educational quality and student learning outcomes as a result of their proximity to students. Well-trained teachers can strengthen scientific and critical thinking skills, promote tolerance, encourage dialogue, promote gender equality, advance important cultural and social values, and create a more sustainable and peaceful world. (UNESCO 2015 p. 104)*

Strengthening existing systems is needed to achieve the vision of quality education outlined by UNESCO and the Education Commission. The BETTER project is providing key support to teacher training colleges and to MINEDH to improve the existing systems, through training of pre-service teachers and their educators, embedding student-centered and gender responsive pedagogy in the national curriculum.

<sup>3</sup> <https://www.globalpartnership.org/content/mozambique-education-strategic-plan-2012-2016>

<sup>4</sup> MINEDH (2015), A Escola É Nossa! Plano Operacional 2015-2018, 28 Feb 2015.

<sup>5</sup> <http://documents.worldbank.org/curated/en/281791495480151135/pdf/MOZAMBIQUE-PAD-05152017.pdf>

<sup>6</sup> <https://openknowledge.worldbank.org/bitstream/handle/10986/21917/Mozambique0service0delivery0indicators.pdf?sequence=1&isAllowed=y>

<sup>7</sup> *ibid.*

## THE COMPETENCY STUDY

At the beginning of the BETTER project in 2015, CODE and Associação Progresso conducted a baseline assessment on pre-service teachers' and their educators' pedagogical practice and ability.

In order to more clearly understand the current local context and what specific strengths and challenges exist in project teaching training colleges to allow for more effective solutions that target these areas, the BETTER team conducted an in-depth Competency Study in 2018. Working with consultants, who had both the educational background and expertise along with knowledge of the local context and language, the study's main objective was to identify levels of competencies of pre-service teachers and teacher educators in the disciplines that are covered by the BETTER project. The study combined quantitative and qualitative approaches, using testing, observation, and a questionnaire. The reading test tools were based on the Organisation for Economic Co-operation and Development's Program for International Student Assessment for Development (PISA-D) methodology<sup>8</sup>, which adopts the assessment of 15-year-old students with 10 years of education as its starting point. One important issue to note is that in Mozambique, Portuguese is the mother tongue of only 17% of the population (INE 2019). This represents a huge challenge to the education sector, in which Portuguese is adopted at the national level. Most of the pre-service teachers and teacher educators tested in Portuguese in this study are being tested in a second language that they only use at school and work, not the language in which they use in their daily activities.

The testing included 288 pre-service teachers and 37 teacher educators with a smaller sample of these participants selected for the qualitative data collection, which included class observations and evaluation of lesson plans. This study provides a benchmark that will be used to assess any progress resulting from project training, activities, and support. The following is an overview of the findings and recommendations from the study.

## FINDINGS

### *Pre-service teachers*

#### *Portuguese Proficiency – Reading and Writing*

Despite the fact that more than 80% of the pre-service teachers have a grade 12 education, two years more than the PISA-D's assessment framework's starting point, only 50% of the participating pre-service teachers had acceptable levels of competency in reading. Overall, they had better results in basic reading and their capacity to comprehend literal information, than in more complex reading exercises that required capacity to interpret text. The participating pre-service teachers had very low scores in writing, with an overall average of only 28.3% of the test's maximum possible score. However, test results showed that second year students scored better than those in their first year, and third year students scored better than those in their second year, indicating that attendance at teacher training colleges may have some positive impact on writing skills.

Pre-service teachers at the teacher training college in Chibutuine, in the southern part of the country, performed better in reading and writing than the pre-service teachers at the other three project colleges. These results are similar to what has been found in other studies and reports<sup>9,10</sup>, in which students from the Southern region of the country, where Portuguese is more frequently spoken, fared better than students from the Central and Northern regions.

#### *Portuguese Language Teaching - Classroom Observations*

Despite pre-service teachers' efforts to use appropriate pedagogical techniques at the primary school level, results show that only 29% were capable of applying practices that led to quality teaching and learning. Overall, male pre-service teachers had better results than female pre-service teachers. The majority had well prepared lesson plans (72.7%). However, they were observed to have weak levels of class organization (34.9%); in particular, there were low results in marking homework (25.5%) and summarizing the lesson at the end of the class (16.4%).

Pre-service teachers showed a reasonable mastery of content (56.4%) and use of language, but there were gaps in their use of adequate instructional materials (23.6%) and in encouraging students to handle these materials (12.7%). Overall, there was a very poor literacy and information environment in classrooms, with 96% of observed classes lacking supplementary reading materials.

<sup>8</sup> <https://www.oecd.org/pisa/pisa-for-development/>

<sup>9</sup> <http://www.sacmeq.org/?q=sacmeq-members/mozambique/sacmeq-reports>

<sup>10</sup> [https://www.globalpartnership.org/sites/default/files/mozambique-operational\\_plan\\_2015-2018.pdf](https://www.globalpartnership.org/sites/default/files/mozambique-operational_plan_2015-2018.pdf)

## **Teacher educators**

### **Portuguese Proficiency – Reading and Writing**

The average reading test score for the 10 teacher educators at the four teacher training colleges who participated was 43.2%, a lower average result than that of the pre-service teachers at 49.7%. Male teacher educators obtained the average of 47.7%, while the average for their female colleagues was 39.9%. Only two teacher educators obtained scores equal to or higher than 50%.

Like the participating pre-service teachers, teacher educators had the best results in questions that assessed basic levels of competency in reading, such as finding and extracting textual information (60%). The worst results were with questions that assessed higher levels of reading competency, such as reflecting on and assessing textual information (37.9%). In contrast to the results of the pre-service teachers, the teacher educators had higher average scores in writing (52.5%) than they did in reading (43.2%). These average scores in both reading and writing obscure a wide range of scores of each participant in these small samples.

### **Portuguese Language Teaching - Classroom Observations**

On average, only half of the participating teacher educators did a good job using appropriate pedagogical techniques to effectively teach pre-service teachers. The results of the observation found that in half of the 10 classes observed, teacher educators presented well developed lesson plans; in four classes, the organization of the classroom was considered to be successful; in half of the classes, teacher educators showed mastery of the course content; and finally, in six out of ten classes, there was very good classroom interaction.

70% of the teacher educators observed in two colleges at Chitima and Pemba attempted to adopt student-centered methodologies, while 60% were observed to have mastered the use of these methodologies. This indicates that the use of student-centered methodologies increased from the 2015 baseline assessment, in which only 51% were observed using these techniques. In addition, 70% of the teacher educators equally engaged female and male pre-service teachers in their classrooms. However, the study reported that the interactions between the teacher educators and pre-service teachers remained hierarchical, which may limit pre-service teachers' confidence to ask questions. The trend towards using interactive methodologies was also observed by the BETTER team during monitoring observations at the teacher training colleges in 2019, during which most of the teacher educators were found to use some interactive methodologies during their classes.

### **Teaching Portuguese as a Second Language – Theory and Classroom Practice**

The teacher educators who took part in the test of teaching Portuguese as a second language had an average score of 42.2% and no teacher training college obtained an average equal to or higher than 50%. The results suggest that there is an emphasis on technical and theoretical principles and approaches to language learning, as opposed to approaches centered on application and reflection. Based on the observation of classroom practices, teacher educators demonstrated good use of class time. Nevertheless, about half of class time was used for teacher educators' presentations with little interaction with the pre-service teachers.

### **Mozambican Languages and Bilingual Education – Theory and Classroom Practice**

Six teacher educators participated in an additional test on their knowledge of Mozambican languages. The results showed that only three of the six had the minimum required competencies to teach this discipline. Teacher educators obtained an average of 49.5% of the maximum possible score on the Mozambican languages test. Observations indicated that the participating teacher educators did not show adequate competencies to teach Mozambican languages and bilingual teaching were very weak, with the average result of 40% of the maximum possible test score.

## DISCUSSION

While these results do not paint an optimistic picture, they provide the needed information to build a solid training program that addresses gaps in knowledge and skills. In a similar Competency Study on mathematics in teacher training colleges in Mozambique by the Japan International Cooperation Agency<sup>11</sup>, average results were also low and there was a similar pattern of pre-service teachers scoring higher in testing than their teacher educators. These results are not only reflective of the situation in Mozambique, there are similar trends throughout Sub-Saharan Africa. The Education Commission's 2019 report stated:

*A study of seven countries in Sub-Saharan Africa found that less than 10 percent of primary school language teachers could demonstrate a minimum level of subject knowledge skill to teach grade four students. Models of initial teacher training and professional development are often outdated and ineffective (p. 11).*

The results have provided concrete evidence for where there is a need for intensive training and support. The baseline assessment provided a beginning point with which to develop and deliver training, in particular the need to expand the pedagogical skills and practices of both teacher educators and pre-service teachers, emphasizing the need for student-centered, participatory, and gender responsive teaching practice. With the results of the Competency Study, further crucial areas for intensive training have been uncovered. The Competency Study has also allowed for an increased shared understanding and purpose between all project stakeholders on what areas need to be the focus of project training.

The following overview of recommendations from the study highlights methods to address areas of concern. The BETTER team will implement actions to address recommendations that are within the scope of the project. For recommendations that may be outside the scope of the project, the BETTER team will work with the teacher training colleges, local and national education officials, MINEDH, and other NGOs and stakeholders to advocate for the change needed to transform the education system to benefit the future of Mozambique.

## RECOMMENDATIONS

The following is an overview of the recommendations from the study to improve the competencies of pre-service teachers and teacher educators.

### Pre-service teachers

In both curricular materials and in classrooms, the teacher training colleges need to ensure that pre-service teachers learn and master both basic and complex reading and writing skills. This will allow them to develop functional reading and writing skills and to be better able to support their primary school students to develop these skills.

There is a need for the teacher training colleges to encourage the production and use of teaching materials developed in and relevant to the local context. Pre-service teachers should also be taught and encouraged to increase their level of interaction with their students in their classrooms.

### Teacher educators

The overall results show that teacher educators need similar training as pre-service teachers to strengthen their skills and knowledge.

### Reading and writing

Training and other activities for the BETTER project should strengthen teacher educators' competencies in complex reading skills, such as integrating, interpreting, reflecting on and evaluating texts. In response to the low writing scores, a particular focus on improving these skills is needed.

### Pedagogical practices

There is a need to strengthen teacher educators' competencies in the following areas: possession and use of supplementary teaching and learning materials; making connections between the lesson being taught and previous or subsequent lessons; synthesizing the lesson at the end of the class with the active involvement of pre-service teachers; creating more participatory environments in their classrooms; and encouraging the interaction between pre-service teachers and teacher educators. Training should emphasize that planning and delivery are not separate activities and that they should be flexible and appropriate to the context in which the teaching and learning takes place.

<sup>11</sup>JICA (2018). **Projeto para a Expansão do Novo Currículo nos Institutos de Formação de Professores (IFP) (PENCIFOP)** : Findings and Recommendations from the Surveys 2016 and 2017. Presentation.

While the findings showed that there was use of some interactive methodologies, teacher educators still require encouragement to use more participatory techniques in their lesson plans and in class. Use of these techniques could improve learning and would allow pre-service teachers to learn these techniques based on the practice of their teacher educators.

### **TOWARDS A HIGH QUALITY EDUCATION: BETTER RESPONSE TO THE COMPETENCY STUDY**

The results of the Competency Study are not just important for the BETTER team to inform the final years of the project. This study also contributes to understanding of teachers' knowledge and skills in language and literacy that is crucial for all stakeholders in the educational sector in Mozambique. While not all of the recommendations from the Competency Study are within the scope or control of the project, the trans-formative potential of BETTER lies in its close collaboration with MINEDH and the potential to influence curriculum and educational policies at the national level while also implementing training and activities at the project teacher training colleges.

In response to the results, learning, and the recommendations from the Competency Study, CODE has developed a series of actions, outlined below, that takes key learning points from this study along with the current research on teacher training and education.

### **ACTIONS AT THE LOCAL LEVEL**

The BETTER project's actions at the local level, in teacher training colleges and their associated primary schools, provides a solid foundation that the project will continue to build upon and that will be strengthened by the information and recommendations from the Competency Study.

#### ***Training for educators, officials, and management***

The project provides key support to teacher training colleges and to MINEDH to improve the existing systems in Mozambique through training of pre-service teachers and their educators, embedding student-centered and gender responsive pedagogy in the national curriculum. The BETTER project has also provided training to a number of important groups connected to the project teacher training colleges, including college directors and other management; school directors, tutors, and school councils at project primary schools; and local, district, and national education officials.

This intensive training of actors within the entire educational ecosystem continues with a renewed emphasis on areas highlighted in the Competency Study recommendations. In addition to an increased emphasis on language skills in training for teacher educators and pre-service teachers, the BETTER team has expanded or launched several innovative training initiatives to address gaps and recommendations from the study.

The need to strengthen teacher educators' skills in Portuguese communication was recognized during the baseline assessment and this training was first implemented in 2017. In response to the Competency Study results, a second phase of training will be developed and delivered that focuses more specifically on issues identified.

A new blended learning leadership course for management and department heads at the teacher training colleges has been developed in partnership with Politecnia University that will strengthen their ability to provide quality learning and effective planning, decision-making, and leadership. By improving the quality of organization, leadership, and education in the colleges, this course will contribute to better education and experience for pre-service teachers.

The need for more consistent and effective support for pre-service teachers during their practica in primary schools become evident during program monitoring visits. In order to address this, the BETTER team held workshops with a team of teacher educators and district and provincial officers to clarify roles and responsibilities, to develop schedules and reporting templates, and to create an action plan to ensure regular supervision visits to each school. Participants also received training on participatory teaching strategies and mentoring, with a particular focus on the development of children's oral language, and early reading and writing skills. The improved system will provide pre-service teachers with better support during their practica, leading to more effective learning opportunities.



### ***Um formando/Um aluno” mentoring initiative***

The “Um formando/Um aluno” mentoring initiative is an innovative program developed by CODE’s international literacy experts, Dr. Misty Sailors and Dr. James Hoffman, in which pre-service teachers engage in one-to-one mentoring with students from the teacher training college’s annex school over an extended period of time. This initiative provides pre-service teachers with practical opportunities to use interactive methodologies to teach literacy, to gain confidence in building and supporting children’s literacy skills, to improve their own reading and writing skills, to learn how to engage children with learning materials, and improves the literacy skills of participating children. The preliminary assessment of this initiative indicates that it not only improves children’s literacy skills, it also improved pre-service teachers’ literacy and teaching skills, directly addressing concerns from the Competency Study.

### ***Community Stories: A Story Writing Workshop***

In response to the Competency Study, the BETTER project partnered with Livro Aberto, a Mozambican NGO that supports libraries and children’s literacy, to improve pre-service teachers’ writing skills by creating stories for graded readers for Mozambican children. Each story highlights key language and educational concepts and celebrates Mozambican oral stories. Pre-service teachers collaboratively coached one another through the writing process from drafting and editing to the final publishing of their stories. A collection of the best stories will be printed for internal use in the teacher training colleges and the workshops will continue, expanding to all four project sites. Developing the readers also encourages pre-service teachers to create their own locally relevant teaching and learning materials to use in their classrooms, another recommendation from the Competency Study.

### ***Ongoing monitoring***

In addition to all of the above activities outlined at the local level, the BETTER team also conducts ongoing monitoring at the program teacher training colleges and their associated primary schools, providing important support and encouragement to the colleges, teacher educators and pre-service teachers.

## **ACTIONS AT THE NATIONAL LEVEL**

While improving teacher education is the key to successful transformation of children’s educational outcomes, CODE also recognizes that actions at the local level are just one piece of the puzzle. Systems change requires action at the national level, through curriculum, policies, and resources that support a dynamic educational ecosystem.

BETTER’s strong partnerships with MINEDH and key project activities that will improve the quality of teacher training at the national level are outlined below.

### ***Textbook and guide development***

A major contribution of the BETTER project to sustainable and significant change in the Mozambican education system is the development of five textbooks focused on language learning and pedagogy for use in teacher training colleges throughout the country. These textbooks mainstream gender equality and embed concepts of student-centered and participatory pedagogy. Hypermedia versions of these textbooks will be available on a new online platform. The BETTER team also created a Participatory Methodologies Guide based on the project training, which will also be distributed to all teacher training colleges in the country. This guide promotes the use of student-centered and engaging methodologies in classrooms and provides extra support for those who have attended BETTER training sessions, allowing them to review what they have learned and refer to the guide when needed.

The potential for improved learning outcomes for pre-service teachers provided by these revised, high quality textbooks focused on language and literacy directly addresses the recommendations from the Competency Study. Teacher educators will also benefit from the well-researched and designed materials, providing them with support for their own improved skills and teaching in these areas. Training provided for teacher educators to effectively use the new textbooks in their classrooms also provides the BETTER project with an opportunity to address skills and knowledge gaps identified in the Competency Study.

The Competency Study and its findings are referred to in the new Education Sector Strategic Plan for 2020-29 and will inform MINEDH's development and implementation of this new plan. At the national level, the Competency Study has raised leaders' awareness of the need to provide teacher educators with additional training, and has highlighted that in future hiring campaigns, there needs to be a focus on hiring teacher educators with the required skills.

## CONCLUSION

Building high quality education systems is not a simple task and does not happen overnight. CODE believes that collaboration is key to effective and sustainable change in education systems. CODE has decades of experience implementing effective literacy programs that improve the quality of teaching and increase children's literacy and learning outcomes. Understanding how best to improve teacher training and to advance transformative approaches to education requires commitment and knowledge of local settings. CODE and Associação Progresso have worked together on literacy and education projects in Mozambique for almost 30 years. In addition, CODE has built a strong partnership with MINEDH, which provides an opportunity to advocate and support sustainable and significant positive change in the education system. Through this combination of commitment, technical expertise, and collaborative partnerships, true transformation can occur, improving the learning outcomes of girls and boys in Mozambique, empowering them to build bright futures for themselves and their country.



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