Modernization of Higher Education in Cameroon: History, Problems and Prospects

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Abstract: Since 1945, Cameroon has embarked on a journey to provide higher education for its youth, recognizing it as a cornerstone for achieving independence. During this period, Cameroon demonstrated a clear commitment to enhancing its education system in preparation for sovereignty, aligning with its objectives under international law. The intellectual vanguard of Cameroon understood that political autonomy necessitated the capacity for self-governance, with higher education emerging as a crucial avenue to meet this demand. Following its formal independence, the Cameroonian government prioritized the development of higher education. As a nation characterized by a dual cultural identity, Cameroon's higher education system implemented both the French and English education systems, distinguishing it from its African counterparts and contributing to its unique educational landscape. However, navigating the coexistence of these dual systems presented challenges, necessitating a protracted period of development and adaptation. Throughout this developmental journey, Cameroon achieved significant milestones in higher education and implemented vital reforms. Yet, persistent challenges such as insufficient funding, subpar teaching standards, and a lack of coherent higher education policies have persisted, hindering the modernization of the sector. Addressing these issues is crucial for the continued development of higher education in Cameroon. This paper employs a literature review methodology and draws upon the "core-periphery" theory to analyze the historical trajectory and inherent challenges facing the modernization of higher education in Cameroon. By doing so, it seeks to offer insights into potential pathways for fostering the deepening and sustainable development of higher education in the country, thereby shaping its future outlook.

Keywords: Higher Education; Modernization; History; Problems; Prospects

1 Introduction

On the cusp of independence, Cameroon confronted a pressing dilemma: the imperative to cultivate a cadre of high-caliber state officials, particularly at the senior level. Pre-independence, many Cameroonians pursued higher education abroad, yet this education often fell short in addressing the specific developmental needs of Cameroon and the broader African context. Hence, it became paramount for the Cameroonian government to establish a local higher education system tailored to the nation's requirements for development [1]. Since gaining independ-ence in 1960, higher education has emerged as a linchpin of national progress [2]. Initially, Cameroon's higher education landscape was dominated by a single institution—the Yaoundé Federal University. However, subsequent decades witnessed a remarkable surge in the expansion and enhancement of higher education across the country. In the mid-1970s, the Cameroonian government initiated a comprehensive higher education reform agenda aimed at bolstering educational quality and accessibility. This agenda encompassed initiatives to elevate teaching

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standards, broaden the spectrum of higher education institutions, and implement policies to foster inclusivity, particularly targeting students from rural and underserved areas. Scholars like Gu Jianxin and Zhang Sanhua have delved into the trajectory of higher education reform and development in Cameroon [3]. Their research encapsulates the evolutionary phases of Cameroon's higher education journey, spanning from its nascent stages through expansion, reform, and consolidation. They delineate the progression of higher education in Cameroon—from a state of dependency to independence, from isolation to openness, and from uniformity to diversity—charting the transition from a solitary university to a diverse array of higher education establishments. Moreover, their work elucidates the overarching mission and objectives of higher education in Cameroon, emphasizing the tripartite mandate of research, teaching, and societal engagement. Yet, it also underscores the multifaceted challenges confronting higher education in Cameroon, including the imperative to enhance relevance, elevate academic standards, fortify institutional management, secure adequate funding, and fortify information systems.

Presently, Cameroon boasts a constellation of universities, technical colleges, and vocational schools, offering an expansive array of disciplines spanning medicine, engineering, business, law, and education, among others. The evolution and modernization of higher education in Cameroon have made substantive contributions to the nation's socioeconomic fabric. Nonetheless, the sector grapples with an array of developmental hurdles. To navigate these challenges and propel higher education into the future, Cameroon has embarked on a series of reform endeavors. Against the backdrop of globalization and technological innovation, higher education in Cameroon stands poised to encounter fresh opportunities and exigencies. Consequently, an in-depth examination of Cameroon's historical trajectory and contemporary challenges vis-à-vis higher education modernization assumes paramount importance. Such endeavors are essential to glean insights, forestall past pitfalls, and formulate pragmatic policies conducive to the recalibration and sustainable development of the higher education sector. This concerted effort not only ensures alignment with international benchmarks but also furnishes students with a quality education attuned to the demands of the modern world. Moreover, the modernization of higher education in Cameroon holds the promise of nurturing a cohort of adept professionals endowed with innovative prowess and prac-

tical acumen, thereby fostering the nation's enduring development trajectory.

2 The Genesis and Emergence of Cameroon's Dual Education System

2.1 The Genesis of Education in Cameroon

Before 1884, formal education in Cameroon manifested in two distinct forms: Islamic education and Western schooling introduced by Western missionaries [4]. Islamic education traces its roots back to the eighth and ninth centuries when Islam permeated West Africa through Arabian caravans. By 1715, the Mandara kingdom along the central and western coast of Cameroon embraced Islam, followed by the Nso kingdom in the 18th century. To facilitate Quranic instruction, traditional Quran schools emerged across Cameroon, where Muslim children acquired proficiency in reading, recitation, and writing in Arabic. Concurrently, Western missionaries brought formal schooling to Cameroon during the early colonial period, leaving an indelible mark on the nation's educational landscape. Beginning with the inaugural mission in Cameroon between 1840 and 1884, three prominent missions spearheaded educational endeavors in the region. The British Baptist Church, among the first missions to arrive, undertook educational and medical initiatives in southern Cameroon, endeavoring to instill Christian values and moral precepts. Similarly, the Presbyterian Church of the United States established schools and churches in northern Cameroon, extending educational and religious services to local communities. Additionally, the Catholic Church in Germany conducted extensive missionary work across Cameroon, erecting schools, medical facilities, and churches to cater to the educational, medical, and spiritual needs of the populace. The educational endeavors of these missions profoundly influenced Cameroonian society and culture, providing educational opportunities while disseminating Western values and knowledge.

In 1844, Joseph Merrick, a London Baptist missionary, established the first Western-style primary school in Bimbia (Limbé) with local consent. Subsequently, in 1845, British Baptist missionary Alfred Saker inaugurated a second primary school in Akwa (Douala). Recognizing

the need for local educators, Saker dispatched three Cameroonian women to a teacher training center in Sierra Leone, with one returning to teach in 1856. Before 1884, the Baptist Church established over ten junior missionary schools in Victoria (now Limbé), Bell, and other locales. Notably, the Victoria Mission School segregated into boys' and girls' institutions in 1880, boasting 130 boys and 80 girls in attendance. Saker, who retired in 1876 after 32 years of missionary and educational service, earned accolades from contemporaries like David Livingstone, who lauded his contributions as exemplary. As the educational landscape evolved, figures like Alfred Saker emerged as pivotal champions of educational development in Cameroon, laying the groundwork for the nation's modernization and progress [5]. By 1884, Cameroon had 15 primary schools with a total of 363 pupils.

2.2 The Emergence of a Dual Education Systems

Cameroon is situated at the confluence of western and central Africa. Its name originates from "Rio dos Camarões" ("River of Prawns"), a designation given to the Wouri River estuary by Portuguese explorers during the 15th and 16th centuries. "Camarões" was also applied to the adjacent mountains [6]. Until the late 19th century, the term "the Cameroons" in English usage was limited to referring to the mountains, while the estuary was known as the Cameroons River or locally as the Bay. In 1884, the Germans expanded the term "Kamerun" to encompass their entire protectorate, which closely corresponded to the present-day state of Cameroon. Between 1884 and 1916, Cameroon fell under German colonization, followed by subsequent periods of French and British rule until 1960. Throughout these colonial epochs, Cameroon's educational landscape underwent profound transformations. German, French, and English primary and secondary education coexisted within Cameroon during this period. In his seminal work "The History of Education in Cameroon: 1844~2004," Professor Fonkeng, George Epah comprehensively examines the trajectory of educational development in Cameroon across the colonial and post-colonial eras. This scholarly endeavor delves into the intricacies of educational policy debates, national developmental perspectives, and the influences of the international milieu [7]. Moreover, researchers like Gwei and Ihims have delved into the pre-independence educational landscape of Cameroon. Gwei's research extends back to the educational development of Cameroon before it was colonized, while Ihims scrutinizes the evolution of education in Cameroon under German, French, and British colonial administrations, with a focus on educational management [8].

Under German rule, educational opportunities were sparse, primarily facilitated through institutions affiliated with Christian churches, predominantly Catholic and Protestant denominations. These institutions imparted religious education and vocational training to a select few. Following World War, I, the League of Nations partitioned Cameroon into French Cameroon and British Cameroon, each administering its own educational system. French Cameroon emphasized French culture and language, primarily concentrating educational resources in urban centers, while rural areas received comparatively limited attention. Conversely, British Cameroon aimed to train clerical, translation, and skilled labor personnel, with English serving as the primary medium of instruction. Notably, in 1922, British Cameroon was placed under the jurisdiction of Nigerian colonial authorities until regaining autonomy under Cameroonian governance post-independence.

With the declaration of independence by French Cameroon in 1960 and British Cameroon in 1961, Cameroon adopted a federal structure, amalgamating both educational models to cater to the linguistic needs of French and English learners. Bilingual educational initiatives became mandatory in public schools nationwide, heralding the inception of Cameroon's dual education system.

1Table 1 Number of primary and secondary schools and their students in Cameroon during the colonial period

	German colony (1884-1916)	French Colony (1916-1960)	British Colony (1916-1960)	Total
Number of schools	625	977+20	499+6	2127
Number of students	40061	342813	86257+903	470034

Source: World Bank Statistics; Cameroon Education Data

3 The Evolution of Higher Education Modernization in Cameroon

In Cameroon, the inception of modern higher education can be traced back to the 20th century, coinciding with the nation's colonial era under German, French, and British rule. However, it was upon gaining independence that the process of modernizing higher education gained momentum and accelerated rapidly. This paper delineates the modernization of higher education in Cameroon into four distinct stages, aimed at elucidating its developmental trajectory comprehensively. These stages comprise the initial development phase during Cameroon's nascent independence (1957-1961), the subsequent expansion period (1962-1992), the era of higher education reforms (1993-2007), and the ongoing phase of higher education advancement in the contemporary era (2008-present). By delineating these stages, this framework offers a lucid comprehension of the historical evolution and enduring trajectory characterizing the modernization of higher education in Cameroon.

3.1 The Genesis of Higher Education During Cameroon's Independence (1957-1961)

During the 1940s to the 1960s, Cameroonian high school graduates primarily relied on scholarships to pursue higher education abroad. Those from French Cameroon predominantly opted for institutions in France or other French colonies in Africa, such as the Dakar French Medical College and the College of Higher Education in Senegal, both established in 1918 and 1950, respectively. Conversely, students from British Cameroon favored universities in the United Kingdom, the United States, or other British African colonies. However, the exorbitant costs associated with studying abroad often deterred students from returning to Cameroon upon completion of their education. This trend not only diverged from the economic and social realities of Cameroon but also underscored the pressing need to nurture indigenous talent. Consequently, Cameroonians petitioned the United Nations and colonial authorities to establish a comprehensive university within Cameroon itself.

Before attaining independence in 1960, Cameroon housed merely three higher education institutions: the university preparatory program, established in 1958, the National Academy of Administration and Justice (ENAM), founded in 1959, and the Joint Military School (EMIA). Notably, the supervision of these institutions was divided between the United Kingdom and France, reflecting the colonial legacy of the region. During this period, higher education was virtually free for Cameroonian students. However, a dearth of understanding among parents regarding Western educational paradigms translated into a limited pool of middle school graduates, thereby constraining the enrollment in higher education. Furthermore, a conspicuous characteristic of these higher education institutions was the predominance of Western faculty and staff, particularly French nationals. Leadership positions such as university vice-president, chief administrators, and senior faculty were predominantly occupied by French individuals [9], while locals were relegated to menial roles such as file sorting, janitorial duties, and security. The managerial and educational frameworks mirrored those of French universities, underscoring the profound influence of France as a hub of higher education. As noted by Philip G. Atbach, the structural, organizational, and ideological underpinnings of modern universities are invariably Eurocentric, irrespective of their geographical location [10]. This phenomenon underscores the imposition of colonial legacies upon higher education systems in developing nations. Hence, the higher education landscape in colonized countries like Cameroon bore the indelible imprint of colonial powers such as France and Britain, shaping institutional frameworks and pedagogical approaches alike.

3.2 The Expansion Era of Higher Education in Cameroon (1962-1992)

After gaining independence in 1960, the Government of Cameroon embarked on a series of initiatives to foster the development of higher education, notably through the establishment of new institutions. In 1962, a mere two years post-independence, the Federal University was inaugurated in Yaoundé with support from UNESCO and France, which contributed teaching staff. Concurrently, the Commonwealth University of Cameroon evolved from the foundation of the National Center for Higher Education, established in 1961. Initially comprising four colleges—Law, Economics, Arts, and Humanities and Hard Sciences—the university expanded in 1963 to in-

clude four additional departments and two new colleges: the Higher Normal College and the Agricultural College. The organizational structure of the Federal University of Cameroon mirrored the French model, with funding provided by the French government and the French Association until the early 1970s.

Despite the establishment of these domestic universities, during the early 1960s, approximately 1,000 Cameroonians continued to pursue higher education abroad, with a significant portion studying in France and Britain. However, by 1976, the University of Yaoundé remained the sole university in the nation. In a bid to stem the outflow of students and bolster domestic higher education,

the government implemented a robust student welfare system in the late 1960s and early 1970s. In addition to tuition-free education, students received accommodation subsidies and substantial grants, prompting a surge in enrollment year after year. Consequently, the University of Yaoundé emerged as a prestigious institution of higher learning, attracting students from across Cameroon and beyond. By 1970, enrollment had swelled to 2,575 students, escalating to 8,200 by 1976. However, the burgeoning scale of enrollment and the imperative to maintain educational quality posed formidable challenges to the university's administration.

2Table 2 Student enrollment at the University of Yaoundé from 1962 to 1992

1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
213	539	577	1,129	1,369	1,677	1,913	1,896
1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
2,011	2,575	3,334	4,484	5,533	6,098	7,169	8,200
1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
9,057	9,602	9,687	9,562	10,231	10,494	12,031	18,000
1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	
17535	19893	22298	26744	34868	37215	25169	

Source: ADEA / WGHE. Reforming System of Higher Education: The Case of Cameroon: R: Washington: ADEA / World Bank 1999. p 5.

In response to this challenge, the Cameroonian government made a pivotal decision in 1977 to inaugurate four university centers across distinct regions, each tailored to foster specialty development characteristics. In the same year, the University Center was founded in the northern region of the country, with a dedicated focus on

agricultural science. Later, in 1985, the Buea University Center was established in the Southwest, prioritizing the social sciences and humanities. The establishment of these new university centers was aimed at enhancing the quality of university education and catering to the diverse professional requirements of various regions.

3Table 3 Four major university centers in Cameroon in 1962-1992

Area	University center	Majors
Southwest	Buea	Language, translation, and literature
Coast Province	Douala	Business department, technical teachers
Western Province	Dschang	Agronomy
Northern Province	Ngaoundere	Food science and food technology

Source: ADEA / WGHE. Reforming System of Higher Education: The Case of Cameroon: R: Washington: ADEA / World Bank 1999.p 5.

This reform initiative partly mitigated the professional and technical education challenges facing the University of Yaoundé and broadened students' choices and opportunities. However, its overall impact fell short of expectations. Despite the establishment of four university centers, Yaoundé University remains overcrowded, whereas the satellite centers are comparatively under-subscribed. For instance, although the Buea University Center was designed to accommodate 2,000 students, it enrolled only 60 students in 1991. Conversely, Yaoundé University, with a capacity for 5,000 students, had nearly 45,000 enrollees

that same year, vastly exceeding its capacity.

Several factors contribute to this disparity: first, the incomplete implementation of the reform plan; second, the highly specialized and limited educational offerings at the university centers; and third, the lucrative job prospects in government departments for graduates of professional and technical programs, resulting in intense competition for admission to these programs. Consequently, enrollment in these programs far surpasses expectations, straining management, teaching, and research capacities. The teacher-student ratio is staggering, with ratios as high as 1:132

in the Law and Economics department, 1:252 in the Science department, and 1:58 in the Arts department during the 1990-1991 academic year.

The economic downturn has further exacerbated financial woes, with reduced government spending on universities. In 1991, student subsidies and grants consumed 43% of the budget, while faculty salaries accounted for 46%, leaving a meager 9% for teaching and research funds. Student-led movements advocating for decentralized governance and branch campuses prompted the establishment of English and French universities in Buea and Ngaoundere in 1991. However, these measures proved insufficient to alleviate pressure and meet the burgeoning demand, signaling the urgent need for comprehensive higher education reform.

Furthermore, mounting protests against tuition and miscellaneous fees, coupled with allegations of faculty appointments based on political connections rather than academic merit, have exacerbated tensions. The lack of separation between politics and academia, particularly evident in faculty appointments influenced by political affiliations, has eroded academic integrity. Students' activism against these injustices eventually led to the recognition of their right to freedom of expression. In the face of mounting challenges, criticisms, and opposition from students and the public, the Cameroonian government announced a comprehensive higher education reform in 1992.

3.3 The Stage of Higher Education Reform in Cameroon (1993-2007)

During the period spanning from 1993 to 2007, Cameroon witnessed a transformative era in higher education, often regarded as its golden age of reform. In 1993, the Cameroonian government embarked on a sweeping overhaul of its higher education system, ushering in a multitude of measures aimed at its enhancement. This comprehensive reform initiative, pivotal in every facet of higher education, was underpinned by several key objectives. Firstly, the government initiated the establishment of six fully-fledged universities, strategically positioned to alleviate the strain on existing institutions in Yaoundé These universities, including the University of Buea and Dschang University, among others, not only diversified academic options but also mitigated congestion issues while extending educational opportunities to diverse regions. Secondly, a commitment to equitable access un-

derscored the reform, ensuring that university education became accessible to all Cameroonians. Geographical considerations and standardized programs were implemented to facilitate widespread access across the nation.

Moreover, the diversification of academic programs was prioritized to align with market demands, affording graduates the flexibility to pursue entrepreneurship or employment in various sectors. This strategic move aimed to bridge the gap between academia and industry needs. Furthermore, fostering stronger ties with local, regional, and international communities was emphasized, fostering a more open and collaborative academic environment. Simultaneously, infrastructure and services were upgraded to cater to the evolving needs of burgeoning universities. Financial restructuring, marked by increased stakeholder participation and alternative revenue streams, bolstered sustainability and autonomy within higher education institutions. This influx of resources aimed to enhance teaching and research environments, thereby nurturing a culture of academic excellence.

Additionally, the government championed international cooperation, recognizing the importance of knowledge exchange and collaboration in a globalized world. Such endeavors aimed to enrich the academic landscape and foster innovation. Furthermore, improvements in the living conditions of both faculty and students underscored the government's commitment to holistic education, acknowledging the pivotal role of well-being in academic success.

Overall, these reforms aimed to tackle multifaceted challenges within higher education, including accessibility, quality, capacity building, and funding. By nurturing a skilled workforce aligned with national and global needs, Cameroon aspired to propel sustainable development and societal progress.

In 2001, Cameroon reinforced its commitment to higher education through Decree No. 5, delineating the legal framework and core direction of its academic endeavors. This decree underscored the pivotal role of higher education in national development, advocating for bilingual education and fostering intellectual and moral awareness conducive to social advancement. Subsequently, in 2007, Cameroon embraced the LMD (Licence-Master-Doctorat) system, aligning its higher education landscape with international standards [11]. This system overhaul aimed to enhance transparency, comparability, and mobility within the academic sphere, catalyzing profound changes across credit systems, degree structures, and quality assurance

mechanisms. Through the adoption of the LMD system, Cameroon further entrenched its commitment to internationalization, paving the way for enhanced adaptability and competitiveness on the global stage.

In essence, the reforms of the 1990s, Decree 5 in 2001, and the LMD system in 2007 epitomize Cameroon's unwavering dedication to higher education. These concerted efforts underscore the transformative potential of integrating with global educational paradigms, positioning Cameroon on a trajectory of modernization and excellence within the realm of higher education.

3.4 New Era of Higher Education in Cameroon (2008 to Present)

Since 2008, the landscape of higher education in Cameroon has undergone a significant transformation, ushering in a new era of development. This phase is characterized by several key aspects that delineate its unique trajectory: the rapid proliferation of higher education institutions across Cameroon, both public and private; a focused effort on specialization and localization, often termed as Cameroonization; and notable strides in international collaborations aimed at enhancing educational standards and talent cultivation. The expansion of higher education in Cameroon has been remarkable, with the establishment of institutions such as Maroua National University in 2008 and the addition of three new national universities in 2019. Concurrently, a multitude of private higher education entities has emerged, diversifying the educational landscape across various regions of the country. Central to this evolution is the emphasis on specialization and localization within higher education. Public and private universities in Cameroon, particularly private institutions, have introduced a plethora of new professional courses tailored to meet contemporary demands. For instance, the University of Buea now offers specialized programs in areas such as women and gender studies, accounting, banking and finance, nursing, medicine, laboratory science, chemical process technology, materials science, journalism, and mass communication.

Furthermore, Cameroon has made significant strides in international cooperation in education and talent development. Bilateral agreements with several countries have facilitated educational exchanges, allowing Cameroonian students to pursue studies abroad while attracting students from diverse nations to Cameroon for higher education. For instance, since 2011, China has emerged as a promi-

nent destination for Cameroonian students seeking international education [12], while Cameroon has also become a favored choice for students from neighboring African countries like Chad, Congo, and Nigeria.

These developments underscore a pivotal shift in the goals and scope of higher education in Cameroon. It is no longer solely focused on producing skilled professionals for government roles but has embarked on a path of comprehensive development tailored to local needs. This proactive approach reflects Cameroon's commitment to forging a sustainable and adaptive trajectory that aligns with its unique domestic context while actively engaging in global educational frameworks and partnerships.

4 Modernization Challenges in Higher Education in Cameroon

4.1 The Adverse Effects of Colonial Legacy and Low Educational Standards

Since Cameroon's establishment as both a French and British colony [13], it has navigated two distinct educational systems [14]. In a bid to offer educational opportunities nationwide, the majority of public higher education institutions have adopted bilingual instruction in both English and French. While this bilingual education model holds advantages for the internationalization of higher education, enabling graduates to seamlessly integrate into the global market, the pool of students proficient in both languages remains limited. Disparities in the knowledge levels of applicants from different regions often pose challenges during the enrollment process. To mitigate potential political tensions between regions, universities have historically admitted all applicants meeting basic admission criteria. Unfortunately, this approach has inadvertently led to a decline in educational standards.

Furthermore, ensuring high-quality education necessitates adequate access to essential resources such as laboratories, library materials, textbooks, and classroom facilities. Despite the reforms instituted in 1993, which stipulated that universities should admit students based on available infrastructure and human and financial resources, investment in infrastructure has not kept pace with the rising demand for higher education. Consequently, although universities have autonomy in setting admission

standards, they face immense social and political pressure to enroll students beyond their capacity.

These systemic challenges have significantly hampered the quality of higher education in Cameroon, impeding its ability to effectively meet the needs of students and society at large.

4.2 Expenditure Limits in Higher Education

Before 1993, public universities relied solely on state funding for their financing and management [15], but with radical reforms, they were mandated to seek their own financial support. This shift aimed to decrease reliance on state funds and transition towards a model where universities operate more like public enterprises, gradually covering the costs of education themselves. Consequently, state involvement in higher education funding and provision has become more limited, with efforts focused on fostering greater autonomy for universities. Cameroon, for instance, enacted Decree No. 005 in 2001, outlining two forms of financing for its National University: internal and external. Internal financing involves contributions from the institutions themselves, families, and students, while external financing options include grants from governments, bilateral and multilateral cooperation, and loans. Despite these measures, the education sector has grappled with a longstanding crisis due to a widening gap between the need for quality education and available resources. Budgetary constraints have led to universities exceeding their financial limits, exacerbated by dwindling aid. Moreover, mismanagement of funds has plagued public higher education institutions, with corruption being a significant issue. For instance, at Douala University, a treasurer was accused of embezzlement, leading to detention in 2010 and subsequent suicide in 2011 [16]. This event has both attracted wide attention and caused people's deep thought.

4.3 Limited Autonomy and Insufficient Research Funds of Universities

Excessive government intervention in higher education institutions severely curtails their capacity to assert their value [17]. In Cameroon, the government not only wields authority in appointing key positions such as education ministers, rectors, and deans but also mandates that public higher education institutions seek approval from government officials prior to making significant decisions. This extensive intervention renders Cameroon's public universities collectively reliant on the government. During the reforms of the 1990s, fostering an environment conducive to scientific research was a stated objective. Ideally, universities should operate with autonomy, allowing educators and researchers the freedom to select their research domains independently. However, in practice, the evaluation criteria for scientific research often hinge on its relevance to addressing national concerns. Furthermore, research funding predominantly targets areas deemed of special national interest, leading to the recruitment of subpar faculty as a primary challenge in the sector. Effective research necessitates experienced educators, yet progress remains sluggish due to inadequate state funding and a dearth of corporate support for research initiatives. These issues are compounded by the glaring disparity between university research needs and allocated budgets. Consequently, Cameroon's scientific research currently heavily relies on government decision-making, with little provision for dedicated research funds. Such a predicament not only stifles scientific advancement but also constrains the growth of higher education institutions.

4.4 Inefficiencies in Higher Education Institutions

Currently, universities grapple with the imperative of digital acceleration. The widespread adoption of information technology offers invaluable support across teaching, learning, administrative, curriculum, and financial domains. Oliver and Jorre de St Jorre underscored the increasing significance of information and communication technology (ICT), particularly in workplaces, emphasizing the need for university systems to align with societal demands through digital learning resources, activities, and assessments [18]. Consequently, integrating digital technology to enhance efficiency emerges as a paramount requirement for today's universities. Despite a series of reforms in Cameroon since 1993 and the enactment of higher education laws in 2001 aimed at bolstering effective management to improve university efficacy, progress has stagnated. It is widely acknowledged that unlocking the substantial potential for efficacy hinges on fully harnessing digital technology in the delivery processes of public universities. However, despite the presence of IT centers, electronic learning resources, electronic libraries,

and digital technologies, the 11 public universities in Cameroon have only minimally integrated digital solutions into administrative, teaching, financial, and course processes.

Hence, the pressing challenge confronting higher education in Cameroon lies in establishing more robust information technology systems to underpin academic endeavors and institutional management effectively.

5 Prospects of Higher Education Modernization in Cameroon

To foster the modernization of higher education in Cameroon, it's imperative to adhere to the historical laws of national development and proactively address the challenges inherent in the modernization process. Central to this endeavor is enhancing the governance and information capabilities of higher education institutions, thereby facilitating their transition from merely adapting to modernization practices to actively spearheading the modernization agenda.

5.1 Enhancing Digital Education

Research indicates a growing significance of modern technology in driving national education reforms. Introducing modern technology holds promise for advancing education modernization [19], enhancing the quality of training for future professionals, and fostering a more scientifically driven educational approach [20]. The Cameroonian government ought to bolster the digital infrastructure of public universities to streamline administrative activities [21], facilitate seamless information acquisition, retrieval, and organization, enable efficient document sharing, and enhance overall information management. This, in turn, will continuously elevate the universities' efficiency and effectiveness.

Furthermore, digitizing the curriculum process of public universities is paramount, ensuring comprehensive coverage of specific projects while facilitating teaching and learning. A digitized curriculum process fosters distance education, catalyzes research endeavors, addresses students' information and material acquisition challenges, equips students and educators with new skills, and ultimately enhances the competitiveness, effectiveness, and efficiency of universities.

5.2 Revitalizing Talent Training Modes

In response to the expanding landscape of higher education, education departments and institutions must heed the interplay between education and economic development [22]. This entails deepening reforms and focusing efforts on refining the approach to cultivating high-quality, versatile talents to ensure the sustained advancement and quality of higher education. Collaboration among stakeholders in higher education, basic education, and secondary education is paramount. Together, they should provide community guidance and support services through various popular media channels such as news, television programs, social media platforms, and comedy shows. Additionally, campus accessibility should be enhanced through websites, brochures, and flyers. Simultaneously, community engagement should be bolstered, while existing guidance and advisory services are upgraded. Amidst escalating demands and costs, higher education institutions must pivot towards online models to address challenges related to infrastructure and technology utilization. Entrepreneurship training should be pragmatically embedded across all programs to foster future self-reliance and interdisciplinary collaboration. Lastly, action must transcend mere policy formulation; robust measures are needed to ensure the effective implementation of developed policies.

5.3 Coordinating the Dual Higher Education System

Having English and French as two official languages is undeniably advantageous for a country, considering their global prominence [23]. Nations like Canada, India [24] and Belgium recognized the value of bilingualism early on and integrated it into their higher education systems, leading to significant international development in their higher education sectors. However, in Cameroon, bilingualism hasn't played as pivotal a role as in Canada. The coexistence of bilingualism has resulted in a dual education system, evident in the presence of two distinct secondary school graduation exams. This duality has exacerbated the bicultural, bilingual divide among Cameroonians, contributing to the shortcomings of the national education system.

While many universities in Cameroon offer bilingual instruction, primary schools generally lack sufficient education in the second official language, except for a few

specialized bilingual institutions. Consequently, incoming students often lack proficiency in both official languages, leading to academic struggles in universities. To address the higher education quality issue, Cameroon must coordinate its current dual education system. Given the desire of English-speaking and French-speaking regions to preserve their respective colonial education systems, traditions, and language of instruction, introducing the native Cameroonian language and teaching English and French as secondary languages emerges as a viable solution. Since most Cameroonians don't speak French or English from birth and learn them in school, these languages are often perceived as foreign. Specifically, to coordinate education in the English and French-speaking regions, prioritizing the native Cameroonian language as the medium of instruction is essential. Reconsidering the establishment of a unified national college entrance exam is also crucial. Incorporating an indigenous language not only aids students in grasping the curriculum but also fosters coordination between the two education systems. The introduction of Cameroon's native language can lead to improved education quality, the implementation of a unified university education system, and the pursuit of education equality. Although achieving this goal may span several decades, it's a necessary step for Cameroon's peace and sustainable development.

5.4 Enhancing and Standardizing the Employment Model for Higher Education Staff

In Cameroon, there exists a notable absence of rational and transparent recruitment policies for faculty members, save for appointments made at the national presidential level and most professorial appointments orchestrated by the Ministry of Education. In contrast to developed nations, higher education institutions in Cameroon, particularly public universities, often find themselves subject to governmental pressures, with little consideration given to the research credentials and teaching expertise of recommended candidates. Despite Cameroon boasting one of the largest numbers of postgraduates and doctoral candidates among African countries, many faculty members holding master's and doctoral degrees secure their positions primarily through personal connections. Conversely, scholars with extensive educational backgrounds or graduates from abroad face formidable hurdles in joining uni-

versity faculties, often leading them to seek opportunities elsewhere.

To ensure the delivery of high-quality higher education, Cameroon must look to the lecturers' recruitment models of developed countries and devise a modernized approach tailored to contemporary needs. Educational institutions rely heavily on teachers as the primary human capital to achieve their goals and objectives [25]. Nevertheless, there's a notable gap in the training of teachers within higher education institutions in Cameroon, particularly concerning their ability to effectively identify and support students with disabilities. The development of higher education in Cameroon necessitates the presence of educators chosen based on merit rather than personal affiliations. To this end, the government should grant universities full autonomy in faculty recruitment processes and systematically phase out informal channels of appointment [26]. Moreover, Cameroon must bolster its existing National Higher Education Security Council to effectively oversee and enhance education quality assurance measures. Strengthening this council will serve to fortify the quality standards upheld across higher education institutions in the country.

5.5 Establishing Intermediary Organizations to Bolster Higher Education Autonomy

To preserve university autonomy, prevent excessive government intervention, and ensure universities retain their distinctiveness to meet societal needs, both public and private universities in Cameroon must adopt a defining characteristic: the establishment of intermediary organizations. These organizations serve as vital links between the government, the market, and society, safeguarding the independence of universities. Taking inspiration from the governance model of universities in the United States, Cameroon can adopt a similar approach. Here, the government indirectly oversees universities through a supervisory board of directors, which determines funding allocations, formulates policies, and enacts laws. Meanwhile, the board of directors, acting on behalf of society and the government, directly manages the university [27]. This model offers flexibility to universities while ensuring they remain accountable. To further address challenges in the modernization of higher education, Cameroon must establish intermediary organizations en-

dowed with legitimate rights and responsibilities. These entities play a crucial role in mitigating the negative impact of political influences on universities, fostering a conducive environment for academic progress.

6 Conclusion

The modernization of higher education in Cameroon has been a gradual evolution, stretching back to the country's independence in 1960. Preceding independence, Cameroon's higher education system primarily served to train civil servants for the colonial government, with limited scope and resources. However, recognizing the imperative to expand and modernize higher education post-independence, the government embarked on transformative initiatives. One of the pivotal milestones in this journey was the establishment of Yaoundé University in 1962, marking Cameroon's inaugural foray into higher education modernization. Over the ensuing years, the government demonstrated a steadfast commitment to enhancing and broadening higher education opportunities. In the 1990s, a series of reforms were introduced to decentralize higher education and foster increased autonomy within universities. This catalyzed the emergence of new academic institutions and a diversification of academic offerings.

In recent times, concerted efforts have been directed towards enhancing the quality of higher education in Cameroon. These efforts encompass curriculum refinement, infrastructure upgrades, and a renewed focus on research and innovation. Moreover, the government has actively encouraged collaborative partnerships with international institutions to facilitate knowledge exchange and cooperation. Key legislative reforms, such as the university reform in 1993, the Higher Education Orientation Law in 2001, the implementation of the bachelor/Licence-Master-Doctorate system (BMD / LMD) in 2007, and the formulation of the new National University Governance Plan in 2008, have all played significant roles in restructuring the governance and specialization of the country's higher education landscape. Despite these advancements, a significant challenge persists: ensuring equitable access to education. Many young Cameroonians continue to encounter obstacles to higher education, including limited infrastructure, steep tuition fees, and a scarcity of scholarships. Efforts are underway to address these hurdles, striving to ensure that higher education remains accessible to all segments of society.

In essence, the modernization of higher education in Cameroon remains an ongoing endeavor, requiring concerted efforts from diverse stakeholders including the government, universities, and international partners. The overarching objective is to establish a robust and inclusive higher education system that effectively addresses the country's national needs and contributes to its socio-economic advancement.

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