Master 2022 Open Access

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Quality Education in Senegal: Overview and Opportunities for Improvement

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This publication URL: https://archive-ouverte.unige.ch/unige:168208

UNIVERSITY OF GENEVA

FACULTY OF SOCIAL SCIENCES

QUALITY EDUCATION IN SENEGAL: OVERVIEW AND OPPORTUNITIES FOR IMPROVEMENT

BY

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A project Submitted to the Faculty of
Social Sciences
In Partial Fulfillment
Of the Requirements
For the Degree of
Master of Innovation, Human Development, and Sustainability

Thesis Adviser: Dr. Julien Forbat

December 2022

Abstract

International frameworks on education appeared during the 1990s, followed by the formulation of international goals for education since the 2000s. Millennium Development Goal 2 sets the goal for developing countries to achieve universal access to primary education by 2015. It was then replaced by Sustainable Development Goal 4, aiming to ensure inclusive and equitable quality education for all by 2030. These international goals and policies strongly influence the national priorities and development of education in countries such as Senegal. The case of Senegal is used to analyze the prospects for quality education in the current international and national educational frameworks. Interviews and extensive research have further allowed the investigation of context-related measures and processes for enhancing quality education. The results have shown the necessity for systemic changes in Senegalese public education as the system is disconnected from local populations and inefficient. Geographical disparities and significant inequalities also undermine it. Overall, effective measures for quality education are articulated around an increased relevance of the system, its curriculum, and means of instruction by participative and inclusive formulation processes. Measures to enhance the quality of learning, like remediation programs or curriculum reduction, have also been singled out to ameliorate the low performances of learners in the public system. Finally, teachers' motivation must be reinforced by improved working conditions and qualifications.

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AI: Academy Inspectorate

CAE-CEM: *Certificat d'Aptitude à l'Enseignement dans les Collèges de l'Enseignement Moyen* (Certificate of Aptitude for Teaching in Middle Schools)

CAEM: *Certificat d'Aptitude à l'Enseignement Moyen* (Certificate of Aptitude in Middle School Education)

CAES: *Certificat d'Aptitude à l'Enseignement Secondaire* (Certificate of Aptitude for Secondary Education)

CAP: *Certification d'Aptitude Pédagogique* (Certificate of Pedagogical Aptitude)

CBA: Competency-Based Approach

EFA: Education For All

EPSSA: Education Policies for Sub-Sharan Africa (WB, 1988)

ETI: Education and Training Inspectorate

FASTEF: *Faculté des Sciences et Technologies de l'Éducation et de la formation* (Faculty of Science and Technology of Education and Training)

FWA: French West Africa

GER: Gross Enrollment Rate

IMF: The International Monetary Fund

LARTES-IFAN: *Laboratoire de recherche sur les transformations économique et sociale de l'Institut Fondamental D'Afrique Noire* (Research Laboratory on Economic and Social Transformations of the Institute Fundamental Afrique Noire)

LPT: *Lecture Pour Tous* (Reading for All)

MDGs: Millennium Developments Goals

NER: Net Enrollment Rate

PAQUET: *Programme d'amélioration de la qualité, de l'équité et de la transparence* (Quality, Equity and Transparency Improvement Program)

PDEF: *Programme de Développement de l'Éducation et de la Formation* (Education and Training Development Program)

PRE: *Programme de Remédiation à l'Élémentaire* (Primary School Remediation Program)

PTA: Parent-Teacher Association

PVE: *Programme de Volontaire de l'Éducation* (Education Volunteer Program)

RELIT: *Renforcement de la Lecture Initiale pour Tous* (Strengthening Initial Reading for All)

SAPs: Structural Adjustment Programs

SDGs: Sustainable Development Goals

SMC: School Management Committee

SSA: Sub-Sharan Africa

UCAD: Université Cheikh Anta Diop de Dakar, Sénégal

UN: United Nations

UNAIDS: Joint United Nations Program on HIV/AIDS

UNDP: United Nations Development Program

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNICEF: United Nations International Children's Emergency Fund

UPE: Universal Primary Education

WB: The World Bank

WDEFA: World Declaration on Education For All, 1990 Jomtien

Acknowledgments

To my father, Zoltán Dienes,
I hope you will be proud of me from above

Introduction

Education is crucial for human and national development. It allows, through the process of learning, to acquire knowledge and skills to participate fully in society. Education is "the provision of learning opportunities in a purposeful and organized manner through various means including, but not limited to, schools and other educational institutions", according to the background document of the 1990 World Conference on Education for All (glossary). In welfare states, the government is expected to provide efficient education systems accessible to all, usually delivered in schools. Governments organize formal education systems to structure education, establish a curriculum and guarantee recognized certifications. In Europe, ideas of formal education systems started to emerge in the 16th century and have not stopped evolving ever since.

In sub-Saharan Africa, the process of developing national education systems began after decolonization in the 1960s. Colonization has left exogenous education systems that newly independent governments needed to adapt. This development has been limited by scarce financial resources and neocolonial dynamics, forcing newly independent countries to set priorities. Depending on the country, reforms focused on improving access to education or the relevance of the system to the national identity. In all cases, significant progress was achieved until the global financial crisis of the 1980s forced cuts in public expenditure, preventing any further development of education systems. To rectify the situation, global frameworks on education were established.

The 1990 World Declaration on Education for All has set the premises for the gradual intervention of the international community in education. It has defined *basic education* as the necessity to provide every child, youth, and adults with opportunities to meet their basic learning needs (UNESCO, 1990, art. 1). This definition was then narrowed to primary education in the Millennium Development Goals. The Millennium Development Goal 2 set the only objective to universalize access to primary education in developing countries by 2015 (UN, 2000). This international framework galvanized efforts and funding toward achieving global goals, which encouraged the international community to develop an agenda for international development post-2015. Thus, the Sustainable Development Goals were built on the experience of the Millennium Development Goals. In the rhetoric on education, the notion of quality reappeared as Sustainable Development Goal 4 aims to "ensure inclusive and equitable quality

education and promote lifelong learning opportunities for all" (UN, 2015). Quality education came back to the forefront because, in developing countries, children were rushed to school without considering the impacts on education provision. In sub-Saharan Africa and other developing region of the world, many children attended school but did not learn. Overall, global frameworks increasingly dictated national policies in countries that do not have full ownership of their education system by challenging external aid investment.

Several authors have largely criticized these international frameworks and the dominant discourses on education and development they convey. They have pointed out the unequal global architecture surrounding education policy formulation at the international level and the biased discourse it promoted based on Western perceptions and representations of the world (Brissett & Mitter, 2017; Brock-Utne, 2002; Sexsmith & McMichael, 2015). They also criticized the increasing standardization of education through the formulation of international goals and the development of international assessments of education to compare learning outcomes because they do not consider the various contexts in developing countries (Mundy & Manion, 2015; Unterhalter, 2014). Finally, several authors highlighted that Sustainable Development Goal 4, and the dominant discourse on education, does not define quality education or guide national governments to reach it (Brissett & Mitter, 2017; Tikly, 2011; Tikly & Barrett, 2013). This paradox shows that the current dominant discourse on education is flawed.

Senegal, a sub-Saharan country, is an interesting case for analyzing the influence of international frameworks on national education policies and priorities for multiple reasons. Senegal was colonized by France, allowing to draw attention to the implications of the colonial encounter and the multiple forms of disadvantages for education resulting from it. These postcolonial dynamics are still felt in Senegalese society nowadays. Furthermore, the education system's performance is bringing down indicators of the country's development (Cissé & Fall, 2022).

This work aims to outline measures identified in the Senegalese context that effectively enhance the quality of learning and education. It will further analyze the possibilities to implement these measures and whether they are supported by the current national and international discourse on education.

This work will focus on Senegal's public formal education system and its functioning, especially at the primary and secondary levels. It will refer to the suggestions of an independent assessment of the quality of learning in Senegal and build on them with the perspective of local education stakeholders.

First, the development of education in sub-Saharan Africa until the 1990s, international discourses between 1990 and 2030, and education in Senegal will be overviewed. Then, the problematization of this work will be described, followed by the methods used to answer the research question. Finally, the last two parts will allow us to analyze the information collected near local educational stakeholders and discuss it in light of the national education policy and extensive literature.

Chapter 1. State of the Art

The 1948 Universal Declaration of Human Rights recognizes education as a human right. Article 26, Alinea 1, states, "Everyone has the right to education" (UN, 1948 my emphasis). Nevertheless, in 1948 most of the countries of Sub-Saharan Africa (SSA) were under colonial rule, which de facto did not guarantee the right to education for everyone. A two-speed world is taking shape, one where it is decided which rights are recognized and another whose realities are erased from the international perspective.

Before focusing on the work of the international community producing global frameworks on education, it is essential to highlight the specific context of SSA countries regarding education. Then, the development of the international discourse on education from 1990 to 2030 will be outlined. A special attention will be paid to the interests' represented in the dominant discourse and the consequences for education systems suffering from multiple forms of disadvantages like the ones in SSA. Finally, the development of formal education in Senegal will be presented.

1.1 Formal education systems in sub-Saharan Africa: from colonization to the 1990s

During colonization, exogenous education systems were imposed on SSA countries with specific goals linked to the settlers' ideology. Even if many efforts were made after Independences to adapt the educational system and make it more accessible, the lack of resources exacerbated by the economic and financial crisis of the 1980s led SSA countries to depend on aid for their education sector in the 1990s. This dependency made SSA countries lose ownership of their education systems when international policies on education started to be established.

1.1.1 Colonial education and Independences

The introduction of formal colonial education systems in SSA was done at the expense of local knowledge and culture since these elements were swept from the curriculum by the colonizers. Colonial education was an instrument of colonization aimed at the cultural domination of civilization and spreading feelings of inferiority in SSA populations (Brock-Utne, 2002; Lange, 2000). The content of education reinforced European superiority by diminishing everything that was not European, including languages (Brock-Utne, 2002). The imposition of foreign languages as means of instruction was disempowering for the African masses and brutal as

pupils were forbidden to speak their native languages in schools, even during the break, at the risk of corporal punishment and other shameful repression methods (Brock-Utne, 2002; Moumouni, 1998). Furthermore, it caused the separation of the school from the community (A. Fall, 2013). Colonial education was very selective and created an elite in SSA that was composed of those who best integrated the culture and ideologies of the colonist.

Nevertheless, as colonial powers restricted local populations' access to the formal educational system, other forms of education, such as traditional and religious education, persisted. Many of the poorest countries in SSA are strongly Muslim, making religious education coexist and sometimes compete with formal schooling (Daun, 2000).

Independence occurred throughout the 1960s for most countries in SSA. Newly independent governments had the difficult mission of building a nation out of heterogeneous community groups within externally imposed limits (A. Fall, 2013; Woolman, 2001). To build a nation, having common references is crucial and education is the most effective way to spread them (A. Fall, 2013). Therefore, the main challenge for governments regarding education was to transform the elitist educational systems left by colonization to make schools accessible for all (Labé et al., 2013). After the 1961 Addis Ababa Conference, where African states discussed educational priorities and plans for development and economic growth, primary education was made free and universal in many countries as measures legitimizing newly independent states (Brock-Utne, 2002).

Moreover, independence was an opportunity for governments to rethink the school to create a sense of national identity and pride for local populations through processes of Africanization of educational systems. Africanization is considered a "restorative justice project" that refers to the will to put Africa back at the center of all decisions and to claim what has been taken from it (Ndille, 2018, p. 5). In education, which participates actively in reconstructing African culture and identities, Africanization meant revising the curriculum and the language of instruction (Moumouni, 1998; Ndille, 2018; Woolman, 2001). Both required massive national efforts. Teaching in mother tongues implied an extensive process of standardization and vocabulary development. In addition, the reconstruction of African history, economics, cultural heritage, and other areas contributing to indigenous knowledge was necessary to build a curriculum that supports the "diverse ontological narratives" of African cultures
(Ndille, 2018, p. 13).

Ultimately, the reconstruction of African states involved rethinking how culture and knowledge are transmitted and how the development of African societies should be thought about between tradition and modernity (Woolman, 2001). It implied, in some cases, the questioning of institutions and elites formed under colonial rule. Indeed, SSA elites were disconnected from their own culture and suffered from alienation, preventing them from acting for the well-being of the African masses (Brock-Utne, 2002; Ndille, 2018). For instance, in some countries, elites were reluctant to the Africanization of the language of instruction since language is a powerful mechanism of social stratification, and elites saw instruction in a foreign language as a way to maintain their power over the masses (Brock-Utne, 2002; Ndille, 2018).

In the end, the limited resources of newly independent states have forced priorities in policymaking, and most SSA governments have prioritized expanding access to education over Africanization (Brock-Utne, 2002). In some countries, the colonial system that had been imposed did not finally undergo many reforms, and, in all countries, schooling was extended. Although many governments have failed to make school more relevant, they made it more accessible as primary enrollments tripled in Africa between 1960 and 1980 (Brock-Utne, 2002, p. 3).

1.1.2 Financial crisis and aid dependency in the 1980s-1990s

Until the 1980s, enrollment rates increased remarkably through SSA, especially at the primary level. In Tanzania, for instance, the primary school gross enrollment rate[1] (GER) of less than 25% in 1960 rose above 60% in twenty years (Labé et al., 2013). Education seemed to be on its way to becoming a *right for all* when an unprecedented economic and financial crisis broke out in the 1980s. The crisis, which mainly affected the developing countries, allowed the global financial institutions of Bretton Woods to impose themselves. The International monetary fund (IMF) and the World Bank (WB) introduced structural adjustment programs (SAP) on deficit states to redress their trade balances. In Africa, more than a third of the countries have undergone SAPs (Brock-Utne, 2002, p. 22). The measures and conditions related to SAPs were various but mainly consisted of market liberalization, reduction in public spending, and

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[1] GER: Number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education (UNESCO, glossary).

privatization. The cut in public expenditure significantly impacted education access and quality. Governments could not pay for the teachers, the materials, or the infrastructure, preventing any further progress in enrollment rates and the Africanization of education as national curricula centers, where they existed, were closed (Brock-Utne, 2002). Finally, the WB imposed market-economy solutions in social service sectors during SAPs, even if the effects of such measures have been denounced (Brock-Utne, 2002). SAPs of the IMF and the WB were part of the neoliberal agenda promoting market forces that were progressively imposed by Western countries in the development area (Brock-Utne, 2002; Mundy & Manion, 2015). As a result of SAPs, schools have been deserted to the point that enrollment rates in most countries were lower in 1995 than in 1980 (Brock-Utne, 2002).

In the 1990s, due to the financial and economic crisis, no country in SSA could finance its school system without foreign funding (Lange, 2000). This situation has led to a change in the power dynamics and relations in formulating education policies in SSA. Indeed, following this crisis, donors and the international community have resorted to increasing interventionism in the educational sector (Labé et al., 2013; Lange, 2000). There were thus three types of actors involved in education policies in SSA: the government, the families, and the funders (Lange, 2000).

In this new architecture, the WB played a dominant role because of the loans it granted for infrastructure building and the policy advice and technical assistance to governments of developing countries it provided (Brock-Utne, 2002). In 1988, the WB published *Education Policies for Sub-Saharan Africa: Adjustment, Revitalization and Expansion* (EPSSA), a document providing policy guidance to SSA governments to redress the stagnation of the enrollment rates and the decrease in quality they identified (Brock-Utne, 2002). Through it, the WB has outlined what kind of aid should be given to the educational sector in SSA and under which conditions (Brock-Utne, 2002). In EPSSA, the WB encouraged, among others, policies of privatization of primary and secondary education and cost-sharing, which implied the participation of families in the school fees (Brock-Utne, 2002). To improve quality in primary education, the WB suggests that instructional materials were a more reliable investment than teacher qualifications or wages, for which they did not grant funding in general (Brock-Utne, 2002). Lastly, it argued that governments should refrain from expanding higher education because of the lack of resources (Brock-Utne, 2002). The WB's policy-based lending was justified by the rate of return methodology, which determined that returns on investment were

the highest in primary education (Heyneman, 2003). The WB's research methodology has yet been widely criticized, notably by Brock-Utne (2002), who denounces the "self-fulfilling prophecy" implemented by the WB (p.47). Indeed, the WB produced or commissioned most studies supporting the arguments presented in the EPSSA. When the research results did not correspond with the narrative, the WB was not mentioning them, resulting in a document relying on heavily biased information sources (Brock-Utne, 2002).

Nevertheless, when governments depended on its aid, the WB could leverage value policy change through covenants and conditionality attached to the loans (Heyneman, 2003). For instance, the WB's lending conditions often imposed the import of western-produced textbooks (Brock-Utne, 2002). As governments could no longer finance their education systems and therefore decide on them, many SSA countries have seen their educational policies determined by bilateral and multilateral funders (Brock-Utne, 2002). According to Brock-Utne (2002), SSA education systems were on the way to "recolonization" since the intellectual gains and progress made in the Africanization of the curriculum were under threat (Brock-Utne, 2002, p. 37).

The case of Tanzania is a great example to illustrate the "recolonization of the mind" some SSA countries experienced throughout the 1990s (Brock-Utne, 2002-title). Julius Nyerere, the first president of Tanzania, showed a deep desire to break with Western domination and undertook a decisive project for the Africanization of its educational system called *Education for Self-Reliance* (Brock-Utne, 2002, p. 124). He made primary schooling accessible to all and elaborated locally adapted curriculums at all levels of education for the development of Tanzania (Brock-Utne, 2002; Ndille, 2018). Kiswahili, an African language widely spoken throughout the country, was established as the medium of instruction for primary and adult education; English remained in secondary and tertiary education. These changes enabled Tanzania to achieve the highest literacy rate on the continent, reaching 90% in 1984 when it was only 33.3% in 1970 (Brock-Utne, 2002). The massive increase in enrollment, which was well on its way to achieving universal primary education, was also a testament to the program's success.

Nevertheless, the consequences of SAPs in Tanzania were catastrophic and ended the development of African socialism and education for self-reliance imagined by Nyerere (Brock-Utne, 2002). The national budget for education fell from 14.2% in 1966 to 5.4% in 1988 (Brock-Utne, 2002). This directly impacted educational programs; the literacy rate fell from 90% in 1984 to 67,8% in 1995, and the GER in primary school dropped to 70% in 1992 (Brock-Utne,

2002). Moreover, Tanzania's education system has been subjected to the external control of donors and funders since then. They imposed, among other measures, the privatization of the schoolbook sectors and the creation of the National Education Trust Fund, which encouraged and supported the development of private secondary schools. International competition in the school book sector destroyed the Tanzanian publishing industry and all efforts previously made to indigenize the curriculum (Brock-Utne, 2002). It further allowed donors to control the language of education, resulting in a return to English at all levels of instruction (Brock-Utne, 2002).

Overall, the 1980s and 1990s were the scenes of disruptions in educational policies in SSA. National governments lost ownership of their educational system as donors and funders have taken control over the curriculum and the language of instruction through the conditions attached to their loans. The externally imposed measures' effects were disastrous everywhere, particularly where the most significant progress had been achieved. In the end, enrollment rates fell so low during this period that Lange (2000) named it the "de-schooling of Africa" (Lange, 2000, p. 56).

1.2 International frameworks on education from 1990 to 2030

Since the 1990s, international frameworks on education have been promoting specific approaches to education. Until 2015, two frameworks with different approaches to education coexisted: EFA and the MDGs. The aim will be to understand which discourse took over and imposed itself as the dominant discourse and why. It will also demonstrate the consequences of the dominant approach at the international level for national education policies. Finally, the changes post-2015 in the international framework that guides development until 2030 will be presented.

1.2.1 Education for All and the Millennium Development Goals: education priorities until 2015

1.2.1.1 Two coexisting frameworks: a right-based approach to education and a human capital approach

The crisis in the education sector led to the 1990 World Conference on Education for All in Jomtien, Thailand, introducing the first global framework on education (Brock-Utne, 2002; UNESCO, 1990). At this conference, organized by the WB, the United Nations Educational,

Scientific and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEF), and United Nations Development Program (UNDP), national government representatives, international and bilateral development agencies, and non-governmental organizations were invited to discuss along with donors the possibilities of reversing the decline in enrollment and completion rates, in addition to improving poor learning outcomes within primary education by the year 2000 (Brock-Utne, 2002). Participants adopted the *World Declaration on Education for All* (WDEFA) and its related *Framework for Action to Meet Basic Learning Needs* (UNESCO, 1990). The WDEFA consists of 10 articles defining the purpose, the expanded vision of basic education, and the requirements to achieve Education For All (EFA). The WDEFA and its related frameworks present an inclusive discourse prioritizing access to basic education of quality, equity, and efficiency for all (UNESCO, 1990). Commitment to the EFA movement was reiterated at the 2000 World Education Forum in Dakar, Senegal, with the adoption of *The Dakar Framework for Action* (UNESCO, 2000). This framework is developed around six regional frameworks and the accomplishment of six global goals by 2015 (see appendix 1 for the list of EFA goals).

EFA builds on previous affirmations of the right to education for all children, youth, and adults, by developing a holistic rights-based approach to education (UNICEF & UNESCO, 2007). EFA includes three interdependent and interlinked dimensions: the right to access education, the right to quality education, and the right to the respect in the learning environment (UNICEF & UNESCO, 2007). Quality education is defined by Goal 6 as "one that satisfies the basic learning needs, and enriches the lives of learners and their overall experience of living" (UNESCO, 2000, p. 17). EFA's approach to quality education considers that the content of the curriculum, the nature of the teaching, and the quality of the learning environment are essential (UNICEF & UNESCO, 2007). It also recognized that education is much broader than formal schooling (Miles & Singal, 2010; Mundy & Manion, 2015).

Nevertheless, EFA goals were not associated with indicators to measure delivery or guide governments in developing national policies, attenuating the impact of the discourse promoted (Unterhalter, 2014). In addition, the right-based approach to education developed by EFA coexisted with other approaches to education, supported by influential actors in the development area, particularly the human capital approach promoted by the WB since the 1980s

(Brock-Utne, 2002). Based on the human capital theory[2], this approach promotes education and skills formation as an investment for economic growth since human capital, measured by the number of years of schooling, positively affects economic growth (Cissé & Fall, 2016; Gillies, 2015). Education is thus conceived as an individual and a public good because it increases the material advantages of individuals by leading them to higher wages, and with a high-quality workforce, the economy progresses as a whole (Gillies, 2015). The human capital theory thus presents a simple model for economic growth with a prominent place for education.

However, it does not consider individuals' overarching social, political, and economic environment (Gillies, 2015). It reduces education to narrow economic terms without considering motivations other than a personal advantage in decision-making; thus, this approach instrumentalizes education to serve economic growth (Gillies, 2015). In addition, the human capital approach to education, guided by neoliberal principles, allocate resource only to sectors suitable for employment. Even provisions considered essential in the education system, such as reading materials or maintaining teachers' salaries, could not receive lending as they were considered recurrent expenditures to be covered by the states (Heyneman, 2003). Finally, the human capital approach to education has been questioned by neoclassical researchers who consider that it is not the length of time children spend in school that explains economic growth, but the quality of the education they receive that is decisive (Cissé & Fall, 2016; Niang, 2014; Tikly, 2011).

Despite the criticisms, the human capital approach to education, driven by the WB, which is also the most significant funder of education, has become the underpinnings of educational policy discourse in the international sphere (Brock-Utne, 2002; Gillies, 2015). Indeed, in the 1990s, no other institution could question or counter the WB's educational policies; even UNESCO depended on the WB's financing (Brock-Utne, 2002; Heyneman, 2003). Therefore, all external funding to education was allocated to primary schooling, to the detriment of other

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[2] In the 1960s, Theodore Schultz (1902-1998) and Gary Becker (1930-2014) developed Adam Smith's theory by including human capital alongside physical capital (productive equipment, tools, and machines) as investments with a positive impact on economic growth (Brock-Utne, 2002; Gillies, 2015).

basic education programs or levels of education, following the WB's priorities as expressed in EPSSA (Brock-Utne, 2002; Heyneman, 2003).

The focus on the development of primary education was then reinforced in the 2000s. The 2000s marked a turning point on the international scene as the development area experienced a paradigm shift with the normalization of multilateral negotiations and the emergence of new actors (Chasek et al., 2018). International summits and conferences recovered after losing their influence in the 1980s to the programs of the WB and IMF (Hulme, 2009). Kofi Annan, the UN Secretary-General at the time, targeted the year 2000 as the symbol for the beginning of a new millennium with a more equal and united world (Hulme, 2009). The international community identified extreme poverty as the biggest obstacle to development and decided to take global action to tackle it (Hulme, 2009). The 2000 *United Nations Millennium Declaration*, adopted by the General Assembly and signed by 189 countries, followed by the formulation of eight Millennium Development Goals (MDG), stands as a framework for developing countries towards development, with the technical and financial assistance of developed countries, for the period 2000-2015 (UN, 2000). The goals covered several areas of development of which education, health, and poverty reduction and were associated with indicators to measure their achievement (see appendix 2 for the list of MDGs).

Regarding education, the objective was to achieve universal primary education (UPE) as expressed in MDG 2. MDG 3 emphasized the importance of gender equality in primary and secondary education. MDG 2 measured UPE through primary net enrollment rate[3] (NER) and the proportion of pupils starting grade 1 who reach the last primary grade, namely school completion. Targets and indicators associated with education in the MDGs were related to formal schooling only (Unterhalter, 2014). MDG 2 thus appears to reflect the WB's ideology, showing that powerful international organizations such as the WB were able to influence the education policy discourse on the global scene (Mundy & Manion, 2015; Unterhalter, 2014). Overall, the MDGs were consistent with the neoliberal agenda guiding international development, and MDG 2 with the human capital approach to education, reinforcing its place

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[3] Total number of students of the official age group for a given level of education who are enrolled in any level of education, expressed as a percentage of the corresponding population (UNESCO, glossary).

as the dominant discourse on the global scene. In consequence, from 2000 to 2015, the objective for all developing countries became achieving UPE, and all investments were directed toward infrastructure building to increase enrollment rates in formal schooling.

1.2.1.2 Results of the priority on access to education

At the dawn of 2015, the results of the MDGs appeared to contrast significant progress with many shortcomings of the vision put forward for development (Griffiths, 2021; Unterhalter, 2014). Regarding MDG 2, primary schooling attracted some 45 million additional children in age between 2000 and 2011, elevating the primary NER from 83 to 90% (UN Department of Public Information, 2013). In addition to the increase in enrollment, primary school dropouts have decreased (Unterhalter, 2014). Nevertheless, even if many countries made significant progress, UPE was not achieved, as 61 million children were still left out of primary schooling (UNESCO, 2012).

Observers also noticed some shortcomings in the educational approach promoted by MDG 2. First, the measurement of UPE was limited to school enrollment data with no focus on attendance, completion, or comprehension (Unterhalter, 2014). Worldwide, some 250 million children cannot read and write after four years of primary schooling (UN Department of Public Information, 2013). Therefore, the literacy and numeracy skills of children who completed primary school were not guaranteed in the MDGs era as learning outcomes were not measured (Unterhalter, 2014).

Furthermore, indicators selected under MDG 2 have created perverse educational policy incentives (Unterhalter, 2014). Indeed, the focus on enrollment has not guided countries to expand school provision with attention to socioeconomic and gender differences (Unterhalter, 2014). As a result, children from the lowest socioeconomic groups have not completed more school years thanks to the MDG framework if progress is measured on disaggregated data (Unterhalter, 2014). In addition to inequities in distribution, other forms of inequality were identified, such as teachers' qualifications, resource allocations, or discriminations associated with race, ethnicity, or language (Unterhalter, 2014). In the end, MDG 2 indicators were not sensible enough as their selection was not based on their pertinence but on the data collection capacity of UNESCO (Unterhalter, 2014).

Finally, assistance was not directed to the countries and populations most in need (Mundy & Manion, 2015, p. 62; Unterhalter, 2014, p. 181). In fact, the UN had identified SSA as the region with the greatest needs and educational challenges (UN, 2000; UNESCO, 2000). However, annual aid to education in SSA only increased by 27% between 2002 and 2010, whereas, in the same period, it increased by 300% in the Arab States (Unterhalter, 2014). Consequently, SSA was where less progress was achieved under the MDGs (Mundy & Manion, 2015). For instance, the number of out-of-school children fell by 25.4 million in South and West Asia, whereas it only decreased by 10.8 million in SSA (Mundy & Manion, 2015). In addition, half of the 61 million out-of-school children were in SSA (UNESCO, 2012).

Besides, the expansion of access to education has yet to be matched by improvements in quality. The MDGs did not foster the development of meaningful educational policies for children and families, as the rate of early school leaving remained at 25% between 2000 and 2011 (UN Department of Public Information, 2013).

1.2.2 The Sustainable Development Goals: objectives for education

After the relative success of the MDGs, the international community has been working on a new set of goals to guide global development post-2015 with a new paradigm to reflect on development. It is in this perspective that *Transforming our world: the 2030 Agenda for Sustainable Development* was conceived and designed (UN, 2015). The Agenda is composed of 17 Goals, 169 targets, and 231 indicators to be implemented by 2030 (see appendix 3 for the list of the SDGs). The SDGs result from an inclusive and transparent formulation process that ensures to "leave no one behind" (UN, 2015, pt. preamble; Weber, 2017, p. 400). Building on the MDGs, the Sustainable Development Goals (SDGs) are a broader and more ambitious agenda than the MDGs (Chasek et al., 2018; UN, 2015). Indeed, the SDGs are *universal,* meaning they must be achieved by all countries alike, unlike the MDGs. In addition, the goals are *integrated* and *indivisible* to create synergies between the various areas of development (Chasek et al., 2018). Finally, all countries must achieve sustainable development, defined within the UN system as a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 43). This definition comes from the report of the World Commission on Environment and Development, also known as the Brundtland Report, which places sustainability at the center of the goals of economic and social development for

all countries, no matter how they are organized (World Commission on Environment and Development, 1987). The discourse on sustainable development is not new, MDG 7 already aimed to ensure environmental sustainability, yet the MDGs failed to operationalize the principles of sustainable development into development policies (Chasek et al., 2018). On the contrary, the SDGs have at their core interest the balancing of the three dimensions of sustainable development, namely the economic, social, and environmental (Chasek et al., 2018; UN, 2015). The SGDs appear thus in the rhetoric as a promising framework for sustainable development.

Education is crucial in promoting sustainable development, as highlighted in *Agenda 21*, established at the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, Brazil (UNCED, 1992). Chapter 36 of Agenda 21 acknowledged the transformative power of formal and non-formal education in changing people's attitudes, which is essential for sustainable development (UNCED, 1992). The 2030 Agenda recognizes education's crucial role in achieving all the goals and dedicates a specific goal for education, SDG 4, which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UN, 2015). SDG 4 has a much broader conception of education than MDG 2 has had in the past. Universal access is no longer limited to primary education but also includes secondary education. It also integrates, among others, life-long learning, vocational training, tertiary education, and adult literacy (see appendix 4 for SDG 4's targets and indicators).

The discourse presented in SDG 4 and throughout Agenda 2030 adopts a transformative language, thus raising the question of whether this language change reflects a more profound shift. However, despite the participatory process of formulation and planning of the SDGs, the power dynamics between the stakeholders are unequal; therefore, particular interests are taking over others, precisely that of a development based on economic growth aligned with neoliberal economic principles (Brissett & Mitter, 2017; Sexsmith & McMichael, 2015; Weber, 2017). Many authors questioned the compatibility between economic growth and sustainable development (Brissett & Mitter, 2017; Hickel, 2019; Kumi et al., 2014; Weber, 2017). Kumi et al. (2014) highlighted that neoliberal development policies in developing countries had created poverty and environmental degradation (Kumi et al., 2014, p. 545). Alternatively, Hickel (2019) investigated if SDG 8 aiming to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" is compatible with the

"sustainability objectives" of the SDGs captured in Goals 6, 12, 13, 14, and 15[4]. He found that SDG 8 violates both SDGs 12 and 13 (Hickel, 2019, p. 879). Moreover, the SDG framework does not provide for redistributive policies to accompany economic growth, undermining any implications for poverty (SDG 1) or inequality (SDG 10) reduction (Hickel, 2019). Thus, the SDGs follow the MDGs in adopting the dominant discourse on development, aligned with the neoliberal agenda, and shaped by Western societies, modes of thought, concepts, and values (Brissett & Mitter, 2017).

As demonstrated by Brissett & Mitter (2017), a double discourse between a transformative approach to education and a utilitarian approach is also present in SDG 4. However, these approaches have very different objectives. Transformative education aims to resolve societal inequalities and injustices, while the utilitarian approach, which follows the same thinking as the human capital approach, conceives education as the means to prepare children to work within an established socioeconomic order. After analyzing SDG 4, the authors found that the utilitarian approach is reflected in more targets than the transformative approach to education. In addition, these targets are better defined, giving them a predominant role (Brissett & Mitter, 2017, p. 197). Indeed, even if several targets use a language reflecting a transformative vision, notably SDG 4.7 and 4.1 mentioning quality, they were reduced and unclear. Quality education is not defined or associated with any recommendations to guide national governments. Therefore, according to the authors, SDG 4 fails to provide a framework to enhance quality education or encourage alternative discourses on education and development. Within the SDG framework, education continues to be instrumentalized to benefit economic growth as SDG 4 "is rooted in a pro-growth Western conception of development" (Brissett & Mitter, 2017, p. 200).

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[4] SDG 6. Ensure availability and sustainable management of water and sanitation for all.

SDG 12. Ensure sustainable consumption and production patterns.

SDG 13. Take urgent action to combat climate change and its impacts.

SDG 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

SDG 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. (UN, 2015).

In the end, the EFA, the MDGs, and the SDGs are all plans of action that national governments, when committing to them, must integrate into national policies. In the MDG framework, the objective for the development of education was unambiguous, all children had to be enrolled in formal schooling. SDG 4 is much more complex, with many different objectives concerning different types of education and actors. The transition to this broader educational goal is therefore challenging for national governments, especially in countries that, under the influence of the MDGs, expanded access to education at the expense of quality.

1.3 Education in Senegal

The example of Senegal will be used to study the impact of international frameworks on national education policies and decision-making in SSA. Senegal is an interesting case because it is a country whose human development index is pulled down by the performance of its school system(Cissé & Fall, 2022). Pupils' results are low, even if the Senegalese government spends a larger share of its total expenditures on education than many other countries in SSA (Cissé & Fall, 2016). It was necessary to go back to the establishment of the formal education system during colonization, the developments it underwent after independence, and the impacts of international educational frameworks on the national educational programs and investments made until 2015 to understand the underlying causes of low performances. Lastly, it will report on the educational system's performances at the dawn of the SDGs and provide an update on the government's priorities for 2018 to 2030 in the education sector following the adoption of SDG 4.

1.3.1 Focus on access to education

The effective colonization of Senegal goes back to the end of the 19th century when it became part of French West Africa (FWA). Nevertheless, schools were imported to Senegal by France in 1817, even before the actual colonization of the country (Cissé & Fall, 2016; Gadjigo, 1990). During colonization, France promoted assimilation and interventionism in its colonies (Brock-Utne, 2002; Labé et al., 2013). In this context, education was limited to the elite and instrumentalized to promote French values and culture (Cissé & Fall, 2016). Schools were established mainly in politically and economically developing regions and were very selective, as only children from educated parents or colonial administrators could attend schools; therefore, the enrollment rate was low (Labé et al., 2013). French was the only language of

instruction, and all materials were imported from France. The school was initially limited to the elementary level but was later extended, notably with the creation of l'*Ecole Normale William Ponty,* in 1903, to train mainly teachers but also doctors, interpreters, executives, and other essential officials for FWA (Jézéquel, 2003). Teachers in the colonial education system were part of the most alienated elite (Cissé & Fall, 2016). Colonial education was not very popular, even after the introduction of mass schooling at the primary and secondary level at the 1944 Brazzaville Conference, the GER at the primary level was 30% in 1960, the year Senegal achieved independence (Labé et al., 2013).

When Senegal became independent in 1960, the government took action to increase access to education (Cissé & Fall, 2016). The will to adapt the school to local realities also existed in Senegal. Nevertheless, until the 1980s, no curriculum reform was achieved due to the reluctance of the elites, thus the colonial educational orientations and programs remained (Cissé & Fall, 2016). In 1981, the new president, Abdou Diouf, launched an educational reform to adapt the school to the socio-cultural realities of Senegal (Cissé & Fall, 2016; A. Fall, 2013). Still, many problems remained, and the SAPs of the 1980s imposed on Senegal led to a reduction in public spending on education which prevented further development of reforms (Cissé & Fall, 2016). Consequently, the GER at the primary level declined from 58% in 1990 to 54,6% in 1995 (Niang, 2014). Even before the cuts in the funds allocated to education, progress in school enrollment was slow in Senegal due to insufficient schools, classes, and teachers, as only 58% of school-age children could be reached in the early 1990s (A. Fall, 2013).

In the 1990s, when international education policies began to emerge with the 1990 WDEFA, Senegal depended on external funding for its education system because of the SAPs (Brock-Utne, 2002). Accordingly, international and external influences started to define the priorities of national resolutions and basic education, as well as increasingly controlling learning content (Cissé & Fall, 2016).

In this context, the Senegalese government operationalized the measures to expand formal primary education in the *Programme de Développement de l'Éducation et de la Formation* (PDEF) from 2000 to 2015 (MEN, 2003). The program included the construction and rehabilitation of classrooms, the increased use of special classes (multigrade or double-shift classes), an increased resort to the *Programme de Volontaires de l'Éducation* (PVE), support for private schools, and a focus on the enrollment of vulnerable children and girls (Cissé & Fall,

2016; Niang, 2014). PVE was a new way of recruiting teachers that allowed the recruitment of a large number of teachers by reducing the duration of the training to a couple of months instead of 4 years (Niang, 2014). This program, launched in 1996, facilitated the recruitment of 1,200 teachers until 2000 when the PDEF intensified this policy by planning to enroll 20,000 volunteers to reach the objective of UPE by 2010 (Cissé & Fall, 2016; MEN, 2003; Niang, 2014). This policy was very effective and allowed, between 1996 and 2000, an increase in the primary GER from 54 to 68.3% (Cissé & Fall, 2016; MEN, 2003). In addition, the development of the private education sector was a measure that aimed to increase the enrolment rate without increasing state expenditure (Niang, 2014). With these measures' overall impact, the primary level GER increased considerably, reaching 93.9% in 2011 (Cissé & Fall, 2016; Niang, 2014). The PDEF was based on three pillars: access, quality, and governance, but the measures were limited to increasing access. It recommended measures that undermined the quality of education, notably with the use of special classes or PVE. By encouraging multigrade classes, where students from two different grades are grouped in the same classroom, PDEF increased the teacher-student ratio (Niang, 2014). PDEF also reduced student learning time in double-shift classes because each cohort has only half of the teaching time (Niang, 2014). Likewise, the PVE policy has reduced the qualifications of the teachers, decreasing their training time and the level of knowledge required for recruitment (Niang, 2014). In 2011, 67% of the country's teaching staff emerged from the PVE and had low academic levels (Cissé & Fall, 2016; Niang, 2014, p. 248). In addition, the rapid increase in enrollment rates was not matched everywhere by sufficient infrastructure, and temporary shelters have replaced the schools, especially in rural areas (Niang, 2014). Using this type of infrastructure leads to many complications that decrease schooling time since temporary shelters are only functional for six to seven months out of the nine months of the school year (Niang, 2014, p. 253, 2015). The measures advocated by PDEF were thus matching the main objective of universalizing access to primary school but were not sensitive to issues of educational quality. Moreover, some measures reinforced disparities between urban and rural areas. For instance, private schools were developed mainly in urban areas accounting for 39,9% of enrollment in the capital city, Dakar, whereas temporary shelters and special classes multiplied in rural areas (Niang, 2014, p. 255).

Finally, the PDEF addressed not only formal primary education but also all other levels of education and non-formal education; nevertheless, UPE attracted all the attention and funding. Indeed, there are many formal and non-formal learning places besides public schools in

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Senegal. Among others, private French or Franco-Arab schools attract many children in urban areas because these infrastructures benefited from better management than public schools and included religious education (Niang, 2014). Moreover, traditional education, generally transmitted orally within the family and the community, still holds an important place in African cultures (Guth, 1990; Moumouni, 1998; Woolman, 2001). Religious education is also crucial in Senegal, a country whose population is 95% Muslim. Koranic schools, called *daaras*, are widespread community-based non-formal schools that are neither registered, regulated, nor overseen by the government. The learning process and its aim consist of memorizing the verses of the Koran to become a good Muslim. Usually, koranic education is heterogeneous in age, gender, and knowledge, and the teaching relies only on the ability of the koranic master (Goensch, 2016; Kuenzi, 2018). Muslim brotherhoods have had a significant influence in Senegal to such an extent that, during colonization, the Murid brotherhood forbade the establishment of French public schools in its sacred city, Touba, and no government succeeded in implementing public schools there to this day (A. Fall, 2013).

Access to primary education in Senegal was generalized during the first decade of the 2000s (see appendix 5 for a summary of the Senegalese formal education system). However, 30,000 children were still not enrolled in primary school (Cissé & Fall, 2016, p. 18). Additionally, significant problems with the quality of education at all levels appeared since children went to school but did not acquire knowledge. In primary school, 70-80% of pupils did not reach the sufficient language competencies threshold in 2014 (MEN, 2018, p. 10). In 2012, the pass rate for the BFEM, the national examination at the end of lower secondary school, was 53.2%, and for the baccalaureate, the examination that concludes upper secondary education, 38.10% (MEN, 2018, p. 10).

1.3.2 Focus on quality education

As a result of the poor performances of learners in national examinations, the strategic framework of the Senegalese education policy succeeding PDEF was designed to provide quality education, a school for all, and inclusive and effective governance (MEN, 2018). The *Programme d'amélioration de la qualité, de l'équité et de la transparence* (PAQUET) was initially launched in 2013 and then updated in 2018 to allow for the integration of the government's commitments at the international level, with the adoption of the SDGs in 2015 namely, without calling into question the objective of PAQUET (MEN, 2018). The PAQUET

plans the strategic implementation of numerous measures of a political, institutional, technical, social, and financial nature to provide inclusive, equitable, and quality education at all levels (MEN, 2018). To improve quality, the PAQUET provides for: the acquisition of textbooks and pedagogical and didactic materials, in-service training for teachers, support for health and nutrition, the establishment of school canteens, and the implementation of new curriculums (MEN, 2018). Other PAQUET measures related to equitable access will also impact quality, including teacher recruitment, improving the school environment, and expanding coverage (MEN, 2018).

However, quality education is not defined in the PAQUET. The objective is to "improve the quality of education and training in all its dimensions" (MEN, 2018, p. 20). Finally, The PAQUET incorporates many elements that are also present in SDG 4, such as preschool education, youth and adult literacy, vocational training, and a particular focus on women's access and completion in education. That said, the purpose of education is clearly to form a quality human capital that contributes to Senegal's economic and social development (MEN, 2018). At all levels, the development of the system must meet the primary objective of learners' employability (MEN, 2018). Therefore, this employability goal and other measures under the PAQUET align with the educational approach promoted by SDG 4 and the neoliberal agenda.

The *Laboratoire de Recherche sur les Transformations Économiques et Sociales de l'Institut Fondamental d'Afrique Noir* (LARTES-IFAN) created an independent assessment, the Jàngandoo[5] Barometer, to evaluate the quality of learning in Senegal (LARTES-IFAN, 2015). The particularities of Jàngandoo are that it is interested in all forms of learning to which children are subjected. Indeed, the evaluation is carried out within households and assesses all children present between the ages of nine and sixteen. Moreover, all children take the same test as it reflects the median level of learning, corresponding "to the acquisition stage of the fundamentals that makes the child autonomous, able to read, understand the readings, and practice the four operations in mathematics" (LARTES-IFAN, 2015, p. 12). In the formal system, this level is equivalent to CE1. The tests, which children can choose to take in either French or Arabic, assess three disciplines through exercises composed of several items of increasing difficulty: reading, mathematics, and general knowledge (see appendix 6 for an

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[5] Wolof word meaning "learning together" (Cissé & Fall, 2016, p. 23)

example of a test). In addition, the barometer explores the surrounding environments in which children learn through community and household surveys to identify factors that positively influence children's performance. Finally, the results are shared with all education stakeholders to create a national dialogue and act together to improve the quality of learning (LARTES-IFAN, 2015).

The LARTES and its partners first conducted the Jàngandoo evaluation nationally in 2014. The children's performances on the tests were appealing as only 18,6% of children successfully passed the overall median level test (LARTES-IFAN, 2015, p. 26). Children did well on the general knowledge test, with a success rate reaching 86,7%, but had much more difficulty in reading and mathematics, where the success rates dropped to 27.7% and 22.2%, respectively (LARTES-IFAN, 2015, p. 26). Furthermore, the results showed no significant difference in success rates by gender (LARTES-IFAN, 2015, p. 30). Gender equality in education is not a prominent issue in Senegal, as there are no apparent structural gender inequalities in access to schooling. The parity index favored girls in preschool (1.16), elementary (1.13), and lower secondary education (1.11) in 2015 (MEN, 2018, p. 10). The parity index was disadvantageous for girls at the upper secondary and higher levels, but the government engaged in programs to encourage and retain girls in education (MEN, 2018).

Overall, the low results on the national exams already highlighted a problem with the quality of learning in Senegal that the Jàngandoo barometer allowed further identification. A significant problem of comprehension among children in Senegal prevents them from acquiring basic knowledge (Cissé & Fall, 2016; LARTES-IFAN, 2015). In the PAQUET, the government has set ambitious educational priorities and strategies to increase pupils' performances and learning abilities. Nevertheless, the educational approach promoted in the PAQUET focuses mainly on education that meets employability criteria. The question will be how quality is included and understood in this context.

Chapter 2: Problematization

This section will outline the problem that gave rise to the research questions and the purpose of our research. It will further present the hypotheses for verification and the conceptual framework that inspired and guided the present research.

2.1 Problematization and research question

There is no universal consensus on the definition of quality education (Tikly, 2011, p. 3). The dominant discourse on education, the human capital approach, considers education only in its capacity to contribute to economic growth. A quality education is, therefore, one that produces competent employees in the current economic order (Gillies, 2015). SDG 4 takes up the dominant discourse and promotes a utilitarian approach to education which associates quality with standardization, efficiency, and employment (Brissett & Mitter, 2017). Nevertheless, Tikly (2011) argued that the human capital approach does not "provide a framework for understanding education quality" (Tikly, 2011, p. 5). However, a consensus has formed around quality measurement through national and international tests (Cissé & Fall, 2016, p. 20; Niang, 2014). The problem is that academic standards and evaluations emanate from Western culture and refer to Western concepts but serve as an assessment for all educational systems (Brock-Utne, 2002). Comparisons between different education systems thus seem to be biased. In regions like SSA, the intrusion of colonial powers first and then of international assistance has left many countries with an education that was not theirs. Instruction is given in a language often not used by the community and prepares for an employment economy that does not necessarily exist in SSA countries since the economy is predominantly informal. Learners in these countries often perform poorly in national assessments and international comparisons. Besides, quality assessments focus on quantitative measurements (Cissé & Fall, 2016; Niang, 2014). For instance, SDG 4.1 refers to quality primary and secondary education "leading to relevant and effective learning outcomes" (UN, 2015). Nevertheless, the indicators selected measure completion rate and the proportion of children at the end of primary or lower secondary education achieving at least a minimum proficiency level in reading and mathematics, namely success rate on exams.

It is, therefore, necessary to consider other frameworks to understand quality education. Several frameworks exist, some developed by international organizations like UNESCO and others

developed by researchers (Odukoya, 2010; Tikly, 2011). Some are process models that assume a linear relationship between inputs, processes, and outputs of education. These models, which are often adopted in a human capital approach to education, lead to a standard approach to quality (Tikly & Barrett, 2011). Nonetheless, Tikly (2011) pointed out that processes and outcomes are complex, multidimensional, and context-related (Tikly, 2011). Other frameworks, founded on a rights-based approach to education, developed a learner-centered model (Odukoya, 2010; Tikly, 2011). However, they do not consider the social, economic, and cultural environment in which the learner is located and their influence on the learning performances in their analysis, making these models likewise obsolete (Odukoya, 2010; Tikly, 2011). In the end, mainstream approaches to education do not truly appreciate what a quality education could be and do not provide an adequate framework to enhance it. The task of governments to deliver quality education to all at primary and secondary levels seems challenging to realize in this context.

Senegal is not an exception in SSA regarding its education system. It seems out of touch with society and inefficient. Dropout and repetition rates are high, and the quality of learning is poor at all levels of education (MEN, 2018, p. 13). The PAQUET mentions improving the quality of education as one of its main objectives, nevertheless, the policy guidelines do not incorporate a different way of monitoring quality education than quantitative processes. The Jàngandoo Citizen Barometer offers an alternative and inclusive way to measure the quality of learning in Senegal, but its advocacy needs to be heard and model integrated to function. It is also necessary to resort to a framework that allows an understanding of quality education considering the specific context of SSA to guide actions in Senegal.

This research seeks to understand what is needed to have quality education at a national level. It will focus on the formal education system of Senegal and try to point out the dysfunctions by comparing the discourse with the reality experienced by local education actors. It also aims to explore the most effective means to increase the quality of learning and education in Senegal from the perspective of local education stakeholders. Therefore, the research questions have been formulated as follows:
What are the most effective measures to improve the quality of education and learning in the Senegalese context? Are these measures encouraged by the current national framework?

2.2 Hypothesis

To improve the quality of learning in Senegal and contribute to quality education, the Senegalese government must undertake significant education reforms to enhance the pertinence of the education delivered in formal schooling systems. It includes, as a priority, reforms in the curriculum, language of instruction, and instructional materials. Reforms must also question teachers' working conditions and training as they have the crucial role of instructing students. These reforms appear to be prevented by a lack of will rather than resources knowing that Senegal is one of the countries in SSA, dedicating the most significant part of its GDP to education, 7.1% in 2015 (Cissé & Fall, 2022, p. 67). It is also essential to recognize the role of external funding in education. They are sometimes required for the system's functioning but can create perverse incentives in the countries dependent upon them as they come with conditionalities.

Moreover, to improve the quality of learning in Senegal and contribute to quality education, remediation programs, and preschool coverage must be institutionalized and expanded.

2.3 Conceptual framework

The framework and related approach that will interest us in understanding quality education in the context of Senegal have been developed by the Research Program Consortium on "Implementing Education Quality in Low-Income countries" (EdQual), focusing mainly on Africa. The approach developed in this context by Tikly and Barrett (2011) builds on existing approaches and is based on social justice theories and Amartya Sen's capability approach (Tikly & Barrett, 2011). They define a good quality education as

> [an] education that provides all learners with the capabilities they require to become economically productive, develop sustainable livelihoods, contribute to peaceful and democratic societies and enhance individual well-being. The learning outcomes that are required vary according to context but at the end of the basic education cycle must include at least threshold levels of literacy and numeracy as well as life skills, including awareness and prevention of disease. (Tikly & Barrett, 2011, p. 9)

Their social justice approach to quality education emphasizes three central dimensions for quality education: inclusion, relevance, and democracy (Tikly & Barrett, 2011). It incorporates

and extends both the human capital and right-based approaches by integrating the political nature of the debate about quality education (Tikly & Barrett, 2011).

Moreover, context is essential in the definition of good quality education as Sen has conceptualized capabilities as situated within specific social and geographic contexts (Tikly & Barrett, 2013). Participation of learners, parents, communities, and the government is thus imperative to determine the capabilities they have reason to value for education outcomes (Tikly & Barrett, 2011). Tikly and Barrett (2013) argue that there are three levels of environments in education, namely the policy, the school, and the home/community environments, and their interactions determine the quality of education (Figure 1). The policy environment is national and mainly concerns the curriculum, teacher training, and quality monitoring and regulation. The school level is responsible for the implementation of policies and, thus, molding educational policy. And finally, the home and community environment are the most significant in determining children's learning opportunities. (Tikly & Barrett, 2013)
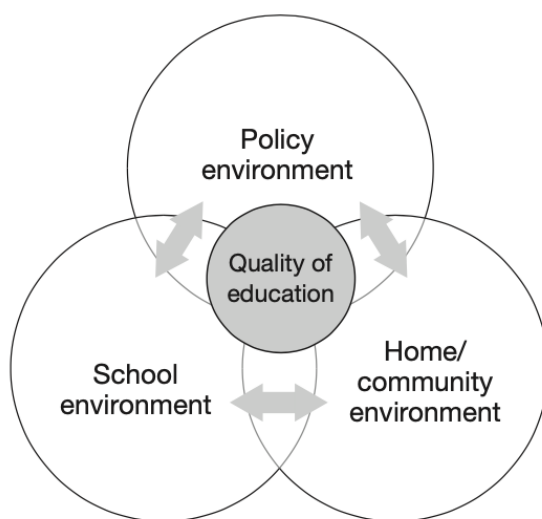
Figure 1. Interacting environments for education quality in Africa (source: Tikly & Barrett, 2013, p.15)

Tikly (2011) further conceptualized the framework for understanding quality education in Africa by identifying inputs and processes underlying quality education, as resumed in figure 2 below. He emphasized the importance of creating an enabling mix of inputs in each environment and accompanying the processes of converting them into desired outcomes to reach quality education. However, he made it clear that the inputs and processes he has

identified are suggestions and not a list to follow since policymakers must consider local needs and realities (Tikly, 2011).

Enabling policy environment

- A national debate on education quality
- Teacher development, salaries and incentives
- Headteacher training
- Assessment, monitoring and evaluation
- A relevant and inclusive curriculum
- Textbook procurement and distribution
- Targeted financial support for schools

- Stakeholder engagement
- Local support for schools

- Stakeholder engagement and community 'voice'

A GOOD QUALITY EDUCATION

- School based professional development
- School self evaluation
- Infrastructure, and resources (including ICTs)
- Structured pedagogy

- Parental literacy
- Parent support for learning
- Books in the home
- A place to study

- School governance and parental 'voice'
- Home school links/ parental education
- School feeding and child health e.g. de-worming

Enabling school environment

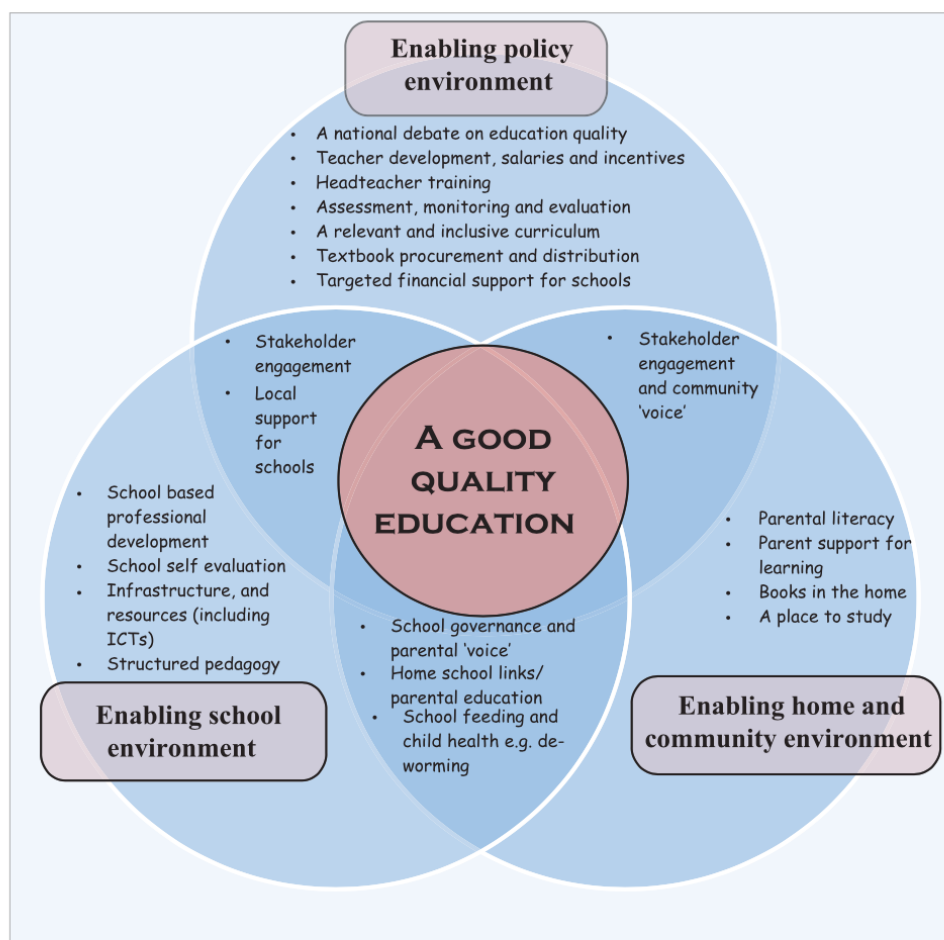**Enabling home and community environment**

Figure 2. A framework for understanding education quality in Africa (source: Tikly, 2011, p.17)

Chapter 3: Methodology

The present research focuses on quality education in Senegal and aims to determine the most effective measures to improve the quality of learning and education. It was essential to first study the influence of international frameworks on national educational policies for the past thirty-two years to understand why the quality of education is such an issue today. Moreover, it was necessary to highlight the specific context of education in SSA and the post-colonial dynamics that have continued to impose irrelevant curricula and measurement of quality. Finally, this section will explain how a more context-related and holistic framework for understanding quality education was used to reflect on the research question.

Due to the purpose of this research, several methods of data collection and analysis were required, as detailed below. In addition, the methodological limitations encountered in the present research will be detailed.

3.1 Methods used

Several research methods were mixed in the present research to gain a deeper understanding of the SSA region and specifically the Senegalese educational system, its organization, and its functioning. Extensive desk research was made and completed through field research in Senegal. The purpose of the field research was to collect qualitative data reflecting personal experiences and perceptions of local actors of the formal education system. Finally, this work has been completed and nourished by personal observations and experiences.

3.1.1 Desk research

Initially, the research started at the international level around the SDGs, MDGs, and EFA. The purpose was to understand the different discourses on education, who was promoting which discourse, and why. It required extensive literature research to understand the global architecture surrounding education as these frameworks are accompanied by a lot of documentation on their formulation process, reviews, and monitoring.

The focus was then turned to the SSA region to analyze the post-colonial development of education systems and the influence of international education frameworks on national policy setting. Senegal was chosen as a case study because the analysis of a region as vast and diverse

as SSA is not possible within the scope of this work. The research pointed out critical writings on the massification of the Senegalese education system. A method to measure the quality of learning in Senegal was developed by the LARTES-IFAN of the University Cheikh Anta Diop (UCAD) of Dakar. This independent evaluation of the quality of learning, named the Jàngandoo barometer, was undertaken nationally in 2014, 2016, and 2019. It thus provided longitudinal data to observe the evolution of the learning abilities of Senegalese children. Finally, throughout this research, the aim was to bring a Senegalese perspective to the forefront.

Regarding the analysis of documents, many articles used in this research referred to discourse analysis (CDA) for analyzing international frameworks on education. CDA is a methodology and theory which considers that discourse results from the specific use of language combined with thoughts and actions reproducing society's asymmetrical power relations and inequalities (Blommaert & Bulcaen, 2000; Brissett & Mitter, 2017). Hence, the construction of a discourse limits other ways of understanding the subject, and CDA is an effective tool to deconstruct and understand the dominant and marginalized discourses that highlight how policies result from a selection process between competing discourses supported by asymmetrical relations of power (Brissett & Mitter, 2017). Education is a high place of reproduction of social relations where policy analysis requires a CDA to highlight how discourses emerged and, thanks to what process, one discourse became dominant and operationalized (Blommaert & Bulcaen, 2000; Brissett & Mitter, 2017).

3.1.2 Semi-directive interviews

Five semi-directive interviews were conducted in September 2022 with a range of local actors directly involved in the education sector to enrich a Senegalese perspective on quality education. The interviews were designed with the goal of better understanding the Senegalese formal school system, its current limitations, and its prospects for development. Some avenues considered by the EdQual framework and the Jàngandoo barometer for improving the quality of education in Senegal were also discussed. Therefore, both frameworks oriented some of the questions asked.

Interviews require research and preparation to determine themes around which to develop the questions of the interview guide, helping to structure the discussion (Longhurst, 2003). The semi-structured interview method was chosen because it allows for flexibility during the interview and for collecting qualitative data that reflected the participants' opinions. This

format also ensures flexibility according to the participants' responses because questions may be asked in a different order depending on the direction of the discussion, or the participant may answer a question without being asked directly (Longhurst, 2003). It is crucial in this sense to be well prepared to be sure that all the topics looking for have been covered during the interview (Longhurst, 2003). In this research, this method comes as a complement to the documentary analysis, allowing to discuss concretely with the concerned actors leads found in the literature for quality education. Therefore, it was essential to carefully select the participants who could respond satisfactorily and bring interesting additional information to answer the research question and verify or, on the contrary, reject the hypotheses previously formulated.

During field research in Senegal, interviews were conducted with a public school primary teacher, a public middle school teacher, a private middle school teacher, a university teacher, and a parent/community member (see table 1 below). This range of participants was selected to gain an overall understanding of the formal school system, from the primary level to higher education, with a local perspective. The primary and secondary teachers also gave insights into the job and profile of inspectors of education and school principals. Participants' names have been removed for anonymity, which is usually required in research. They will be replaced in the text by acronyms related to their function in the educational system or their initials in the case of the parent/community member.

Acronyms	Function and location (all in Senegal)	Place and date of the interview
Primary school teacher (PT)	Public school of Medina Ndiayene, in the commune of Gainth Pathe, in the department of Koungheul, Kaffrine region.	Mbokhodoff, the 25th of September 2022.
Public lower secondary teacher (ST1)	Mathematics and sciences teacher in the public middle and secondary school of Dounde, in the commune of Aoure, in the department of Kanel, Matam region.	Mbokhodoff, the 26th of September 2022.
Private lower secondary teacher (ST2)	English teacher in the private middle and secondary school Notre-Dame in Dakar-Plateau, Dakar region.	Dakar, the 29th of September 2022.
University teacher (UT)	Professor in the Department of Geography, rural dynamics specialist, University Cheikh Anta Diop (UCAD), Dakar.	Dakar, the 28th of September 2022.
YD	Mother of school children and member of the community of Mbokhodoff, in the commune of Thiomby, in the department of Kaolack, Kaolack region.	Mbokhodoff, the 25th of September 2022.

Table 1. List of participants in the interviews

The interviews with the ST2 and the UT took place in Dakar. For the other participants, it was in Mbokhodoff, a village about 200 km from Dakar. The teachers were at their homes as it was during the school break. It was easier to proceed this way because, during the school year, the teachers are very busy and are often isolated in the bush. These elements were decided in advance with the participants. The organization has been facilitated by the pre-established relationship of trust that existed.

Similar guides were used for the interviews with the primary and secondary teachers (see appendix 7 for interview guides). First, general questions about their level of training, the teaching environment, the teacher-pupils and pupils-textbook ratios in their classrooms, and the facilities available in the school were asked. Then, it went on to more open-ended questions about themes previously identified using the EdQual framework. Questions covered areas of teacher training and qualifications, working conditions, links between the school and parents/community, the relevance of the curriculum and textbooks, the pedagogical methods encouraged, and evaluations. Students' performances and suggestions to enhance students' learning abilities and the overall quality of education were also discussed. The three teachers were selected based on their teaching level and location. The interviews were also used to understand some of the Jàngandoo barometer results. For instance, it highlighted that students who attended private schools were the most successful; therefore, two middle school teachers were selected, one working in a private school in the capital and another in a public school in the bush, to compare their situations. In addition, the primary school teacher interviewed works in the Kaffrine region, where students perform well below the national average, according to the Jàngandoo barometer. Therefore, selecting these teachers has facilitated comparing and identifying situations that enhance quality education and learning abilities.

For the other interviews with the UT and YD, specific interview guides were used because these interviews completed the picture of the school system with more precise information on the dynamics surrounding schooling (see appendix 7). The interview with the UT discussed urban-rural dynamics because of the significant disparity between these two settings regarding infrastructure, resources, and children's performance on the Jàngandoo assessment. The questions were also interested in the perception of the quality education at the university and potential opportunities to improve it. The questions for YD were mainly about the links, if any, between the school and the parents. They were interested in the actual cost of schooling in terms

of tuition fees and loss of workforce for housework and fieldwork. It also sought to investigate the influence of parental literacy, support for learning, and home learning conditions on children's performance, given that these factors appeared to be decisive in the children's performances according to the Jàngandoo evaluation.

3.1.3 Observations and personal experience

In addition to the previously mentioned methods, I had the opportunity to experience the Senegalese higher education system myself through an exchange semester at the University Cheikh Anta Diop (UCAD) of Dakar in the spring of 2021. During this semester, I discovered challenging learning and teaching conditions, a lack of infrastructure, resources, and great difficulties in organization and management. Tertiary education is disrupted by political agendas, strikes at all levels (students/ teachers/ administrations), and teacher absenteeism making the effective teaching time very low. The quality of tertiary education in Senegal is not assessed but could be significantly improved.

During my time in Senegal, I also met friends who made my experience very enriching and authentic. They spoke to me at length about Senegalese culture and traditions. They told me about the functioning of the political and educational system, their failures, and the repercussions this had on the population. They talked to me about the difficulties of life in Senegal, especially those of university students from rural areas with very few financial resources. I observed the difficult living conditions they had to face and their impact on their learning dispositions. Finally, thanks to them, the idea of my research topic came to me. Some friends invited me to their home in the bush to meet their families and participate in traditional events. When I was there, I realized that French, the country's official language, is very little mastered by the rural population. Only a few adults and young people who attended secondary school could truly communicate with me in French. The children who went to primary school did not understand what I was saying to them and could neither interact with me. This observation made me wonder what they were learning during all their years of schooling.

Besides my experience in Senegal, I also benefited from my work experience here in Switzerland for this research. Indeed, I have been working as a substitute teacher in public schools for the past two years. I'm working in all levels of compulsory education, and this experience enables me to understand the issues related to schooling more practically.

Furthermore, my position as an intern for the NGO Helpcode Switzerland allows me to meet professionals developing projects related to education in SSA and have thus great experience to learn from. It also gave me the opportunity to integrate the working group on education in emergencies of the Swiss Network for Education & International Cooperation (RECI) and participate in the thematic day 2022 of the RECI "Reframing Education for a Sustainable World, How to Support Teachers and Learners as Agent of Change to Achieve SDG 4.7?" During this day, attention was paid to the different values that education should transmit and the critical role of teachers. Ultimately, this internship and working experience in schools offered me many exciting insights into educational issues and enriched my thinking in the present work.

3.2 Methodological limitations

It took much work to conduct interviews in another country as it requires a lot of organization and a small amount of faith. Indeed, there are many elements to consider in the feasibility of interviews in Senegal, especially in a limited time frame. In the first place, it was essential to have preestablished relationships with the participants to be able to conduct interviews without staying in the country for months. Some education stakeholders, such as inspectors, are very busy and in short supply. Therefore, it is not very easy to meet influential stakeholders.

In addition, it is difficult to address specific topics or ask certain questions while remaining culturally appropriate in a traditional society since cultures are very different between Switzerland and Senegal. For example, the word of an elder or someone hierarchically superior cannot be contradicted. Therefore, the interview with the UT was restricted due to the highly hierarchical relationship between students and university teachers. It can also limit the scope of participants. For instance, discussing with the master in the Koranic school appears to be very complicated. If one wanted to conform to the traditions and cultures of Senegal, these were limitations to consider and respect.

Cultural differences also concern the ways of organizing and the notion of time. For instance, it was impossible to agree on the exact dates of the meetings with the participants before being on-site. Moreover, punctuality does not exist. People set approximate meeting times, and then we will see how it goes. No one is stressed about time. These representations impacted the course of the interviews, especially in the village, where the rhythm of the day is very particular.

The two interviews conducted with the teachers in the village were more like conversations throughout the day than actual interviews. Even if the format, with an interview guide, was respected, the process was not classical. Consequently, the interviews were not recorded but directly transcribed on a computer.

Finally, there is the language and communication barrier. In the bush especially, the internet connection is insufficient to conduct video interviews, so it is necessary to go in person to the participants. Additionally, it is crucial to be accompanied by a person who can translate and interpret the discussions with the local population, as they rarely speak French. YD in the present research only speaks serrere, a local language. Therefore, the interview was translated and interpretated by her son.

Overall, these are why the organization and the realization of interviews in Senegal were challenging and had some limitations.

Chapter 4. Data Analysis

A thematic analysis was conducted to analyze the data collected in the semi-structured interviews. This analysis followed a deductive approach since a set of themes was already singled out through the framework for understanding quality education in Africa (Tikly, 2011). Subsequently, the data were organized according to the three environments interacting for quality education, as identified by Tikly & Barret (2011) in Figure 1. In the policy environment, the elements that depend on the actions adopted and pursued by the national government of Senegal are collected. At the level of the school environment, the attention is on how national policies are implemented in the school. Finally, the home and community environment will be handled by looking at the extent to which parental support influence schooling and the cost of schooling for families and communities. Overall, this analysis will reflect the reality of the public school in Senegal for its various users. The focus is set on public education at the primary and secondary level, but parallels will also be made with the private sector and the university in accordance with the teaching positions of the participants interviewed.

4.1 Policy environment in Senegal

Education policies at the national level depend on the government, particularly the Ministry of Education. They set the conditions for the recruitment of teachers, organize training, and allocate teaching positions. They are also responsible for school coverage and national curriculum. How they manage the education system, infrastructure, and resources influence the quality of education. Based on the information collected, an overview will be made of the organization and functioning of Senegal's primary and lower secondary public education systems. Some comparisons will be made with the private schools and the university. Finally, the content of the curriculum and some leads to adapt it further will be presented.

4.1.1 Teaching force management

4.1.1.1 Recruitment, training, and allocation of teachers

In Senegal, public primary and secondary school teachers are recruited through competitive entrance examinations. The frequency of the competitions and the number of participants selected depend on the needs. In general, competitive entrance examinations are held once a

year, but the government may decide otherwise. For example, the recruitment of middle school teachers open to holders of the literary baccalaureate has been suspended for several years. Conversely, the exam available to holders of the scientific baccalaureate was held twice between August 2017 and February 2018. In addition, the recruitment of teachers is very selective. For instance, in the competitive exam attended by the PT in 2018, 2'500 candidates were selected out of approximately 27'000 participants. In the one attended by the ST1 in 2018, 85 candidates were selected among about 2000 participants. It is, therefore, common for candidates to apply several times before being selected, as was the case for the ST1, who failed the competitive entrance examination in 2017 but was selected in 2018.

In the public sector, the recruitment procedure, training, and assignment to a teaching position are centralized. There are two distinct training paths in Senegal depending on the level of primary or secondary education, as detailed in Figure 3.
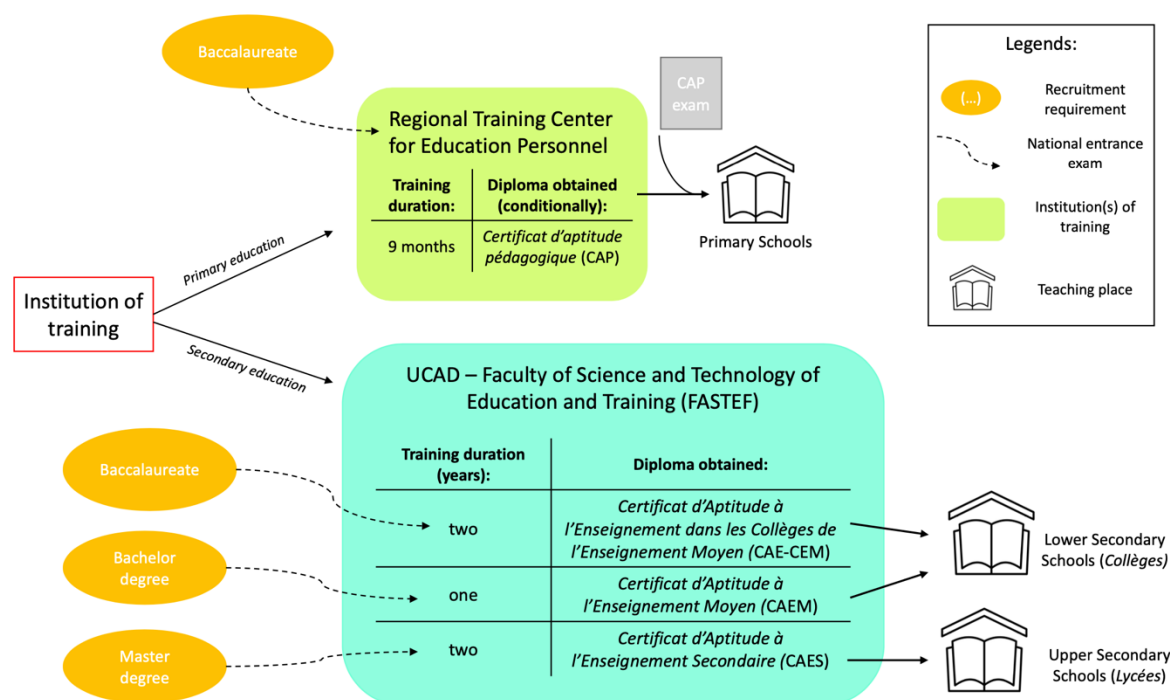
Figure 3. Training paths for primary and secondary teachers in Senegal

To teach in primary schools, candidates must have a baccalaureate to take the national exam in three stages (see appendix 8 for a press release announcing the primary teacher recruitment competition in 2023). The first stage, a dictation, is held in regional examination centers. The following two steps are centralized in Dakar. At the end of the competition, candidates accepted into the training program can choose a Regional Training Center for Education Personnel, where they will be trained for nine months. The training includes pedagogical training modules

and internships. At the end of the training, the Ministry of Education assigns new teachers to positions. In general, new teachers are assigned to the region where they were trained, but this is especially true for those who have done well in training. Instead, the government assigns new teachers to departments according to its needs. It is then the departmental administration that assigns the teacher to a village. There is no way to challenge this decision. However, certain factors are considered in the assignment process, including the gender of the person and marital status. For instance, women are often assigned to communes rather than remote villages with no electricity. Finally, new primary teachers have the position of a contractual master because they must still pass the certificate of pedagogical aptitude (CAP) to be integrated as civil servants. To get the CAP, an inspector of the Education and Training Inspectorate (ETI), accompanied by the school principal and a teacher holding the CAP, must grade the candidate on the lessons given during an ordinary day. Usually, there is a French and a math lesson, a physical education class, and an early learning lesson (history/geography/scientific and technological initiation).

At the secondary level, the recruitment process is more complex. The candidates, who have at least the baccalaureate, are trained at the Faculty of Science and Technology of Education and Training (FASTEF) of the UCAD. The training will depend on the candidate's academic level and will last one or two years. At the end of the training, the FASTEF delivers three different diplomas that will orient the teaching position and the salary. The certificate of aptitude for teaching in middle schools (CAE-CEM) and the certificate of aptitude in middle school education (CAEM) allow teaching in lower secondary schools. The difference is that CAEM candidates have already obtained a bachelor's degree in the subject that will be taught. Therefore, their training is reduced to one year to focus only on the school program and participate in evaluated internships. CAE-CEM candidates have an extra year in which their academic knowledge is reinforced to equal the level of the first year of a bachelor's. Teaching at the upper secondary level requires a master's degree, and the candidates are trained for two years to obtain the certificate of aptitude for secondary education (CAES). At the end of the training, the Ministry of Education assigns secondary teachers to a region. Then, the departmental administration gives them a teaching position. The Dakar region is eliminated from the positions available to new teachers because it is the most coveted region. Only teachers with experience and favorable conditions, such as a good reputation or relations, are moved there. Secondary teachers have exceptional opportunities to change teaching positions, notably

during the national movement. Nevertheless, even if the national movement happens annually, teachers rarely move during their careers because of the many requirements. Finally, new teachers have already been assessed during their training at the FASTEF but are still considered contractual masters. After one year of practice, they must submit their application to the Academy Inspectorate (AI) to be integrated as civil servants.

Regarding the quality of the training, the PT considers that training in primary education is too short. On the other hand, the ST1 considers the two-year teacher training course for lower secondary schools sufficient. He stressed the quality of training provided at the FASTEF, where repetition is not allowed.

Overall, there is a shortage of teachers in Senegal, resulting in shortened training and assignments that do not correspond to the diploma customarily required. These are mainly primary teachers who are assigned to the lower secondary level. These teachers, known as temporary teachers, are promised distance learning that will allow them to upgrade their qualifications and, thus, their salaries. Even though the government made this promise, it does not keep it, and the temporary teachers remain in this situation for several years. This strategy leads to significant discrepancies between teachers' training levels within the same institution. Teachers see this strategy as a way for the state to save on salaries.

By contrast, teacher recruitment follows different procedures in the private or tertiary sectors. In the private school sector, the school director interviews candidates after going through a placement center or applying directly to the school. DIDEC, for example, is the placement center for private education for all Catholic schools in Dakar. The conditions of recruitment are also different. FASTEF graduate teachers are integrated as full-time teachers, and the others as temporary teachers. The salary and teaching hours depend on this status. In higher education, the recruitment process for teachers is similar to that in private schools. The University issues a call for applications and selects a candidate after an interview. In both cases, these procedures offer candidates the free choice of the region in which they wish to practice the profession, which influences their working conditions and motivation.

4.1.1.2 Teacher's working conditions

In the public sector, teachers' working conditions are difficult, which can strain their motivation. There is a lack of teaching materials, infrastructure, and staff, especially in rural

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areas. Some teachers invest a lot of their time and money in offering free tutoring or providing materials to their students from low-income families. Unfortunately, the state does not support teachers financially or technically in these endeavors, and most of the difficulties linked to the profession are generally the result of poor management by the state.

Moreover, at all levels of education, the integration of contract teachers into civil servants is subject to severe administrative delays, leading to teachers' strikes. Primary teachers are candidates for the CAP as soon as they have completed their training, yet it takes several years for an inspector to visit some teachers. Likewise, secondary teachers can submit their files to the IEA and wait for years before being integrated. The salaries of contractual teachers are minimal because they are not entitled to allowances. In addition, the state systematically removes from the reminders it must pay teachers once they are integrated for all the years deprived of allowances by invoking taxes or even without justification. In the end, many teachers consider that administrative delays and the selectivity of competition when there is a shortage of teachers are strategies of the state to reduce its expenditure in the education sector. In general, the relationship between the government and the teachers is hierarchical and sometimes conflictual, resulting in strikes. Teachers are rarely involved in political decisions or, generally, in politics. The PT mentioned, for example, that there were no teachers in the political sphere in the department of Kougheul. In contrast, teachers can have essential roles in their religious community, such as imams in a Muslim community. Furthermore, the UT condemned the absence of collaboration between the state and scientists and the lack of funds allocated to research.

Besides, once teachers are in post, they have little opportunity to develop their educational practice. In-service training in Senegal refers to pedagogical animation cells organized to discuss the program and strengthen teachers' knowledge. At the primary level, the inspectors of the ETI manage the pedagogical animation cells for all primary schools in the commune. They happen monthly but last only as long as teachers have questions. Schools can also take the initiatives to set up internal cells. At the secondary levels, the teachers from the same area and subject organize the pedagogical cells. They are scheduled outside school and are not remunerated. Consequently, they are held less often. Overall, both teachers blame the government for investing the minimum in in-service training when it would greatly benefit teachers.

The government's management of the public education sector is thus not a source of motivation for teachers. The salaries are just enough, the working conditions are demanding, and there are few professional development opportunities. Most teachers have chosen this profession as a vocation and are willing to endure the challenging working conditions. The role of the teacher in Senegal is a position of prestige. They are respected by families, communities, and society- even those who do not send their children to school.

4.1.2 School coverage and evaluation of teachers

4.1.2.1 Primary and secondary schools' coverage

The level of school coverage depends on the region and the level of education in question. Until 2015, the goal was universal primary education (UPE), which led to the investment of most of the funds in primary school construction. It had enabled small villages like Mbokhodoff to have a primary school, whereas before, children had to walk long distances to go to school, which was an obstacle to schooling. Today, primary school coverage is considered sufficient by the PT. The problem is the lack of teachers, resulting in high teacher-pupil rations and special classes. For example, in the Kaolack region, where the children of YD attend school, there can easily be 80 pupils for one teacher. In the Kaffrine region where the PT teaches, the enrolment rate is lower and, therefore, the teacher-pupil ratios are lower too. The bigger problem in the Kaffrine region is the persistence of multigrade classes. Even though classes are trying to be organized according to primary school cycles, multigrade classes are an obstacle to quality education. In 2019, out of the 2251 classes in public primary schools, 1297 were multigrade classes, more than half (ANSD, 2019, p. 47).

In the case of secondary education, coverage is far from adequate. As secondary school development is a more recent priority of the state, there is a considerable lack of infrastructure, as evidenced by the new schools created each year. In some remote areas, to compensate for the lack of infrastructure, community members contribute and build the school themselves, as was the case in the village where the ST1 was posted. When he arrived, the middle school was, in fact, a primary school classroom. In addition to the lack of infrastructure, there is a lack of secondary school teachers, compensated for by using temporary teachers or by time reductions in the pupils' schedule. In secondary school, teachers have a certain amount of teaching time, and often there is only one teacher per subject, so they oversee the lessons for all classes. To

not overload the teacher's time, the head teacher reduces the number of lessons for pupils. It is also common for head teachers to look for help in neighboring schools. Mutual aid is a substantial value in Senegalese society; therefore, teachers like the ST1 agree to volunteer to teach in another middle school.

Private schools and universities are not exceptions to large classes. According to the UT, the fact that universities are only located in cities leads to a rural exodus of students with consequences that the government still needs to address. The management of the university is becoming increasingly complicated. Indeed, the increasing number of students leads to delays in the calendar to the point that the university now runs all year long, whereas before, it was functional nine months out of twelve. This disruption not only resulted in the exhaustion of teachers but also in taking students away from their home environment.

4.1.2.1 Evaluation of teachers

Teacher evaluation is rare and occurs only for specific purposes, such as obtaining the CAP at the primary level. At the secondary level, the head teacher evaluates teachers' performance as part of the national movement. They give them a mark out of twenty according to the teacher's performance, but there is no guarantee that this mark is given objectively. Inspectors of the AI have also assessed secondary teachers during their training at the FASTEF. Inspectors also evaluate teachers in private schools, but some temporary teachers, such as the ST2, can slip through the net because their presence in the school is limited. At the university, there is no evaluation of teachers' work. The university is hardly controlled by the public authorities, which means that the management should decide on its own to put such a mechanism in place. Nevertheless, for the moment, it is perceived as an additional burden that the teachers do not support.

The work of the inspectors is, therefore, partly the teachers' evaluation but mainly the teachers' supervision and support. The government recruit inspectors through a competitive examination to which only civil servants can apply. The training lasts four years. Then, inspectors are assigned either to the ETI or the AI, depending on the inspectorates' needs and teachers' experience. The competition is held only a few years and is very selective, resulting in a small number of inspectors. For example, in the department of Koungheul, where the PT teaches, there are only four inspectors of the ETI for all 133 public primary schools (ANSD, 2019, p.

46). The lack of inspectors mainly affects teachers in remote areas. In urban areas, supervision is more accessible and, therefore, more frequent.

4.1.3 Curriculum in formal education

4.1.3.1 National curriculum

The formal education system of Senegal is composed of preschool education, primary education, general secondary education, vocational and professional education, and higher education (MEN, 2003, 2018). Primary and general secondary education, which are the focus of this work, are organized as presented in Figure 4. In Senegal, schooling is compulsory for all children between the age of six and sixteen and is provided free of charge in public education institutions (Law No. 2004-37 of December 15, 2004). Primary schooling starts at six or seven years old. This law is complicated to enforce since many children are not in school in Senegal or leave before they turn sixteen.
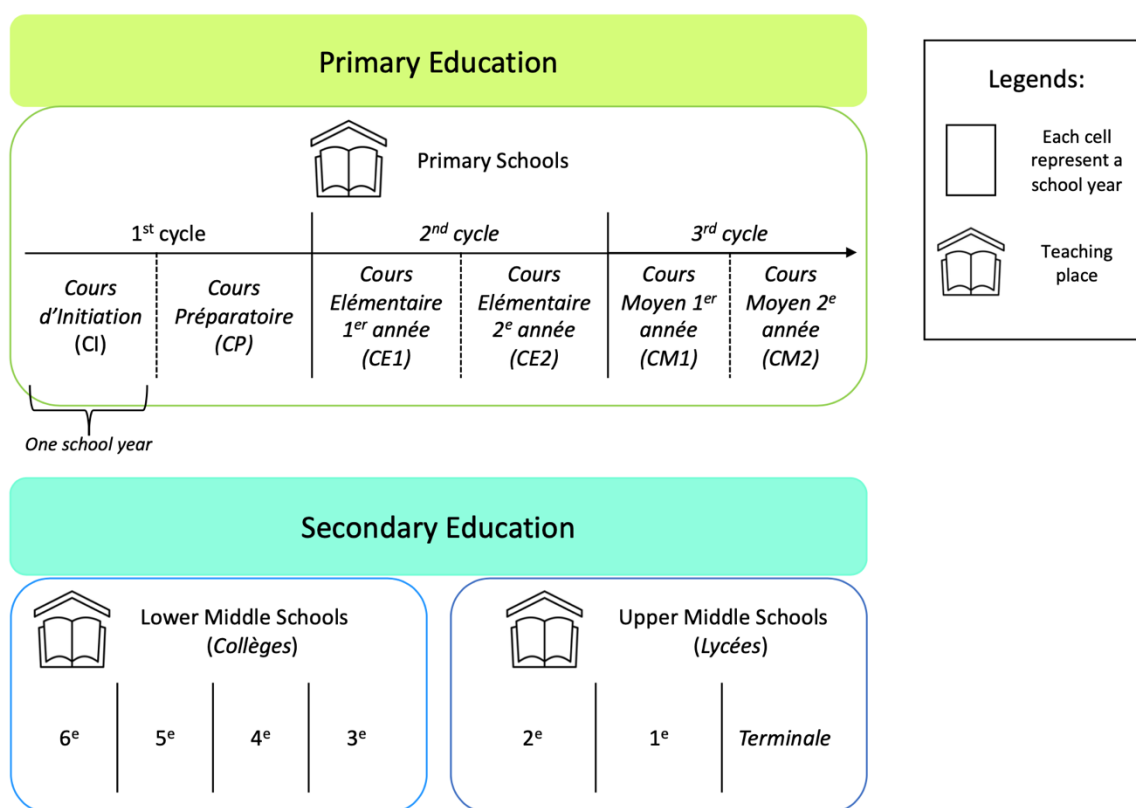

Figure 4. The organization of primary and secondary education in Senegal

In Senegal, there is a national curriculum for primary and secondary education. Referred to by teachers as "the guide", they follow it very meticulously. It has been elaborated by the Ministry

of Education and applies to the public and private schools. French is the language of instruction at all levels, materials and exams are also exclusively in French. The government produces official textbooks, but the teachers can also enrich their lessons with other textbooks.

In 2014, the curriculum has undergone reforms following the 2013 Senegalese Education Conferences (*Assises de l'Education et de la Réforme,* Dakar, 2013). The objective is to put the child's learning experience at the center of the pedagogy. Teachers should base their lessons on situations that children can experience in their daily lives. It motivates children and facilitates their learning.

Nevertheless, in the opinion of the teachers interviewed, the main problem regarding the curricula is that the program is too full. It overloads the pupils and imposes a rhythm that does not allow them to acquire solid foundations in basic learning of reading and mathematics. The PT highlighted that reading is essential because it allows for self-instruction, yet he witnessed many students in CM2, the last year of primary education, unable to read. At the secondary level, subject overload prevents children from specializing. The ST1 asserted that reducing subjects from five to three in lower secondary schools would increase the quality of learning and the skills acquired by the pupils.

4.1.3.2 Suggestions for curriculum adaptations

It was difficult for the teachers interviewed to suggest improvements or adaptations to the curriculum. The PT mentioned that religious education in the public school curriculum would effectively incentivize parents to send their children to school, especially in a highly Islamized region like Kaffrine. In addition, the UT emphasized that to include traditional knowledge in school curricula, it would be first necessary for the teachers themselves to learn this knowledge. Most teachers must leave their home environment to be trained in urban centers. Because they are cut off from their original environment, they lose the traditional knowledge they have acquired. Therefore, it would be necessary to capitalize on traditional knowledge during teacher training, but the government does not support curriculum adaptation in this direction.

The teachers also commented on learning in national languages. The PT argued that if it is well done, learning in a national language in the first cycle of primary education would facilitate reading learning but would not change anything for mathematics. In 2019, when the PT started teaching, he was involved in the *Lecture Pour Tous* (LPT) program funded by the United States

Agency for International Development (USAID) for 2016-2021. The program covered seven regions of Senegal (Diourbel, Fatick, Kaolack, Kaffrine, Louga, Matam, and Saint-Louis) and consisted of one hour of instruction per day in national languages. LPT was either in seerer, wolof, or pulaar, and dispensed in the three first years of primary schooling. He reported that, in general, the results were better when the discussion was in the national language because students participated more. They were more comfortable expressing themselves.

Nevertheless, he insisted on the importance of accompanying teachers and reinforcing their knowledge of national languages for quality teaching. Teachers are not assigned according to their origin, and many do not speak the local language of their teaching environment. Moreover, following his experienced, he argued that in the case of teaching in national languages, it would be necessary to start associating French with learning reading from the beginning because it would be too complicated to introduce French only in the second cycle.

The ST1 also supports the advantages of teaching in national languages at the secondary level. He explained that the use of the national language was done in any case when the pupils could not understand the explanations in French. If the teacher does not speak the local language, he asks the pupil who understands best to explain in his mother tongue to the rest of his classmates. He believes that introducing national languages as means of instruction, even in lower secondary education, would facilitate understanding and learning because they are more comfortable in their mother tongue and see things more simply. It would also make it easier for the teachers and help to achieve their goals. However, he thinks national languages should not replace French but coexist in the system. He argued that education is "the field of the quest for knowledge", where understanding another language is only a benefit, and it would be better to have all the necessary resources because we do not know the future destination of the learner. Therefore, the best thing is to have all the weapons required to compete internationally, according to the ST1.

4.2 School environment

The school environment refers to how the various schools have implemented national policies, what teaching methods are used, and how students are assessed. The national curriculum guides teachers to ensure all children receive the same education. However, the infrastructures and materials available vary from school to school, as will illustrate the situations in two public

schools in remote villages, a private school in Dakar, and the UCAD. The experience of teachers will also show how the teaching resources impact teaching methods and quality. The national evaluation system will finally be presented.

4.2.1 Infrastructures and materials availability

In Senegal, the development of school infrastructure is very uneven, both between types of learning places and between regions. Resources are meager and poorly distributed by the state. School is free, but most public schools still perceive inscription fees. At the secondary education level, the state sets the price of school fees to cover administrative expenses and some insurance. Some schools add a fee for a coat. ST1 points out that while the state sets fees, it does not control everything. At the primary level, disparities can also be observed in the inscription fees across the country. The registration fees collected allow schools to have a budget to buy materials and maintain infrastructures.

The PT experience challenging working conditions in Medina Ndiayene. The school has some basic infrastructure, such as toilets but no sanitary block. There is no electricity. There used to be a canteen sponsored by the International non-governmental organization World Vision that served the children daily, but the sponsorship has ended. However, this free meal motivated parents to send their children to school and ensure that they were properly fed, which is necessary for them to learn well. Other incentives to send children to school implemented are the distribution of school supplies and free schooling.

Doundé, the village where the ST1 works, is also remote, close to the border with Mali. The state has created a college in the village and assigned teachers but has not built any infrastructure. It was necessary to borrow the primary school classrooms, but this alternation was not beneficial for the children's learning. Consequently, the community contributed to building a middle school for the village in 2021. The infrastructures are very rudimentary (see pictures below). The school has no canteen or sanitary block, only toilets. Pupils are only provided with basic materials like rulers and compasses but no microscope or printer. In this school, you must pay registration fees and for your supplies. However, some students are admitted to class even though they are not registered, and it happens that teachers pay for supplies for some students. Finally, the ST1 argued that the state did not build the lower secondary school in Doundé because of a lack of resources but for political reasons. The mayor

of the neighboring village has better political relations, and the state built a college of eight classes in the village while there are only 42 students, and in Doundé, there are 108.

Figure 5. Pictures of the public middle school of Doundé (sent by ST1 in December 2022)

Regarding the availability of textbooks and their content, teachers in the public sector confirmed that the student-textbook ratios could be more satisfactory. In principle, there should be one book per child, but this is rarely the case. Each school must manage the purchase of materials such as textbooks with available funds collected through enrollment fees. The result is an unequal material distribution between the different schools. In addition, the PT argues that teachers must enrich the official textbooks and indications of the national curriculum to provide quality teaching. Several books or websites are developed by the public or private sector and adapted to the Senegalese program to do so.

Nevertheless, only civil servant teachers receive allowances for purchasing textbooks and other preparation materials for teaching. Contract teachers, who are also most of the workforce, must pay for these materials with their own money. Therefore, quality teaching relies on the teachers' motivation and resources since the state does not create a favorable environment by not making the means fully available to all teachers.

The public university also lacks resources to ensure its proper functioning. At UCAD, the infrastructure needs to be renovated and developed. The university is overcrowded. The lack of

classrooms prevents the appropriate conduct of courses. The WIFI hardly works, restricting the development of online teaching and access to numeric resources.

Only private schools do not have these infrastructure and material problems because they are fee-paying and therefore have funds. At Notre-Dame Institution in Dakar, where the ST2 is a contractual English teacher, the material is of excellent quality and in sufficient quantity. The school has all the infrastructures that ensure quality education, a canteen, a sanitary block, toilets, a library, a science laboratory, and a functional computer room. There is even a ventilation system because there are many asthmatic students. In addition, students are transported to school by private buses.

4.2.2 Pedagogy and evaluations of learners

4.2.2.1 Pedagogy and discipline in schools

The Senegalese government implemented a child-centered pedagogy focusing on skill acquisition in the 2014 reform. The goal is to motivate and empower students based on real-life situations they must exploit. The teacher thus has a guiding position rather than an authoritarian one, as in a frontal pedagogy. Nevertheless, teaching remains frontal in often overabundant classes with no material and, in all cases, is not supervised.

In the private sector, many schools use structured pedagogy to guarantee quality. It is the case of the Notre-Dame Institution of Dakar. The year's courses are divided into three terms instead of two in public schools. Teachers prepare each distribution by clarifying the objectives of each lesson and the concepts to be retained. The divisions are approved by the administration beforehand as a guarantee.

Sanctions for bad behavior are usually the student's exclusion from class or even expelled from school, temporarily or permanently. The teacher will report the problematic behavior to the headmaster, and the student's parents will be summoned. It is also possible to reduce the student's grade by 5 points. In private schools, teachers can call the parents to discuss, but the students are not expelled.

Besides, corporal punishment in school is forbidden by law. However, corporal punishment is firmly rooted in tradition and is seen as beneficial to children's education. Therefore, this law is respected, mainly in Dakar and private schools, where legal proceedings are risky. In the

bush, teachers still inflict corporal punishment on students. The PT explained that the situation of a teacher in the bush can be complicated and that it is necessary to be respected. He admitted that he resorts to corporal punishment if he feels the need.

At the University, the relationship between teachers and students is strongly hierarchical. Teachers do not answer to anyone, which gives them full rights. They do not have to justify their absence or notify the students. It is common for a teacher to send a student on personal errands for them. The hierarchical relationship is also felt in the dialogue, as teachers can demean students. Finally, teaching methods vary depending on the teacher. The teacher can project the lecture support in one class and give explanations. In another one, the teacher can dictate their lectures for students to copy.

4.2.2.2 National exams and teachers' assessment practices

In Senegal's formal education system, each level of education ends with a national examination. Figure 6 illustrates the transition between the primary, lower secondary, and upper secondary levels.
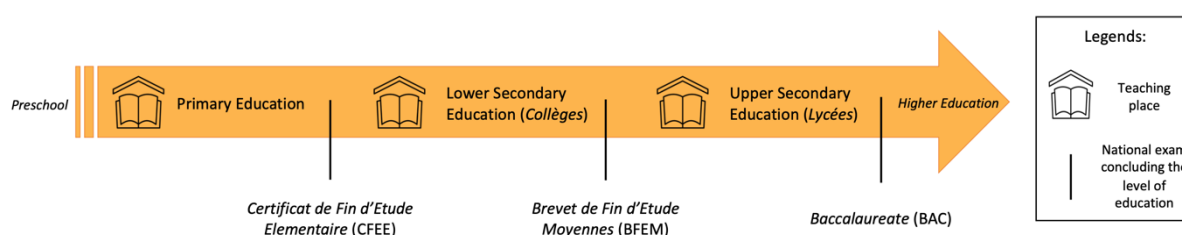

Figure 6. National exams in primary and secondary education

In primary school, there are compulsory termly assessments. The teacher creates the evaluation according to the objectives of the guide. The headteacher must then validate it. Teachers can also do daily evaluations like the PT. He gives homework every day and for every subject taught. These evaluations allow him to target the difficulties of each pupil to offer adapted remediation. The teacher forms groups according to the problems and helps the students in a targeted way. Some teachers like him take time out of school and on weekends to provide free remedial classes. There are also four hours of compulsory remediation per week in the school where the PT works, but these extra hours are not paid to the teachers. The final examen of primary school to obtain the CFEE is harmonized at the national level.

At the lower secondary level, teachers prepare at least two mid-semester assessments and an end-of-semester essay for both school year semesters. The end-of-semester paper is harmonized at the departmental level as the IA chooses the subject. When there are differences in the program's progress between schools, each will produce its essay. It is possible to discuss these elements during the cell groups organized by the teachers of the same subject in the same area. Finally, the BFEM is common to the whole country. Pupils from public and private schools must pass the same exam. There are also remedial programs at the secondary level, but they are not compulsory. The teachers offer them voluntarily during the time outside school to help students. These hours are not paid. If the curriculum is loaded, it is difficult for students to ask for remedial classes. The state does not provide anything, and the school provides the facilities. In private secondary schools, three semesters are planned per year instead of two in public schools. The ST2 explained that there is less disruption during the school year, which allows for more effective teaching time. Moreover, in private schools, assessments are made every semester, after which the parents of the students receive the report card. At the end of each term, there are two assignments. If the grades are insufficient, the teacher may decide to do a third composition if there is time, as the aim is for the students to succeed.

At the national level, harmonizing end-of-level tests, i.e., the CFEE, the BFEM, and the baccalaureate, is essential to ensure equality. They also allow for comparisons and to measure progress. However, the ST1 argued that the government only aims at success in exam rates. It led to a decrease in the level of the subjects of the compositions. The ministry also lowered the average from 10/20 to 9/20 for students to move on to the next level. Therefore, he claimed that the quality of learning has decreased because it is easier to succeed nowadays than before. The format also changed for QCM to encourage the laziness of students.

4.3 Home and community environment

The home and community environment are an essential level because they are the ones who experience the school daily. Even if the policy and school environments undeniably influence it, the parents primarily make the decision of whether to send children to school. The importance of parent's relation to the school will be demonstrated through the example of YD and the experience of teachers. Finally, the schooling decision to school has consequences for families and communities as will be explained.

4.3.1 Influences of parents' perceptions of school and abilities

The choice of schooling is the responsibility of the parents, more precisely of the head of the household. Public school is not the only place of education in Senegal, and, in some regions, such as Kaffrine, some parents are reluctant to send their children to public school because it does not reflect their values. The PT is working to raise awareness among parents to send their children to school. He says that parents are ignorant and still think that public school will alienate their children. For example, parents are afraid that their children will not know religion or that they will become "toubabs"[6]. He explains this phenomenon through the economic problems of Kaffrine, one of the poorest regions of Senegal, and the fact that most parents are illiterate.

Parental literacy is indeed a factor that enables schooling and children's performances. Nevertheless, it is not an explanatory factor since children can do well in school despite their parents being illiterate. YD, for example, has never been to school, and neither has her husband. Even though two of her sons are teachers, and another is doing a Ph.D. at UCAD. Parents can encourage their children to go to school even if they are not educated. Parental support and supervision give importance to school in children's eyes and motivate them to succeed.

The PT explained that it is necessary to involve families, especially in primary education. It is what he is doing when raising awareness in the community. By talking with the families and explaining what children learn in school, some decide to send their children to school or not let them give up. At the primary level, the decision to send children to school rests with the parents, and it is pertinent to encourage parents not to withdraw their children from school. For instance, early marriage causes many girls not to finish primary school. The PT stresses that this is a problem that requires parents' engagement.

Thus, awareness is necessary for communities and families that are out of touch with the school. There are also many situations where parents strongly encourage their child's academic success even if they "do not understand school", as YD does. She encourages her eight children to study at least until the BFEM because she has seen the changes that school brings to the living conditions of families. The family's older children had to study under the village streetlights at

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[6] Word used in Senegal to refer to white people

night, but now, thanks to their financial help, younger family members have a desk, a lamp, and even some books to study.

Finally, parents who want to be involved in the school's governance can join the Parent-Teacher Association (PTA) or the School Management Committee (SMC). The role of the SMC is to maintain the school and its surroundings and manage its budget. On his side, the president of the PTA meets regularly with the teachers to discuss the school's and teachers' needs. He then shares the information with the rest of the parents and the community. When the community feels concerned and is very involved, as is the case in the village where the ST1 teaches, dialogue can lead to significant improvements.

Private school experience confirms the benefit of parental support and literacy on pupils' performances. The ST2 supports that children in private schools perform better than children in another system because their parents are educated, they support the learning of their children, and they provide their children with all the resources necessary for their success. He explained that families are wealthy; therefore, the children from private schools are well nourished, they can be taught by a tutor if needed, and they have many books at home. They also learn to use a computer early on and often speak several languages at home.

4.3.2 The cost of schooling

In rural areas, where access to education is not as easy as in urban areas, families make sacrifices to send their children to school, as highlighted by the UT and YD. Indeed, schooling costs, including registration fees and school supplies, are an obstacle for the most vulnerable families. Some schools cover these costs to encourage schooling. Families can also put strategies in place with other members of the community. For example, a friend mentioned that when he was young, he worked in the fields of a neighboring family who paid his school fees in exchange. Sometimes these fees are covered by organizations such as churches or sponsorship programs. In any case, these costs are not negligible for families who live on their land and have very few resources.

In addition, the costs increase with the level of education. For instance, in the commune of Thiomby, where YD's children are going to school, the registration fees are 500 FCFA for primary school, 7000 FCFA for lower secondary school, and 10'000 FCFA for upper secondary school. To this must be added the price of school supplies which depends on the list made by

the teacher. For children in primary school, this can represent 2000-2500 FCFA, then 5000 to 10'000 FCFA in secondary education, according to YD. She adds that it is preferable to buy this material in the capital and to have it transported because it is less expensive than buying it directly in the bush.

Furthermore, there are other elements than financial costs to consider for families, such as the distance between school and home and the time the child will spend at school. In both cases, it is more complicated in rural than in urban areas as the role of children in the household is different. In the rural environment, children are a workforce for families. They help in the fields and at home. Parents take this into account when making schooling decisions. The PT maintains that school does not prevent children from working in the fields because they have time to do so outside school hours, as long as the school is close enough. There are also situations where the school is too far from the house. Thus, families send their children to relatives in urban areas or bigger villages. In this case, the schooling decision is a loss of workforce for the family. If children reach university, they must leave their local environment as universities are only in the largest urban areas in Senegal.

Finally, the UT asserts that schooling has a price for the community too because it creates human flows and rural exodus. Many young people leave the village to study in cities, particularly for university. It is a significant loss for the rural environment. Investments are made locally for children's education, but then the qualified workforce leave. Villages are full of elders, women, and children. Whether it is for study or work, the adult workforce has left villages for urban centers. Cities are overpopulated and insalubrious because people from rural areas do not have the means for proper lodging. The UT believes that many problems of the city come from the fact that the rural area is emptying. In addition, the UT argues that the shift in the university calendar reinforces the disconnection of university students from their home environment. Indeed, as the university now runs twelve months out of twelve, students do not have time to return to the village. In the end, the mobility of students from rural areas is a crucial issue for Senegal and yet is ignored by political instances, according to the UT.

Chapter 5. Discussion

Even though the quality of education has taken a determining place in the discourse of the national government, the funders of education, and at the international level, the children's performance in Senegal remains problematic. In 2019, the results of the Jàngandoo barometer show that only 20.3% of the children surveyed passed the reading test, 22.3% the math test, and 28.4% the general knowledge test (Cissé et al., 2021, p. 18). All children in the household, aged between nine and sixteen, are assessed by these tests. Only 68.6% of the sample attended a French public school (Cissé et al., 2021, p. 17). These assessments are designed to reflect a median level of learning calibrated to the third grade of the formal sector, i.e., CE1, when children are about nine years old (Cissé et al., 2021, p. 9). Therefore, children's performances are particularly low considering the age of the sample tested. Nevertheless, the Jàngandoo barometer highlighted encouraging progress between 2016 and 2019 as learners' performances improved by 5.6% in the reading test, 3.7% in the math test, and 7.6% in the general knowledge test (Cissé et al., 2021, p. 33). In the PAQUET (2018-2030), the government emphasized the need to improve the quality of learning, like SDG 4. Nevertheless, as demonstrated, SDG 4 is not a framework where quality education will be operationalized. We must therefore discuss if the PAQUET is a framework that can enable quality education.

This work will present different measures and opportunities to improve the quality of learning and education in Senegal based on the data analysis, the Jàngandoo barometer results, and exhaustive literature. It will also highlight the current limitations of the public education system in Senegal and discuss processes to adapt it to enhance quality education.

5.1 Measures to enhance the quality of learning

We believe it is impossible to achieve quality education without ensuring learning, as it is the process underlying education. In addition, improving the quality of learning is essential in the fight against school dropouts. Therefore, some measures that have emerged repeatedly and have a determining role in children's performance will be discussed. First, the impact of preschool education and remediation programs will be emphasized. These programs are partly operational in Senegal, but they are not systematic and institutionalized. Then, measures recommended by the teachers to improve children's understanding will be exposed. The question of the language

of instruction will be thoroughly examined due to its complexity and pertinence to facilitate learning.

5.1.1 Systematization and institutionalization of remediation programs and preschool education

5.1.1.1 Extend access to preschool education

The international community encourages the development of preschool education in SDG 4.2, highlighting the importance of preparation for primary education (UN, 2015). Nevertheless, preschool education for children aged 3 to 5 is not yet compulsory in Senegal. The government has not prioritized its development because of the high costs and left it to the private sector, making it an elitist education reserved for urban areas in Senegal (MEN, 2003). As a result, GER in preschools is rising very slowly. It was 15.2% in 2013 and increased only to 17.5% in 2017 (MEN, 2018, p. 35).

In the PAQUET, the Senegalese government projected to achieve a GER of 64.6% in preschool education by 2030 (MEN, 2018, p. 28). To tackle the existing inequality of access, the government planned to adapt the preschool offer by expanding the community model, building new infrastructures, and recruiting trained teachers (MEN, 2018, p. 38). Nevertheless, the government rarely succeeds in realizing its promising rhetoric on education (Diouf, 2019). In 2022, formal preschool education remains limited to urban areas. For example, between 2021 and 2022, two private preschools opened in the same street of a fancy neighborhood in Dakar, whereas formal preschools are extremely rare in rural areas. In addition, the PT explained that there was no specific training for preschool teachers. It is integrated into the nine months of training for primary teachers via modules and internships.

Yet, preschool education significantly improves learners' performance in reading, math, and general culture (Cissé et al., 2021; LARTES-IFAN, 2017). In 2019, children who attended formal preschool performed two to three times better than children who did not participate in preschool (Cissé et al., 2021, p. 45). For example, the success rate in reading is about 44.3% for those who attended preschool and 16.6% for others (Cissé et al., 2021, p. 46). Interestingly, attending a daara before primary school also positively affects learners' performances (Cissé et al., 2021; LARTES-IFAN, 2017). The performance gap is smaller, with learners who went to a daara having a success rate of 25.7% in reading compared to 23.4% for those who did not participate in preschool education (Cissé et al., 2021, p. 47). The success rate is not as high as

when attending a formal preschool, but religious education is more accessible. In the 2019 Jàngandoo barometer sample, 51.2% of children attended a religious school before primary school, whereas only 19.5% a formal preschool (Cissé et al., 2021, p. 46).

Overall, preschool education enhances the quality of learning but is not sufficiently accessible. The government must expand the offer, ensuring it is accessible to all (Cissé et al., 2021; LARTES-IFAN, 2017). It must also actively promote preschool education by, for instance, making it mandatory or highlighting its merits.

The number of children who attended a religious school before primary school should also be of interest to the government. Goensh (2016) suggested increasing religious schooling as pre-primary education in Senegal (Goensch, 2016, p. 181). It seems appropriate given the low coverage of formal infrastructure, the importance of religion in Senegal, and the accessibility of Koranic schools. However, the state must ensure the harmonization of the quality of learning by, for example, setting preschool education objectives and making financial means available. It should be ensured that attending a daara before primary school improves children's performance to the same level as if they were attending a formal preschool.

5.1.1.2 Remediation programs

Dropout rates are high at all education levels in Senegal, reflecting an inefficient internal system (Diagne, 2010; MEN, 2018). In 2015, dropout rates reached 11,5% in lower secondary education, and repetition rates have increased at all levels compared to previous years (MEN, 2018, p. 10). Early school leaving, meaning before completing five years of primary school, increases the risk of illiteracy (Diagne, 2010). The teachers interviewed all emphasized the responsibility of parents, especially in primary education, as a child cannot leave school without parental permission. Therefore, they play a significant role in maintaining children in school.

The Jàngandoo barometer displays poor learning achievements as the primary reason for dropping out among children of the sample who no longer attend a learning place (Cissé et al., 2021, p. 62). In 2019, 2.1% of learners in formal schools had repeated three or more times and 31.9% once in the sample assessed (Cissé et al., 2021, p. 44). Repeating a school year leads to a decrease in results and a significant loss of motivation among students, which leads to dropping out. To address the issue, the government of Senegal has eliminated repetition in the

first year of each primary school cycle and capped the maximum repetition rate at the end of each cycle at 5% (Diagne, 2010, p. 320).

Nevertheless, the causes of dropout are multiple and often involve several factors. Diagne's (2010) research on dropouts in primary education has determined that characteristics specific to the student and household are responsible for half of the dropouts. The other half is explained by external characteristics related to the educational offer, its quality, or the community environment (Diagne, 2010, p. 341). He found that there is an 86.4% chance that a boy who has never attended preschool and never owned a book during his school years, living in a non-affluent family where children no longer go to school and where no child has ever reached college, will drop out before completing primary school (Diagne, 2010, p. 332). He noted that a high teacher-student ratio, multigrade classes, or professional activity increases the chances of dropping out (Diagne, 2010). He also discovered that textbook availability reduces the probability of dropping out by 67.7% (Diagne, 2010, p. 340).

Furthermore, the Jàngandoo research team highlights the merits of remediation programs and has pleaded for their institutionalization since 2016 (Cissé et al., 2021, p. 77; LARTES-IFAN, 2017, p. 107). As explained by the PT, remediation programs allow students to target and work effectively on their shortcomings. The official curriculum calls for two afternoons per week dedicated to remediation in the classroom, but in practice, remediation is very rare (A. S. Fall, 2021). The PT also mentioned that reinforcement hours are scheduled at the school, but it is not enough. According to the PT, there is also a need for initiatives implemented by the teachers outside class time. However, they receive nothing in exchange, neither salary nor additional material means to ensure the reinforcements.

In 2018-2019, the LARTES-IFAN conducted an encouraging action research program: "Mainstreaming Continuous Assessment and Remediation in the Education System of Senegal (ERP)" in three low-performing regions (Matam, Kaffrine, and Kolda), reaching 42'423 learners (Cissé & Sene, 2020; A. S. Fall, 2021; Moussa et al., 2021). This program, involving ICT, aimed to overcome students' learning difficulties in reading and mathematics by emphasizing content related to the student's cultural universe and interactive learning methods (Cissé & Sene, 2020; A. S. Fall, 2021). Above all, the strategy adopted followed a participatory and community-based approach involving the relevant academic authorities, the local authorities, and the communities (A. S. Fall, 2021; Moussa et al., 2021). The training and

capacity-building of the various actors were central to the process because remediation practice requires specific skills (A. S. Fall, 2021; Moussa et al., 2021). Primary school directors had a central role in monitoring the effectiveness of ERP, which could be done in real-time thanks to technological tools (Moussa et al., 2021, p. 91). The tools allowed effective communication with the relevant authorities to implement improvements in the activities. They also allowed parents to monitor their children's progress and get involved in home follow-up (Moussa et al., 2021). Finally, guides and tools for evaluation and remediation were designed by LARTES and made available to all those in charge of supporting children's learning (A. S. Fall, 2021, p. 3). These guides and tools were crucial in empowering community members and parents to become involved in early learning in reading and mathematics. All these elements contributed to the program's success, resulting in 60-80% of students making progress in reading and math (A. S. Fall, 2021, p. 4). In addition, the training has equipped teachers and community remediators with essential skills and, supported by the enthusiasm of parents and students, has contributed to the gradual installation of a culture of evaluation (A. S. Fall, 2021, p. 4). These results and the recognized contribution of the program to the quality of education in Senegal should encourage the national government to institutionalize and systematize remediation at all levels of the school system to promote quality education for all (A. S. Fall, 2021; Moussa et al., 2021).

Nevertheless, there are limits to the program to address. The evaluation and remediation system developed in the ERP is based on a computer application, which requires access to the electricity network (Cissé & Sene, 2020, p. 2). This access is not guaranteed throughout Senegal. For instance, the village where the PT teaches is not connected to the electricity network. Therefore, according to Moussa et al. (2021), an offline version of tools should be developed (Moussa et al., 2021, p. 91). Cissé and Sene (2020) further argued that equal access to numerical resources is necessary for quality education (Cissé & Sene, 2020, p. 3). Besides, providing access to digital resources by equipping schools with electricity and computers is not enough. It is also necessary to train teachers, principals, and community members in using ICT to master and appropriate digital technology to offer an innovative and participatory approach to learning (Cissé & Sene, 2020; A. S. Fall, 2021). The success of ERP ultimately depends on the synergies created by the pedagogical approach and the activities proposed, as well as on the involvement of the various stakeholders (Moussa et al., 2021). The program has proven that remarkable progress can be achieved even in a short period when all relevant stakeholders are empowered and motivated.

5.1.2 Tackle comprehension issues

5.1.2.1 Curriculum reduction

Comprehension, namely identifying words and assigning meaning, is the most significant obstacle to children's success in Senegal (Cissé et al., 2021). Nevertheless, it is essential in all subjects taught in school. For example, in a math exam, one must understand the problem statement to solve it in mathematics.

The experiences of field agents must be listened to for improvements in learner performance. Curriculum reduction, for example, is a measure that all teachers have raised as beneficial to the quality of learning. This reduction in the curriculum would focus on essential reading and mathematical skills in primary school, which are currently sorely lacking in French public schools.

The results of the Jàngandoo barometer emphasized that only 24.8% of the student in the last cycle of public primary school (CM1/CM2) passed the average level reading test (Cissé et al., 2021, p. 48). When children are older and attend lower or upper secondary schools, their success rate on the reading test increases to 55.4% and 81.1%, respectively (Cissé et al., 2021, p. 48). It shows that it takes longer in Senegalese public schools to reach a minimum level of reading skills. As the PT pointed out, if a child cannot read, he will not be able to teach himself and progress. The suggestion to reduce the number of subjects taught in primary school to focus on fundamental skills would thus allow children in Senegalese public schools to acquire solid foundation on which to build their learning.

5.1.2.2 National languages as means of instruction

The problems of learners' comprehension in public schools lead us to reflect on the question of the means of instruction, particularly the language of instruction. Indeed, as Brock-Utne (2002) highlighted, languages should not hinder the acquisition of knowledge (Brock-Utne, 2002, p. 173). Language policy in a country is the state's responsibility, which decides upon the status of a language, standardization processes, and language planning (Faye, 2015; Sarr, 2017).

In Senegal, French remained the official language after independence, used for administration and education. However, it is still not the language of the population that uses various African languages in everyday life. As a result, French is a poorly mastered language, whether by

students, teachers, or trainers in the education sector (Lauwerier, 2016). Pupils have difficulty expressing themselves, making them passive in learning (Diouf, 2019). Moreover, the ST1 explained that many teachers resort to African languages in their teaching to overcome understanding difficulties. Nevertheless, this practice of teachers is counterproductive to students' performance because the learning materials and evaluations are only in French (Diouf, 2019).

The benefits of using the mother tongue in basic education have been proven and have been praised by UNESCO since the 1970s (Aikman, 2015; Brock-Utne, 2002). Even during colonization, Jean Dard, the teacher of the first French school opened to the local population in Senegal, underscored the need to resort to national languages to enable students to acquire and assimilate knowledge (Diouf, 2019; Faye, 2015). Therefore, the integration of African languages into education appears necessary for inclusive and relevant quality education and is even, according to Diouf (2019), the guarantee to achieve SDG 4 (Cissé et al., 2021; Diouf, 2019, p. 160; LARTES-IFAN, 2017; Lauwerier, 2016; Tikly, 2011).

In Senegal, the political will to integrate African languages into education has been expressed since independence. Between 1960 and 1971, six local languages[7] were codified to become national languages, a condition for their accession to means of instruction (Faye, 2015). Since then, the government and civil society have conducted many experiments using national languages in education (Diouf, 2019; Sarr, 2017). Examples include the experience of television and non-television classes between 1977 and 1984 in primary schools, the establishment of 155 bilingual classrooms in primary education across the country from 2002 to 2008, and more recently, LPT, resulting from cooperation with USAID. The LPT program was achieved in 2021 and replaced by the *Renforcement de la Lecture Initiale pour Tous* (RELIT) program for the coming five years.

Common to all these experiences is the apparent progress of the pupils, confirming the benefits of using national languages in education (Diouf, 2019, p. 151). Unfortunately, these experiences were as numerous as they were unique, as they used different national languages and methodologies each time. They were sporadic and without clearly defined follow-up and support measures, leading to their termination (Diouf, 2019). The state is especially criticized

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[7] Diola, Malinké, Pulaar, Seerer, Soniké, and Wolof.

for its lack of coordination and funding, which are necessary to successfully implement such a significant revision of the education system (Diouf, 2019). The example of Tanzania's successful implementation of Kiswahili in basic and adult education shows the importance of strong leadership and vision, which Senegalese leaders lack. According to Diouf (2019), integrating national languages into education has never been considered a priority by political leaders (Diouf, 2019, p. 148).

However, such reform is very complex to implement. It requires a well-defined policy and institutional stability, which is lacking in Senegal (Diouf, 2019). Indeed, there are many possibilities to develop multilingual education following different pedagogies (Aikman, 2015, fig. 13.2). Different teaching methodologies using national languages have been experienced in Senegal, from which it is necessary to draw inspiration for a context-relevant choice. It is essential to conceive cohabitation and define the different teaching modalities without putting aside French, whose teaching is considered crucial (Sarr, 2017).

Moreover, which national language will be taught in a plurilingual context must be decided. Nevertheless, the government did not give orientation on language choice when there are currently 19 national languages in Senegal, and this number could still increase as the law does not set a limit (Faye, 2015; Sarr, 2017). Faye (2015) emphasized the need to make language choices in the education system based on objective criteria, selected following a broad and inclusive consultation and negotiation process because it is a sensitive issue (Faye, 2015, p. 39). Indeed, symbolically it has much importance as languages are often related to ethnical identities, and the decision must not jeopardize national cohesion (Diouf, 2019; Faye, 2015). Finally, this policy must involve all levels of education to be coherent (Brock-Utne, 2002; Diouf, 2019). National languages are taught at the University as a subject in linguistics mandatory for all students of the faculty of arts. National languages are also used in preschool education. Only secondary education has been left out, as no research on integrating national languages has been conducted (Diouf, 2019). The PAQUET further not mentions national languages in secondary education, only in primary school (MEN, 2018).

One could therefore imagine several ways to integrate national languages in Senegal. It could be, as was the case in Tanzania, that the Ministry of Education and the government decide that education in primary school will be in the lingua franca of the country, which would be Wolof in Senegal. On the other hand, French will be taught in secondary schools as a language of

openness to the world (see Brock-Utne, 2002 for more details on Tanzania's case). Wolof appears to be a judicious choice since it is already widely spoken and studied in Senegal and neighboring countries (Diouf, 2019). However, a top-down process, as was done in Tanzania in 1963, might be outdated in present times. Only a participatory process can lead to national consensus involving the population, which is necessary for the success of the reform (Diouf, 2019; Faye, 2015). Faye's (2015) research confirms that there is no consensus among the population on a common national language of instruction (Faye, 2015, p. 32). Only a minor part of his sample considered Wolof as the language of instruction. His research reveals that the Senegalese are still deeply attached to their local language, which is part of their identity. Therefore, they would prefer to have their language taught.

A regional approach to the languages of instruction is also possible. Sarr (2017), for instance, recommended a progressive additive bilingual teaching between the dominant language of each region, the lingua franca Wolof, and the official language French (Sarr, 2017, p. 56). The regional language, which can be the same as the vehicular language, would be the preferred medium of instruction at the primary level. Wolof and French would be added at the secondary level without abandoning the regional language (Sarr, 2017). This possibility is particularly relevant for the link with the close environment and the community of learners, but more technical and challenging to implement.

Overall, the teachers interviewed highlighted the inadequacy of the functioning of the public education system for integrating national languages. Indeed, teachers are assigned without considering their area of origin. Consequently, they often do not speak the language of the region they teach in, such as the ST1, who is a seerrer in a peuhl environment. The PT has also identified the lack of linguistic knowledge as a limitation of the LPT program, as it was held only in three national languages with no guarantee that the teachers knew these languages. It should be noted that teacher recruitment and training pay little attention to language proficiency (Lauwerier, 2016). Therefore, intensive training is necessary for teachers to master national languages before integrating them into the educational system. The government still needs to set up a system for training teachers in national languages, given that the various programs experimented with have led to sporadic and inefficient in-service training (Diouf, 2019).

In the end, integrating national languages as a medium of instruction is a complex issue involving crucial choices at different levels. It is a reform that would lead to an overhaul of the educational system as it would require adapting the management of teachers, the teaching

materials, and the evaluations. It is also essential for the government to actively promote the national languages to ensure their successful integration and overcome the barriers that may exist. Therefore, a strong political will is needed for such a significant change. However, none of the Senegalese governments have made this a priority. In the PAQUET, the government mentions instruction in the national languages as various levels of education but does not develop any strategy to implement it. The government seems attached to French as an official language because it does not actively promote national languages. Even after colonization, the French language continued to be associated with social promotion, economic development, and opportunities in Senegal (Diouf, 2019; Faye, 2015). Mundy & Manion (2015) argued that "education is deeply implicated in neocolonial relations"(Mundy & Manion, 2015, p. 51). Thus, it is critical to decolonize the languages of instruction to develop schools that emanate and reflect African societies.

5.2 Disparities affecting the quality of learning and education

Quality education implies equitable and inclusive access to learning. The PAQUET and SDG 4 have stressed it, yet the government is slowly taking action to reduce disparities in the public education system. As Niang (2014) has established, many of these disparities result from Senegal's education policy in the 2000s. The disparities are mainly geographical. There are substantial inequalities in learners' performance between urban and rural areas and between the regions of Senegal. Several sources of these inequalities will be pointed out to inform the debate on quality education in Senegal. Other disparities in the learning performances of learners identified are related to the learning place attended and the living conditions of households. These elements influence the quality of learning and education and must be considered in policy formulation. The government must act to reduce these disparities to ensure quality education for all.

5.2.1 Geographic disparities

5.2.1.1 Urban-rural disparities

Senegal is a country in transition, where rural areas are evolving, and urban areas are expanding and attracting more and more people. According to the UT, rural and urban areas are mainly characterized by different organizations of society and activities closely related to the available

resources in the environment. These spaces are not static, and there is a high degree of mobility between environments, especially for education and working. Indeed, there are few economic opportunities in rural areas, and higher education infrastructures can only be found in urban areas.

Regarding schooling in 2019, most learners (51%) lived in rural areas, while the others were equally divided between Dakar and other urban areas (Cissé et al., 2021, p. 34). The problem is that children's performances depend on their home environment since learners from urban areas perform significantly better in the Jàngandoo assessment. For instance, 40.9% of learners in Dakar passed the median reading test compared to 25.2% in other urban areas and 11.2% in rural areas (Cissé et al., 2021, p. 34). These differences in performance between urban and rural areas can be explained, among other things, by inequalities in infrastructure and materials, which mean that large and special classes (multigrade or double-shift classes) are more common in rural areas. Teachers' working conditions are generally harsher in rural than urban areas, and their supervision by inspectors is lessened because of the long distances and the lack of resources at the ETI. Niang (2015) also researched the effective schooling time in primary schools in Senegal and showed that, especially in rural areas, the pedagogical calendar is disrupted by many elements that ultimately reduce the time allocated to learning processes (Niang, 2015). For instance, the school year ends earlier because of the arrival of the rainy season and the intensification of fieldwork, where children are a precious help to families (Niang, 2015). The school year might also start later because children must clean and fix the school (Niang, 2014, 2015).

In addition, living in a rural area increases the risk of never frequenting a learning place, particularly a formal school, because of the lack of infrastructure and socio-economic dynamics specific to rural areas (Cissé & Fall, 2022, pp. 74, 76). It also leads to delays in school entry, given that a 7-year-old child has an 83% chance of entering formal school in urban areas, while this proportion drops to 55% for children in rural areas (Cissé & Fall, 2022, p. 78).

5.2.1.2 Regional disparities

Senegal is divided into fourteen regions with highly variable population sizes and densities. The Jàngandoo barometer has highlighted substantial regional disparities in children's learning performances (Cissé et al., 2021; LARTES-IFAN, 2015, 2017). At each Jàngandoo assessment,

the Dakar region performed the best in reading, mathematics, and general knowledge (Cissé et al., 2021; LARTES-IFAN, 2015, 2017). The map below illustrates regional differences in reading test performances in 2016 (Figure 7). Overall, the performances are low. This map highlighting the structural inequalities of the Senegalese education system, with certain regions such as Dakar concentrating educational resources to the detriment of other regions that accumulate disadvantages (Cissé & Fall, 2022, p. 70).
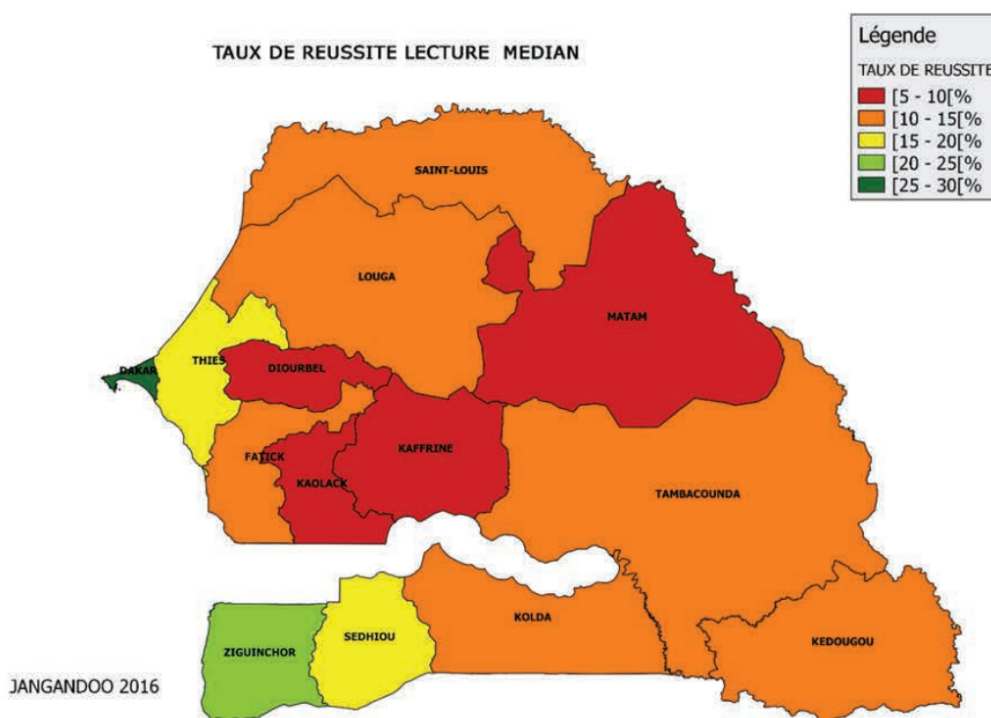
Figure 7. Map of Senegal showing the median level lecture test success rate by region (source: LARTES-IFAN, 2017, p.40)

Between 2016 and 2019, children's reading, math, and general knowledge performances increased in Senegal. Results have improved, especially in the regions with the lowest performance (Cissé et al., 2021; LARTES-IFAN, 2017). It can be explained by the fact that many educative programs targeted these regions for experiments.

The focus will be on reading and math scores because the differences in performance are more significant than on the general culture test, where overall, the children perform similarly. In the Kaffrine region, the average score on the reading test improved by 8.2 points and on the mathematics test by 12.6 points (see appendix 9 for calculations). In the Matam region, colossal progress has been made, with an increase of 11.5 points in reading and 10.8 points in mathematics. In Dakar, results improved to a lesser extent: +4.7 points in reading and +4.1 in math.

Nevertheless, even if the gap between regions has narrowed, it remains a problem and reduces very slowly. Indeed, the gap in scores between the two most extreme regions on the reading test was 17.7 points in 2016 and 14.3 in 2019, representing a decrease in the gap of only 3.4 points. For the math test, the gap narrowed by 4.1 points between 2016 and 2019 and by 2 points for the general knowledge test.

Finally, disparities in the quality of learning are very marked, depending on the children's areas of residence and the region of residence. It appears pertinent to recall here that the Jàngandoo barometer evaluates all children in the households, from 9 to 16 years old, whether they have ever attended a learning place or not. Therefore, this approach allows for identifying which children are not attending any place of learning. Interestingly, the phenomenon of exclusion from school has the same regional disparities due to structural inequalities. As the quality of a system is appreciated as a whole, the Senegalese government must address the structural inequalities in the educational system to include left-out children and ensure quality education for all.

5.2.2 Influence of the learning place and parental support and literacy on children's performances

5.2.2.1 Influence of the learning place and living conditions

Various learning places in Senegal influence the learners' performances. Figure 8 illustrates the significant differences in performance between the various schools, with private schools standing out. Most learners attend French public schools (68.9% of the sample), and daaras are in second place (Cissé et al., 2021, p. 43). French private schools come in third place, attracting 10.5% of learners (Cissé et al., 2021, p. 43). Private schools are located only in urban areas, mainly in Dakar. They are generally responsible for higher performances in Dakar than other regions (Cissé et al., 2021; MEN, 2018).

The ST2 argued that children in private schools performed better because they are better supervised, thanks to higher financial means. He explained that children attending private schools are from wealthy families and have an enabling learning environment at school and home. They are exposed to information and communication technologies (ICT) at an early age, they have libraries at home, and their parents are often highly educated. These factors contribute

to quality education. Moreover, private schools benefit from better management of school time and resources, making them enabling learning environments for children.
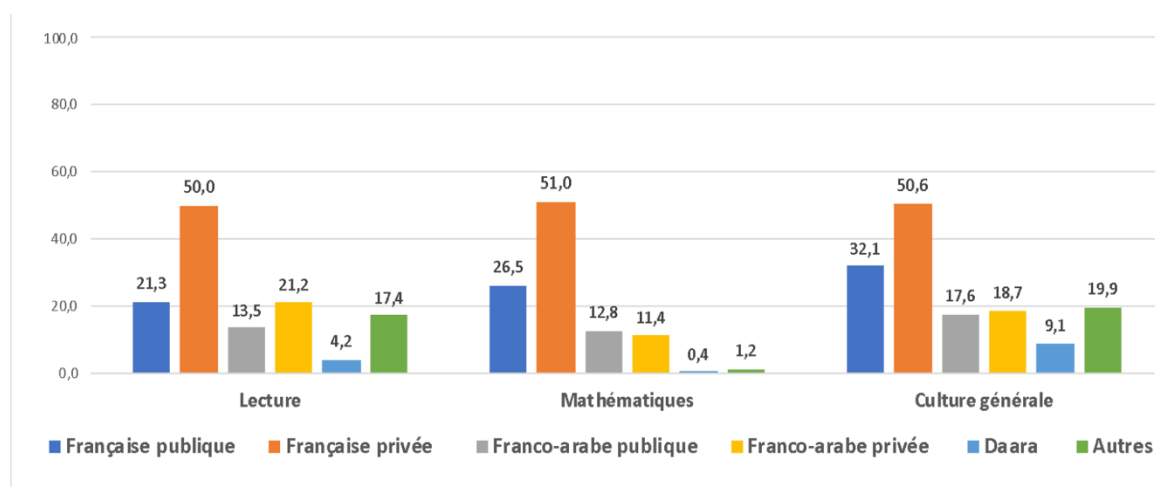
Figure 8. Children's performance by type of learning place attended (%) (source: Cissé et al., 2021, p.44)

Household living conditions thus impact student performance (Cissé et al., 2021; LARTES-IFAN, 2015, 2017). In 2019, the results of learners from high living conditions were two to three times higher than those from low living conditions in all three subjects (Cissé et al., 2021, p. 38). Furthermore, having the means allows appointing a tutor, which on average, doubles the learners' performances (Cissé et al., 2021, p. 52). Nevertheless, Jàngandoo 2019 highlighted that "learner performance is not strictly increasing as a function of household education spending per child" (Cissé et al., 2021, p. 54). The motivation of children is also determinant in their performances. Conversely, children from poor households have limited access to schooling (Goensch, 2016; Kuenzi, 2018). Sometimes, families cannot send their children to public school, supposedly free, because they lack the financial resources to pay for fees and materials. Niang (2015) pointed out that poverty in some areas of the country leads to delays at the start of the school year because children do not have the necessary materials to begin (Niang, 2015, p. 140).

In the end, in Senegal, money allows consuming better-quality education. However, the curriculum is the same in French public and private schools, which may explain why some pupils fail despite a favorable learning environment in school and at home.

Children's performance in private schools underscores the importance of parental home follow-up and parental literacy. These elements had already appeared before, notably with the example of YD, which demonstrated that parental support is crucial for children's participation and success in school. The Jàngandoo assessment confirms the positive influence of parental support and follow-up on their children's performances (Cissé et al., 2021; LARTES-IFAN, 2015, 2017). All cases mention the parents' school follow-up, but any household member may do it. It could be a brother or sister, an aunt or an uncle, or someone else.

In Senegal, school follow-up is not yet widespread. In 2016, 23.9% of children in school were not followed-up by a household member (LARTES-IFAN, 2017, p. 66). In 2019, the percentage reduced to 22,5% (Cissé et al., 2021, p. 50). Home follow-up is progressing very slowly. Therefore, the government must invest resources in outreach work with parents and the community to involve them more in school follow-up.

Interestingly, when mothers oversee home follow-up, learners perform better in reading, math, and general knowledge. Children attended by their fathers perform similarly to children who are not followed (Cissé et al., 2021, p. 51; LARTES-IFAN, 2017, p. 66). Unfortunately, in 2019, the father provided home follow-up for learners in 30.7% of the cases and the mother in 13.9% (Cissé et al., 2021, p. 50). This information is to consider when developing awareness-raising campaigns to make them as effective as possible.

The Jàngandoo Barometer also highlighted the importance of the education level of the person in charge of the learner's home follow-up and the head of the household, as it may not be the same person. In both cases, the higher the education level, the better the learner's performance. For instance, if the head of the household attended tertiary education, learners perform 2.2 times better than those from a household where the head attended primary school (Cissé et al., 2021, p. 36). Similarly, only students who were home followed up by someone who had attended higher education passed the assessment in 2019. They passed the reading test at 51%, the math test at 54%, and the general knowledge test at 54.9%, whereas learners with no home follow-up at 15.6%, 20.5%, and 26.4%, respectively (Cissé et al., 2021, p. 52).

However, the level of education of the learner's home follow-up is not a determining factor. When a person with no education follows learners, their performances are equivalent to those of learners who are followed by someone with a low level of education, i.e., who has attended

a literacy class or elementary school (Cissé et al., 2021, p. 52; LARTES-IFAN, 2017, p. 68). Recalling YD's example, parental literacy should not limit parental support. Even uneducated parents can contribute to improving learners' performances. It is essential to draw attention to this fact to mainstream the follow-up of learners at home.

5.3 Processes underlying quality education

Measures to improve the quality of learning must be accompanied by underlying processes to be efficient and contribute to quality education. The two critical elements identified are curriculum revision and the role of teachers. The above measures imply changes in the national curriculum or its complete revision with measures such as including national languages in education. This process must be done inclusively so that the changes bring more relevance to the public education system. It is also an opportunity to include meaningful values for learners and their communities to encourage schooling. Finally, it will discuss how to strengthen teachers' fundamental role in providing quality education and be actors of change.

5.3.1 A renewed curriculum for more relevance

5.3.1.1 Inclusive formulation process

In the social justice perspective developed by Tikly & Barrett (2011), quality education is inclusive, relevant, and democratic. Relevance happens when the learning outcomes of the educational systems are meaningful and valuable for the learners, their communities, and national development (Tikly & Barrett, 2011, p. 3). In this approach, participation in the definitions of learning outcomes and content of education, and more generally in all decisions regarding the education system, must be inclusive and democratic (Tikly & Barrett, 2011).

In the case of Senegal, active dialogue between schools and communities has already allowed for significant improvements in the schooling conditions of the students, notably in Doundé, where ST1 teaches. In Doundé, the Parent-Teacher Association (PTA) organizes regular meetings where teachers express the students and teachers' needs. The PTA then reports the grievances to the village mayors and other community members. As a result, community members funded the construction of the secondary school. This situation is not necessarily representative of all of Senegal. In Medina Ndiayene, where the PT is, or in Mbokhodoff, where YD lives, the communities are hardly involved in school governance.

The formulation of education policies and the national curriculum are competencies of the Ministry of Education. It is influenced by international cooperation but limits the participation of teachers or other education stakeholders (Lauwerier, 2016). Educational policies are, therefore, the result of a top-down formulation process, including little knowledge and experience of the operational difficulties (Lauwerier, 2016). It results in an education that is disconnected from the population. The lack of interest was one of the main reasons for not attending school or dropping out in 2016, accounting for 17,4% and 13,4% of the sample, respectively (LARTES-IFAN, 2017, p. 82). Therefore, to increase the relevance of the education system, the government should revise the formulation processes of education policies and content to include communities, among others.

Moreover, to reach quality education, as stated in the PAQUET, the government must take an active role in promoting and accompanying the measures it puts in place. For example, Diouf (2019) blamed the government for the lack of information and sensitization plans for the population, especially parents, in initiatives such as integrating national languages into formal education (Diouf, 2019). A process of dialogue and consultation between government and stakeholders in education is necessary to formulate policies leading to quality education.

5.3.1.2 Inclusion on meaningful values

In any case, relevant education in SSA must be accompanied by the decolonization of the curriculum. The thinking behind the decolonization of education is the same as the one behind projects of Africanization of education after independence. The curriculums and means of instruction must emanate from African societies. In addition, school is not only a place to transmit knowledge but also values. This function of school has been set aside in many systems because it cannot be evaluated.

Nevertheless, decolonization of the school requires the respect of traditional values to reconcile the communities with the school. Traditional education has the potential to bridge the gap between the school and the community while including relevant values, as the main objectives of traditional education are the formation of character and the acquisition of moral qualities valued in one's community (Moumouni, 1998). Traditional education is highly context-dependent and organized within the community and the family. The community has a role as an educator, where every member plays a role in the education, especially the elders, who are often referred to as libraries for their vast knowledge and entitled to transmit it (Brock-Utne,

2002). The acquisition of knowledge is stimulated through learning-by doing and covers a wide variety of subjects that are practical and relevant to the community's needs. Therefore, the community is also an end in itself because someone successfully educated is helpful to the community and contributes to its well-being (Woolman, 2001). In addition, Guth (1990) emphasized that oral transmission of knowledge through storytelling, riddles, and proverbs allowed for learning language, writing, grammar, and spelling (Guth, 1990, p. 91). The use of teaching methods from traditional education, in the early years of education, for example, appears to be very positive for strengthening the relevance of education and links with the community.

In the case of Senegal, religious education also plays a fundamental role in transmitting values and holds significant importance for the Senegalese population. The PT assured that including religion, particularly its values, in public schools would be a way to change the school's image in some parents' eyes and, consequently, increase enrollment and attendance. The secularity of the public school has remained since colonization, yet Senegal is a highly religious country. Religious education is traditionally provided in Koranic schools (daaras) and has always coexisted with formal education in Senegal (Goensch, 2016; Kuenzi, 2018). Religious institutions and communities have been recognized by the 1963 Constitution as a means of education, although it is not overlooked by the government (Revised Constitution of 2001, article 22).

The importance of daaras is undeniable in Senegal since they are the second most frequented place of learning in Senegal after public school (Cissé et al., 2021, p. 42). Religiosity is often seen as a barrier to formal schooling, as if religiously educated people do not trust the government's education (Kuenzi, 2018). However, the Jàngandoo barometer highlighted that the main reason for not attending a place of learning is the lack of infrastructure nearby (LARTES-IFAN, 2017, p. 81). Goensch's research on the determinants of school type choice in the Saint-Louis region in Senegal further showed that a religiously educated head of the household is strongly related to enrollment in both school types, as formal schooling is considered a valuable complement to religious education (Goensch, 2016, p. 169). These two types of systems thus coexist, and even if they are separate, it is common for children to attend formal and koranic schools simultaneously when possible (Goensch, 2016).

Consequently, as Goensch (2016) has pointed out, there is a need to include Koranic schools in discussions around universal primary education and its quality. For the moment, the quality of

learning is problematic in these structures as only 4.2% of children who attend daaras passed the reading test, 0.4% the mathematic test, and 9.1% the general knowledge test in the Jàngandoo assessment of 2019 (Cissé et al., 2021, p. 44). The government has undertaken a project to modernize the daaras to improve the quality of learning and include math in the curriculum. The government also needs to find ways to include religious education and enhance the compatibility of the two systems to ensure quality education for all in Senegal. Goensch (2016), for example, mentioned the idea of children attending formal education in the morning and religious education in the afternoon within the same infrastructure.

5.3.2 Teachers' training and empowerment

5.3.2.1 Initial and in-service training

Initial teacher education and training significantly impact students' performances (Lauwerier, 2016; Odukoya, 2010; Tikly, 2011). However, when it came to achieving universal primary education, the initial training of teachers was reduced to overcome the teacher shortage. This strategy, which has disastrous effects on the quality of learning, has been encouraged by international institutions such as the World Bank (Barro, 2017; Brock-Utne, 2002). Senegal was one of the countries most affected by the decrease in primary teacher education and training (Lauwerier, 2016, p. 791). As a result, it is generally observed that primary school teachers in Senegal have an insufficient academic and pedagogical level (Lauwerier, 2016; Niang, 2014, p. 248). Even if the level of recruitment was raised to the baccalaureate in 2012, Senegal's primary education system has been overloaded with teachers who lack skill, as in 2013, 54% of primary teachers had only the BFEM level (Barro, 2017, p. 166; Niang, 2014, p. 247).

Moreover, the initial training of primary teachers is too rudimentary to take ownership of the teaching methods and adapt them to the pupils' environment, as required by the competency-based approach (CBA) adopted by the government in 2014 (Lauwerier, 2016). CBA is defined by Lauwerier & Akkari (2019) as "the set of orientations and measures taken by educational policies in West Africa aimed at reforming teaching and learning by giving primacy to the student's activity and knowledge constructed in relation to his or her socio-cultural context" (Lauwerier & Akkari, 2019, p. 7-my translation). Even if this approach can improve pupils' motivation and, thus, their learning abilities, it was designed in an exogenous context and implemented in a top-down process (Lauwerier & Akkari, 2013, 2019). Teachers were not

given the ability to use this approach properly and adapt it to the Senegalese context (Lauwerier & Akkari, 2019). Indeed, primary teacher training lasts only nine months. It is supposed to reinforce the knowledge and skills of aspiring teachers, but according to the PT recruited in 2018, it is insufficient because it is too short.

In addition, CBA, mainly supported by international organizations, values skills that ultimately correspond to the job market and employability (Lauwerier & Akkari, 2013). Therefore, this approach, like the human capital approach, is not consistent with the fact that there is very little job supply in Senegal, especially for graduates (Barro, 2017; Diouf, 2019). Opportunities for wage labor are rare, as evidenced by many applications for all state recruitment competitions. It appears necessary to question these exogenous approaches to turn to pedagogies more consistent with the African development context and the reality of multilingual and multicultural societies.

The training of secondary teachers is very different from that of primary teachers because they are not trained to become generalists but specialized teachers. Thus, the training is mainly focused on the subjects that will be taught. The ST1 has a great deal of respect for the training he received. However, he complained about the lack of secondary teachers, which overloads teachers in service and force the government to assign unqualified teachers.

In the PAQUET, the government planned to expand secondary education to achieve 95% GER by 2030 (MEN, 2018, p. 46). In 2015, the GER was 59.9% in the lower secondary level and 33.2% in the upper secondary (MEN, 2018, pp. 46, 49). To increase GERs, the government wants to focus on employability-related fields such as sciences and vocational training (MEN, 2018). They intended to build infrastructures, provide schools with laboratories and computer rooms, and increase the recruitment and training of teachers in scientific subjects, among other relevant measures (MEN, 2018). Unfortunately, what is happening in 2022 is far from the strategies described in the PAQUET. Despite the shortage of science subject teachers, only 85 applicants out of approximately 2,000 participants were admitted to the training in 2018. Resources are also poorly allocated, recalling the building of a secondary school in the village where there are 45 students instead of the one with 108 students (ST1).

Finally, the initial training of primary and secondary teachers is completed by in-service training, held in the form of pedagogical animation cells in Senegal. At the primary level, they are organized monthly by inspectors of the ETI to compensate for the shortcomings of initial

training. Nevertheless, the PT explained that they were generally used to help novice teachers prepare their lessons and discuss topics to prepare for the CAP examinations. As teachers are required to follow the national curriculum closely, these sessions mainly reinforce the teachers' knowledge of the subjects taught (Lauwerier, 2016). The PT also mentioned that they were generally very short and animated only by teachers' questions. Therefore, the sessions are too superficial and do not focus on the relevance of teaching to be an effective means to complete the insufficient initial training (Lauwerier, 2016, p. 798). At the secondary level, the IA or IEF does not supervise in-service training. Therefore, it is almost inexistent. According to the ST1, the teachers are too overwhelmed to organize or participate in in-service training.

Overall, adequately trained teachers are necessary for all measures implemented in the education systems. The introduction of the CBA in 2014, or the experiences with the national languages previously mentioned, show that changes in teacher training are necessary for the effects of measures to improve quality education to be effective.

5.3.2.2 Teachers as agent of change

Qualified teachers do not automatically lead to quality education as other factors influence the quality of teaching, notably motivation. There are various ways to increase or trigger teacher motivation, such as a good salary, professional development opportunities, or a quality work environment. The perception of teachers by the population and the government also affects their motivation.

In Senegal, the government does not provide in-service training for teachers that allows acquiring new skills. Findings of the EdQual research team yet shows that "where teachers and headteachers have been empowered to identify and act on issues of quality through forms of professional development, they have been motivated to do so" (Tikly, 2011, p. 13). The efforts and investments made by the teachers' interview for the success of their pupils indicate that this may be true for Senegalese teachers too. Most Senegalese teachers find their motivation in the prestige and social recognition of the position. Teaching is a vocation for them and a way to contribute to national development, which is why many teachers are highly motivated to provide quality education to their students. Therefore, the government should offer teachers professional development opportunities, particularly to act on localized issues of quality education.

Moreover, the state poorly manages public schools, resulting in challenging working conditions for teachers, especially in rural areas. Indeed, schools lack basic infrastructure, and teachers have minimal material resources for large classes. The government has invested significant efforts to ensure the availability of reading and math textbook for pupils in public schools, reaching a coverage of 97.4% in 2019 (Cissé et al., 2021, p. 73). By contrast, the availability of functional computer rooms decreased between 2016 and 2019 from 17.3% to 12.1%, despite the desire to increase the use of ICT in the PAQUET (Cissé et al., 2021, p. 75). The private sector has shown that it is possible to overcome the lack of teacher qualifications through more effective personnel management and favorable working conditions. The government must then continue and reinforce its efforts to create enabling working environments for teachers in the public sector.

It further involves changes in the management of the teaching force. The teaching profession has become increasingly precarious due to the cuts in public spending imposed by the SAPs (Barro, 2017; Lauwerier & Akkari, 2019). The introduction of PVE and contractual teachers significantly devalued the teaching profession since recruitment was easily accessible and salary conditions were reduced (Niang, 2014). In addition, teachers' integration is subject to many administrative hindrances, causing strikes and disrupting the school calendar. According to the teachers interviewed, delays are government strategies to save money. The relationship between teachers and the state could be improved, leading to a source of motivation instead of strikes.

Ultimately, it takes a combination of conditions to become agents of change contributing to quality education. The government must provide the right tools for teachers to deliver relevant and contextualized education, as well as an enabling working environment where the public system is strengthened by increased coordination at all levels and the implication of all stakeholders in education.

Conclusion

This work has overwide the quality of education in Senegal and the prospects for its achievement in the current national education program. Some measures and processes fostering quality education have been identified in the local context thanks to interviews with education stakeholders, the recommendations provided by Jàngandoo, and the framework for understanding quality education in Africa (Figure 2). There were discussed considering the reality of the systems described by the interviewees, the strategies and priorities of the national government exposed in the PAQUET (2018-2030), and extensive literature.

First, measures already tested to improve the quality of learning were discussed. The benefits of the systematization and institutionalization of remediations programs and preschool education on pupils' performances were exposed to highlight the need to take action to expand their coverage. The positive effects of focusing on fundamental skills such as reading by reducing the curriculum and adjusting the means of instruction were also discussed. The integration of national languages in education retained great attention due to the issue's complexity and relevance.

Then, processes supporting quality education were presented. The necessity of a curriculum relevant to the learners and their communities for quality education was emphasized. It would involve a change in the formulation of education policies and decision-making to include other stakeholders in education since it is very centralized now. It could also be an opportunity to reconnect or reinforce the links with the community by including traditional and religious education. Overall, the training and empowerment of teachers are essential in all measures related to quality education as they are the preferred intermediary with pupils.

Core inequalities in the formal education of Senegal were also featured because they undermine quality education. To rightly fulfill its responsibility, the state must ensure equal quality education throughout the country. Education policymakers also need to consider the influence of external factors on children's performances to target children facing difficulties and propose adapted programs.

In the end, concretizing these measures and processes depends on a clear vision for a holistic and deep reform of the Senegalese education system. Measures must be implemented following a comprehensive approach to be effective, as quality education results from the interaction of the policy, school, and home/community environments (Figure 1). This systemic reform also

entails from the government a better redistribution of financial resources over the regions. Resources to provide quality education are apparently lacking, but if considering the budget for education of the Senegalese government compared with neighboring countries, the situation in Senegal should be better. Therefore, the main issue with financial resources is not a shortage but instead their poor distribution.

Further research on quality education in Senegal should focus on non-formal and informal education systems to include them in the debate. They hold an important place in the Senegalese educational landscape and allow to reach the most excluded and vulnerable children, youth, and adults. Similarly, research on the implications of alternative educations, such as indigenous learning, to transform education and foster sustainable development should be integrated into the global reflection on education and its future (see for instance Griffiths, 2021; Kopnina, 2020). Finally, to push the reflection further, we suggest to consider post-development theories and thinkers, such as Ivan Illich, to deconstruct the basis of our understanding of the education system and the school (see Barrón Pastor, 2015 for an outline).

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Appendix 1. The six Education for All Goals

Retrieved from: UNESCO. (2000). *The Dakar Framework for Action: Education for All: Meeting our collective commitments (including six regional frameworks for action)*. https://unesdoc.unesco.org/ark:/48223/pf0000121147

Goal 1. Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children

Goal 2. Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality

Goal 3. Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes

Goal 4. Achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults

Goal 5. Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality

Goal 6. Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills

Appendix 2. The Millennium Development Goals

Retrieved from: https://www.un.org/millenniumgoals/ (14.11.22)

Goal 1. Eradicate extreme poverty and hunger

- Target 1.A. Halve, between 1990 and 2015, the proportion of people whose income is less than $1.25 a day
- Target 1.B. Achieve full and productive employment and decent work for all, including women and young people
- Target 1.C. Halve, between 1990 and 2015, the proportion of people who suffer from hunger

Goal 2. Achieve universal primary education

- Target 2.A. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

Goal 3. Promote gender equality and empower women

- Target 3.A. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015

Goal 4. Reduce child mortality

- Target 4.A. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

Goal 5. Improve maternal health

- Target 5.A. Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio
- Target 5.B. Achieve, by 2015, universal access to reproductive health

Goal 6. Combat HIV/AIDS, malaria and other diseases

- Target 6.A. Have halted by 2015 and begun to reserve spread of HIV/AIDS
- Target 6.B. Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it
- Target 6.C. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

Goal 7. Ensure environmental sustainability

- Target 7.A. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources

- Target 7.B. Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss

- Target 7.C. By 2015, halve the proportion of people without sustainable access to safe drinking water and basic sanitation

- Target 7.D. Achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers

Goal 8. Develop a global partnership for development

- Target 8.A. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system

- Target 8.B. Address the special needs of least developed countries

- Target 8.C. Address the special needs of landlocked developing countries and small island developing States

- Target 8.D. Deal comprehensively with the debt problems of developing countries

- Target 8.E. In cooperation with pharmaceutical companies, provide access to affordable essential medicines in developing countries

- Target 8.F. In cooperation with the private sector, make available benefits of new technologies, especially information and communications

Appendix 3. The 17 Sustainable Development Goals

Retrieved from: https://sdgs.un.org/goals (14.11.22)

Goal 1.   End poverty in all its forms everywhere

Goal 2.   End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 3.   Ensure healthy lives and promote well-being for all at all ages

Goal 4.   Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 5.   Achieve gender equality and empower all women and girls

Goal 6.   Ensure availability and sustainable management of water and sanitations for all

Goal 7.   Ensure access to affordable, reliable, sustainable and modern energy for all

Goal 8.   Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 9.   Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10.   Reduce inequality within and among countries

Goal 11.   Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12.   Ensure sustainable consumption and production patterns

Goal 13.   Take urgent action to combat climate change and its impacts

Goal 14.   Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15.   Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16.   Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 17.   Strengthen the means of implementation and revitalize the global partnership for sustainable development

Appendix 4. SDG 4: targets and indicators

Retrieved from: https://sdgs.un.org/goals/goal4 (14.11.22)

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
- Indicator 4.1.1: Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex
- Indicator 4.1.2: Completion rate (primary education, lower secondary education, upper secondary education)

Target 4.2: By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
- Indicator 4.2.1: Proportion of children aged 24–59 months who are developmentally on track in health, learning and psychosocial well-being, by sex
- Indicator 4.2.2: Participation rate in organized learning (one year before the official primary entry age), by sex

Target 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
- Indicator 4.3.1: Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex

Target 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- Indicator 4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill

Target 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
- Indicator 4.5.1: Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated

Target 4.6: By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

- Indicator 4.6.1: Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex

Target 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
- Indicator 4.7.1: Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment

Target 4.a: Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all
- Indicator 4.a.1: Proportion of schools offering basic services, by type of service

Target 4.b: By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries
- Indicator 4.b.1: Volume of official development assistance flows for scholarships by sector and type of study

Target 4.c: By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States
- Indicator 4.c.1: Proportion of teachers with the minimum required qualifications, by education level

Appendix 5. The formal education system in Senegal

Retrieved from: https://www.education.sn/fr/basic-page/3 (14.11.22)

In Senegal, the law No. 2004-37 of December 15, 2004, makes schooling compulsory for all children of both sexes between the ages of six and sixteen. This compulsory schooling, according to the law, is provided free of charge in public educational institutions.

This law concerns formal public education which is delivered in several levels and types of education as follows:
- Preschool (education préscolaire)
- Primary education (enseignement élémentaire)
- Lower and Upper secondary education (enseignement moyen et secondaire général)
- Vocational training (enseignement technique et formation professionnelle)
- Higher education (ensiegnement supérieur)

In addition to formal public schooling, a private educational offer has been largely developed.

Our focus in the present research is on primary education as well as lower and upper secondary formal education, that we will detail.

Primary education is intended for children aged between 7 and 12 years old; children who have attended preschool may enter at 6 years old. The objective of primary education is to provide basic skills as outlined in the basic education curriculum. Primary education is organized as follows:
- 1st cycle : CI (cours d'initiation) + CP (cours préparatoire)
- 2nd cycle : CE1 (cours élémentaire 1e année) + CE2 (cours élémentaire 2e année)
- 3rd cycle : CM1 (cours moyen 1e année) + CM2 (cours moyen 2e année)

At the end of the primary school, pupils are required to pass the elementary school leaving certificate (CFEE: certificat de fin d'étude élémentaire).

It is then the middle school that children who have obtained their CFEE attend. Lower secondary education is a four-year program that runs from grade 6 to grade 3 (6e > 5e > 4e > 3e).

In principle, lower secondary education is a separate institution, called *le collège* in French. However, in Senegal, especially in rural areas, it is common for the middle and high schools to be one in the same building or for the middle school to be mixed with the primary school.

The end of lower secondary school is sanctioned by the BFEM exam (brevet de fin d'étude moyennes).

Finally, secondary education ends with high school, called *le lycée* in French. Upper secondary education lasts 3 years (2e > 1e > Terminale). The final evaluation of secondary school is the baccalaureate.

Appendix 6. Jàngandoo test 2014

Retrieved from: LARTES-IFAN. (2015). Jàngandoo, baromètre de la qualité des apprentissages des enfants au Sénégal, Principaux résultats 2014, Rapport descriptif, p. 13.

Appendix 7 – Interview guides

Questions for the primary teacher (PT)

Questions générales:

- Quel est votre niveau de formation ? Est-il identique pour tous les enseignants de l'école ?
- Depuis quand exercez-vous ce métier ?
- Quelles sont les disciplines que vous enseignez ?
- Quel est le lieu d'exercice de votre profession ? Avez-vous pu librement choisir ?
- Combien avez-vous d'élèves en moyenne dans une classe ?
- Avez-vous à disposition des livres pour vous et pour vos élèves ? Quel est le ratio livre-élève dans des matières comme le français et les mathématiques ?
- Dans votre établissement, y a-t-il un bloc sanitaire ou une cantine ?
- Comment estimez-vous l'état du matériel à disposition ? Et celui des infrastructures ? (Est-ce qu'il y a une cantine, un bloc sanitaire, des toilettes, etc…)

Questions plus spécifiques :

- Quelles sont les principales difficultés de votre métier ? Existe-il des difficultés spécifiques à la région où vous enseignez (ndlr. Kaffrine) ?
- Est-ce que le métier d'enseignant vous permet d'avoir une qualité de vie que vous jugez suffisante ? Vous sentez vous motivé, reconnu et soutenu à exercer cette profession ?
- Est-ce que vous estimez que la formation que vous avez reçue pour devenir enseignant vous a fourni les outils nécessaires au bon exercice de votre profession (soit une formation suffisante et adéquate) ? Est-ce que vous avez la possibilité de participer à des formations continues ?
- A quel type de pédagogie avez-vous recours ?
- Quelles sont vos pratiques évaluatives ? Sont-elles harmonisées ou est-ce que vous en décidez personnellement ?
- Comment jugez-vous la couverture de l'enseignement élémentaire dans les espaces ruraux ?
- Quelle est votre relation avec les parents d'élèves ? Et entre l'école et la communauté en général ?
- Comment luttez-vous contre le décrochage scolaire ? Quels sont les moyens disponibles ?
- Est-ce que des programmes de remédiation sont proposés dans votre département ?
- Et sur l'inclusion de savoir traditionnels dans le cursus scolaire ?
- Quel est votre avis sur l'enseignement en langue maternelle ?
- Comment jugez-vous le contenu des ouvrages scolaires ? Leur contenu est-il adapté au contexte Sénégalais ? Et s'agissant du curriculum en général : est-il adapté, pertinent et motivant ?
- Avez-vous déjà entendu parler des 17 Objectifs pour le Développement Durable de l'ONU et plus spécifiquement de l'objectif 4 voulant assurer l'accès de tous à une

éducation de qualité, sur un pied d'égalité, et promouvoir les possibilités d'apprentissage tout au long de la vie ?
- Préscolaire
- De votre expérience, quelles sont les mesures les plus efficaces pour améliorer/faciliter l'apprentissage des élèves ?

Questions for the teacher in public lower secondary school (ST1)
Questions générales:
- Quel est votre niveau de formation ? Est-il identique pour tous les enseignants de l'école ?
- Depuis quand exercez-vous ce métier ?
- Quelles sont les disciplines que vous enseignez ?
- Quel est le lieu d'exercice de votre profession ? Avez-vous pu librement choisir ?
- Combien avez-vous d'élèves en moyenne dans une classe ?
- Est-ce qu'il y a de grands écarts entre les élèves aux niveaux de leurs capacités et/ou de leur âge ?
- Avez-vous à disposition des livres pour vous et pour vos élèves ? Quel est le ratio livre-élève dans des matières comme le français et les mathématiques ?
- Dans votre établissement, y a-t-il un bloc sanitaire ou une cantine ?
- Comment estimez-vous l'état du matériel à disposition ? Et celui des infrastructures ? (Est-ce qu'il y a une cantine, un bloc sanitaire, des toilettes, etc…)

Questions plus spécifiques :
- Estimez-vous que la couverture de l'enseignement secondaire au Sénégal soit suffisante ?
- Comment jugez-vous l'égalité de genre dans l'école secondaire ?
- Qualité des programmes scolaires : sont-ils adaptés, pertinents et motivants ?
- A quel type de pédagogie avez-vous recours ?
- Quelles sont vos pratiques évaluatives ? Sont-elles harmonisées ou est-ce que vous en décidez personnellement ?
- Comment luttez-vous contre le décrochage scolaire ?
- Avez-vous l'opportunité de participer aux choix de la politique éducative ? Si oui par quels moyens ?
- Quelles sont les principales difficultés de votre métier ? Existe-t-il des difficultés spécifiques à la région où vous enseignez ?
- Est-ce que le métier d'enseignant vous permet d'avoir une qualité de vie que vous jugez suffisante ? Vous sentez vous motivé, reconnu et soutenu à exercer cette profession ?
- Est-ce que vous estimez que la formation que vous avez reçue pour devenir enseignant vous a fourni les outils nécessaires au bon exercice de votre profession (soit une formation suffisante et adéquate) ? Est-ce que vous avez la possibilité de participer à des formations continues ?
- Quelle est votre relation avec les parents d'élèves ? Entre l'école et la communauté en général ?

- De votre expérience, quelles sont les mesures les plus efficaces pour améliorer/faciliter l'apprentissage des élèves ?
- Avez-vous déjà entendu parler des 17 Objectifs pour le Développement Durable de l'ONU et plus spécifiquement de l'objectif 4 voulant assurer l'accès de tous à une éducation de qualité, sur un pied d'égalité, et promouvoir les possibilités d'apprentissage tout au long de la vie ?

Questions for the teacher in a private lower secondary school (ST2)
Questions générales:
- Quel est votre niveau de formation ? Est-il identique pour tous les enseignants de l'école ?
- Depuis quand exercez-vous ce métier ?
- Quelles sont les disciplines que vous enseignez ?
- Quel est le lieu d'exercice de votre profession ? Avez-vous pu librement choisir ?
- Combien avez-vous d'élèves en moyenne dans une classe ?
- Est-ce qu'il y a de grands écarts entre les élèves aux niveaux de leurs capacités et/ou de leur âge ?
- Avez-vous à disposition des livres pour vous et pour vos élèves ? Quel est le ratio livre-élève dans des matières comme le français et les mathématiques ?
- Dans votre établissement, y a-t-il un bloc sanitaire ou une cantine ?
- Comment estimez-vous l'état du matériel à disposition ? Et celui des infrastructures ? (Est-ce qu'il y a une cantine, un bloc sanitaire, des toilettes, etc…)

Questions spécifiques :
- A que type de pédagogie avez-vous recours ?
- Quelles sont vos pratiques évaluatives ? Sont-elles harmonisées ou est-ce que vous en décidez individuellement ? A quelle fréquence ont-elles lieux ?
- Est-ce que vous êtes évalué en tant qu'enseignant ?
- D'après les résultats du baromètre citoyen Jàngandoo, les élèves fréquentant les écoles privées ont de meilleurs résultats que ceux dans le public. D'après vous, qu'est-ce qui pourrait expliquer cela ?
- Quelle est votre relation avec les parents d'élèves ?

Questions for the professor at the UCAD (UT)
- Quel est votre parcours ? Quels sont les prérequis pour devenir enseignant à l'Université ?
- Lorsque vous enseignez à des classes de première année de licence, comment estimez-vous leur niveau scolaire ? Sont-ils suffisamment préparés pour leur cursus universitaire ?
- Existe-il des mécanismes de vérification de la qualité de l'enseignement supérieur au Sénégal ? D'après vous, quel pourrait être l'impact de la mise en place d'un système de mesure de qualité de l'éducation à l'Université ?

- La recherche est-elle encouragée par l'Université ? Existe-il une synergie entre les recherches universitaires et d'autres secteur ?

Dynamiques urbain-rural :
- Quel est l'effet de la croissance urbaine sur l'école dans le milieu rural ? Comment lutter contre les disparités urbain-rural dans le scolaire ?
- Y a-t-il des dynamiques différentes entre les communautés urbaine et rurale en lien avec l'école ?
- Faudrait-il adapter l'école au milieu rural comme cela avait été l'idée avec « les écoles de brousse » ?
- Comment préserver les savoir traditionnels ? Que pensez-vous de leur intégration au curriculum ?

Questions for YD, mother with children in school – community member (YD)
- Combien de personnes de vivent dans votre ménage ? Combien sont scolarisés et où ?
- Quelle langue parlez-vous dans le foyer ?
- Quelle est le niveau de scolarisation du chef de ménage ?
- Existe-il un lien entre l'école et la communauté ?
- Quelles sont les réalités de l'école dans votre village/commune ? L'école est-elle gratuite ? Combien d'élèves y a-t-il par classe ?
- Quelle place à l'école dans votre foyer ?
- Dans votre foyer, y a-t-il un espace pour que les enfants étudient ? (Table, crayon, lumière)
- Disposez-vous de livre/une bibliothèque dans le foyer ?

Appendix 8.

Retrieved from: sent by a friend though WhatsApp (15.12.2022)

REPUBLIQUE DU SENEGAL
Un Peuple – Un But – Une Foi

**Ministère
de l'Education nationale**

DIRECTION DES EXAMENS ET CONCOURS (DEXCO)

COMMUNIQUE

Le Ministère de l'Education nationale porte à la connaissance du public l'ouverture du **concours de recrutement d'élèves – maîtres (CREM), session de 2022.**

Le dépôt des dossiers de candidature s'effectue **du lundi 19 décembre 2022 à 8 heures au vendredi 20 janvier 2023** à **17 heures.**

Le CREM est ouvert aux Sénégalais titulaires du Baccalauréat ou de tout autre diplôme admis en équivalence, âgés de **18 ans au moins** et de **30 ans au plus**, au 31 décembre 2022.

Les mille cinq cents (1 500) postes en compétition sont répartis ainsi qu'il suit :

- **1 200** option Français ;
- **250** option Arabe ;
- **50** option Daara.

Le dossier de candidature est ainsi composé :

- une demande manuscrite adressée au Ministre de l'Education nationale ;
- un extrait de naissance datant de **moins de six (06) mois** ou une photocopie légalisée de la carte nationale d'identité **du candidat** en cours de validité ;
- une photocopie légalisée du certificat de nationalité sénégalaise ;
- une photocopie légalisée du Baccalauréat ou de l'attestation en cours de validité ou une attestation spéciale du Baccalauréat ; les bacheliers de la session de juillet 2022 peuvent déposer une photocopie légalisée de leur relevé de notes ou de leur attestation de réussite ou de leur diplôme ;
- un certificat médical d'aptitude à l'Enseignement délivré par un médecin du Centre médico–social des Fonctionnaires ou un médecin exerçant dans une structure publique de santé ;
- un extrait du casier judiciaire n° 3 datant de moins de trois (03) mois ;
- un certificat de bonne vie et mœurs datant de moins de trois (03) mois ;
- une quittance de paiement des droits d'inscription dont le montant est fixé à dix mille francs CFA (**10 000 F CFA**).

L'inscription en ligne, la numérisation et le téléchargement des pièces constitutives du dossier sur le site internet du CREM (www.crem.education.sn) sont obligatoires pour tous les candidats.

N.B. : **Il est formellement interdit de s'inscrire en ligne en utilisant la carte nationale d'identité de quelqu'un d'autre. Tout candidat qui se rendrait coupable de cette faute verra son dossier classé sans suite.**

Tout dossier incomplet, non conforme ou non accompagné d'une inscription en ligne sera classé sans suite, et les droits d'inscription ne seront pas remboursés.

Aucun dossier et aucune inscription en ligne ne seront validés après la date et l'heure limites de dépôt fixées au **vendredi 20 janvier 2023 à 17 heures.**

L'épreuve de Présélection se déroulera le **mardi 7 février 2023 à 10 heures précises** dans le(s) centre(s) retenu(s) par l'Inspecteur d'Académie.

L'arrêté n°18077 du 04 décembre 2014 relatif à l'organisation du CREM, modifié, est disponible sur le site internet du Ministère de l'Education nationale (www.education.sn) ou dans les Inspections d'Académie (**IA**) et les Inspections de l'Education et de la Formation (**IEF**).

Toute autre information utile relative au concours sera également disponible, en temps opportun, sur les sites internet www.education.sn et www.crem.education.sn, ainsi que dans les IA et les IEF.

Les inspecteurs d'Académie et les inspecteurs de l'Education et de la Formation sont chargés, chacun dans sa circonscription, de faire une large diffusion du présent communiqué.

Dakar, le ___ 1 5 DEC 2022 _____

Le Ministre de l'Education nationale

Cheikh Oumar ANNE

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Appendix 9.

Retrieved from: LARTES-IFAN. (2017). *Jàngandoo, baromètre de la qualité des apprentissages au Sénégal.* (ISSN : 2230-0678; Série Etudes Nationales Du LARTES N°002-01-2017, p. 117). LARTES-IFAN.

Cissé, R., Moussa, S., Lô, C., & Fall, A. S. (2021). *La qualité des apprentissages au Sénégal. Les leçons de Jàngandoo 2019.* Presses Universitaires de Dakar (P.U.D.).

Tables retrieved from Jàngandoo 2016 (LARTES-IFAN, 2017, pp. 43–45):

Tableau 10 : Scores moyens des enfants en lecture selon la région

Région	Score moyen	25% - perf	25% + perf	Ecart entre + et -
Dakar	34,5	4,7	50,3	45,7
Ziguinchor	29,8	5,6	50,3	44,6
Thiès	27,1	4,4	50,1	45,7
Louga	25,8	4,3	48,5	44,2
Fatick	25,3	4,5	48,4	43,9
Saint-Louis	23,5	2,7	48,8	46,1
Sédhiou	23,3	4,8	50,6	45,8
Diourbel	23,1	3,5	49,5	46
Kaolack	22,4	4,4	47,6	43,2
Kédougou	20,3	5,3	49,6	44,3
Tambacounda	19,2	3,7	51	47,3
Kolda	17,6	4,5	49,8	45,3
Matam	16,9	3,3	47,8	44,4
Kaffrine	16,8	3,3	48,5	45,2
Ensemble	**26**	**4**	**49,8**	**45,8**

Score supérieur à la moyenne nationale
Score proche de la moyenne nationale
Score inférieur à la moyenne nationale

Source : Jàngandoo 2016, LARTES-IFAN
*** Différences statistiquement significatives au seuil de 5%.*

Tableau 10 : Scores moyens des enfants en mathématiques selon la région

Région	Score moyen	25% - perf	25% + perf	Ecart entre + et -
Dakar	31,8	2,5	54,1	51,6
Ziguinchor	28,4	2,0	55,5	53,5
Thiès	24,5	1,8	54,0	52,2
Saint-Louis	21,9	2,6	51,3	48,7
Sédhiou	21,7	2,2	52,2	50,0
Fatick	20,8	1,4	53,7	52,3
Louga	19,9	1,6	54,5	52,9
Kédougou	19,8	2,3	53,7	51,4
Tambacounda	17,8	1,8	52,5	50,7
Kaolack	17,6	1,8	51,2	49,4
Matam	15,5	2,0	52,5	50,5
Kolda	15,4	1,6	53,1	51,5
Diourbel	12,2	1,4	54,5	53,0
Kaffrine	10,4	1,4	54,5	53,0
Ensemble	**22,2**	**1,9**	**54,6**	**52,7**

Score supérieur à la moyenne nationale
Score proche de la moyenne nationale
Score inférieur à la moyenne nationale

Source : Jàngandoo 2016, LARTES-IFAN
*** Différences statistiquement significatives au seuil de 5%.*

Tableau 11 : **Scores moyens des enfants en culture générale selon la région**

Région	Score moyen	25% - perf	25% + perf	Ecart entre + et -
Dakar	21,2	11,4	25,8	14,4
Ziguinchor	19,6	11,8	25,2	13,3
Thiès	18,6	11,2	25,4	14,2
Sédhiou	18,6	11,7	25	13,2
Kédougou	17,9	11	24,8	13,9
Louga	17,9	11,6	24,8	13,2
Fatick	17,7	11,3	24,8	13,5
Kolda	16,8	10,2	25,4	15,2
Saint-Louis	16,6	9,5	25,1	15,6
Tambacounda	16,6	10	25,3	15,3
Kaolack	16,5	10,6	25	14,5
Matam	15,9	11,6	25,3	13,7
Diourbel	15,6	10,6	25,1	14,5
Kaffrine	14	9,6	24,8	15,2
Ensemble	**18,1**	10,7	25,4	14,8

Source : Jàngandoo 2016, LARTES-IFAN
** Différences statistiquement significatives au seuil de 5%.

Legend:
- Score supérieur à la moyenne nationale
- Score proche de la moyenne nationale
- Score inférieur à la moyenne nationale

Tables retrieved from Jàngandoo 2019 (Cissé et al., 2021, pp. 27–29):

Tableau 12: **Score moyen des enfants en lecture selon la région chez les enfants testés en français (points)**

	Score moyen	25% - perf	25% + perf	Écart entre + et -
Dakar	39,2	28,0	52,3	24,3
Ziguinchor	37,0	24,5	50,5	26,0
Sédhiou	33,1	20,0	46,0	26,0
Diourbel	31,7	15,5	43,5	28,0
Thiès	30,9	16,0	45,5	29,5
Kédougou	29,2	14,0	42,0	28,0
Louga	28,6	13,5	42,0	28,5
Matam	28,4	14,5	41,0	26,5
Fatick	27,6	14,0	39,0	25,0
Saint-Louis	27,4	10,0	43,0	33,0
Kaolack	27,1	10,5	40,0	29,5
Kolda	27,0	11,5	41,0	29,5
Kaffrine	25,0	10,0	38,5	28,5
Tambacounda	24,9	6,0	42,0	36,0
Sénégal	32,0	16,5	46,5	30,0

Source : Jàngandoo 2019, LARTES-IFAN
** Différences statistiquement significatives au seuil de 5%.

Tableau 13: Score moyen des enfants en mathématiques selon la région chez les enfants testés en français (points)

	Score moyen	25% - perf	25% + perf	Écart entre + et -
Dakar	35,9	17,0	55,0	38,0
Ziguinchor	31,2	12,0	48,0	36,0
Sédhiou	28,7	9,0	46,0	37,0
Diourbel	28,4	5,0	44,0	39,0
Thiès	28,2	6,0	49,0	43,0
Fatick	26,9	9,0	43,0	34,0
Louga	26,8	5,0	46,0	41,0
Matam	26,3	8,0	41,0	33,0
Kaolack	25,3	4,0	44,0	40,0
Kolda	23,6	5,0	38,0	33,0
Kédougou	23,4	5,0	37,0	32,0
Saint-Louis	23,4	3,0	41,0	38,0
Kaffrine	23,0	4,0	41,0	37,0
Tambacounda	18,6	2,0	33,0	31,0
Sénégal	28,8	7,0	48,0	41,0

Source : Jàngandoo 2019, LARTES-IFAN
***Différences statistiquement significatives au seuil de 5%.**

Tableau 14: Score moyen des enfants en culture générale selon la région chez les enfants testés en français (points)

	Score moyen	25% - perf	25% + perf	Écart entre + et -
Dakar	21,8	17,0	26,0	9,0
Sédhiou	21,4	17,0	25,0	8,0
Ziguinchor	21,2	17,0	25,0	8,0
Thiès	20,2	15,0	25,0	10,0
Diourbel	19,6	13,0	23,0	10,0
Kédougou	19,6	14,0	25,0	11,0
Matam	19,3	15,0	23,0	8,0
Kolda	19,0	14,0	24,0	10,0
Louga	18,9	14,0	24,0	10,0
Saint-Louis	18,8	13,0	25,0	12,0
Kaolack	18,4	13,0	23,0	10,0
Fatick	17,9	13,0	22,0	9,0
Kaffrine	17,6	12,0	22,0	10,0
Tambacounda	16,6	10,0	22,0	12,0
Sénégal	19,9	15,0	25,0	10,0

Source : Jàngandoo 2019, LARTES-IFAN
***Différences statistiquement significatives au seuil de 5%.**

Tables with my calculations (in red are the numbers I mentioned)

Reading test, 2016 vs. 2019:

Region	Score in 2016 (pts)	Score in 2019 (pts)	Difference
DAKAR	34,5	39,2	4,7
KAFFRINE	16,8	25	8,2
TAMBACOUNDA	19,2	24,9	5,7
MATAM	16,9	28,4	11,5

Mathematic test, 2016 vs. 2019:

Region	Score in 2016 (pts)	Score in 2019 (pts)	Difference
DAKAR	31,8	35,9	4,1
KAFFRINE	10,4	23	12,6
TAMBACOUNDA	17,8	18,6	0,8
MATAM	15,5	26,3	10,8

Difference between the best and the worst acores in the reading test:

Year	Best score	Worst score	Difference
2016	34,5	16,8	17,7
2019	39,2	24,9	14,3
Difference	4,7	8,1	3,4

Difference between the best and the worst scores in the mathematic test:

Year	Best score	Worst score	Difference
2016	31,8	10,4	21,4
2019	35,9	18,6	17,3
Difference	4,1	8,2	4,1

Difference between the best and the worst scores in the general knowledge test:

Year	Best score	Worst score	Difference
2016	21,2	14	7,2
2019	21,8	16,6	5,2
Difference	0,6	2,6	2