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Pedagogic and programmes change and the enhancement of relevance of state higher education system in Cameroon

ABSTRACT

This study was designed to examine pedagogic, and programme change and the enhancement of relevance of state higher education system in Cameroon. The study was guided by two objectives which examine how change in teaching methods and change in programmes enhances the relevance in state higher education system in Cameroon. This is supported by the Improvement Theory of Benthum, Gulikers, Jong and Mulder (2011) who holds that the world has evolved and that the type of university education, skills and knowledge in the past can no longer effectively serve the needs of the modern era/labour market (relevance). The concurrent mixed-methods research designed specifically the concurrent triangulation design was adopted for the study. Both close and open-ended questions for lecturers and an interview guide for university administrators (HODs) were the instruments used for the study. The sample consist of 1,915 lecturers, and 40 administrators (HODs) from the universities of Buea, Yaounde II, Douala, Bamenda, Yaounde I, Dschang, Maroua and Ngaoundere. The purposive and stratified sampling techniques was adopted for the study. Data from close ended questions was analysed using SPSS 23.0, with the aid of descriptive and inferential statistical tools while open ended questions and the interview were analysed thematically. The Spearman's rho was used to test the lone research hypotheses formulated in the study. Findings shows that most of the lecturers (73.0%) agree that there is a need for change in teaching methods to enhance relevance of Higher Education and most of the lecturers (74.7%) equally agreed that there is a need for change in universities programmes to enhance relevance of Higher Education. Hypothetically, there is a significant, positive and moderate relationship between pedagogic change and the enhancement of relevance of state Universities (R-value 0.246**, p-value < 0.001 < 0.05) implying that changes in pedagogy will contribute to the enhancement of higher education relevance. It is recommended that; workshops and capacity building programmes should constantly be organized to improve on the pedagogical competences of academic staff. Internship/ placement, field work and industrial training should be actively incorporated in the curriculum for each degree programme where applicable while effective follow up, supervision and monitoring should be accompanied.

1.   Introduction

The need for relevance in the educational system is an uncompleted debate particularly in Africa. The Phelps-Stokes commission report of 1919 and 1922 for education in Africa pointed out as follows: it seems clear that educational polces of the governments and missions have hitherto been inadequate and to a considerable extent, unreal so far as the vital needs of Africa are concerned (Fonkeng, 2010). The Addis Ababa conference on the development of education in Africa in 1961 emphasized on the relevance of HE with the need for the reorganization of education for adaptation to the social, economic and political development of Africans. Another critical area of reform has been the adoption of more student-centred, active learning pedagogies to replace traditional lecture-based instruction (Olaide, 2013). These pedagogic shifts aim to better engage students, develop critical thinking skills, and connect academic content to real-world applications. According to a study by Donkeng (2022) the Cameroonian higher education system has undergone significant changes to better align with national development needs. This includes a focus on professionalization, curriculum reform, and the integration of practical skills into academic programmes, which are essential for addressing the demands of the labour market and fostering economic growth. This has involved introducing new degree programmes in high-demand fields like engineering, information technology, and entrepreneurship, while also revising existing curricula to incorporate more practical, hands-on components. Partnership between universities and industry has been a key strategy to ensure programme relevance and graduate employability (Njeuma *et al.*, 1999).

The Jumptian conference of 1990 and many recent conferences on education in Africa have equally focused on the need for relevance in the educational system a call for pedagogic innovative changes in teaching methods and programmes for the enhancement of relevance of state higher education system in Cameroon. Despite these positive steps, challenges remain in fully aligning Cameroon's state higher education system with national development needs. Inadequate resources, resistance to change, and limited coordination between academic institutions and employers continue to hinder progress (Donkeng, 2022). Ongoing efforts to address these barriers and further enhance pedagogic practices and programme relevance will be critical to strengthening the contribution of state higher education to Cameroon's overall social and economic advancement.

1.1 Context and justification of study

The Sector Wide Approach SWA (2006), depicted that HE system in Cameroon is suffering from inadequacy in teaching programmes, infrastructural resources, funding and teachers' quality thus products of the system find it difficult to integrate into the production sector explaining a need for a drastic change for the enhancement in its relevance (SWA, 2006). It becomes difficult for higher education institutions to meet their objectives. Which are to educate highly qualified graduates and responsible citizens to meet the needs of the fast growing and changing human society and the need of the job market through adequate education financing, updated curricula and accelerated e-learning will help develop skills to meet future workforce demands (Obonyo, 2022). Based on this backdrop this study aims at analysing the need for educational change and the enhancement of relevance of state higher education system in Cameroon. It is hoped that the result from the study and recommendations will improve on the provision of higher education (HE).

MINESUP (2001) in the Law No. 005 of 16th April 2001 on the orientation of higher education in Cameroon, defines the orientation of higher education in terms of teaching, research, and contribution to development and bilingualism and cooperation. In line with the change process for the enhancement of relevance. The law emphasizes that for the relevance of HE to be upheld in terms of skill acquisition and professionalization, it should aim at solving local problems. The absence of this causes the country poor items of economic growth and prosperity. In this light, attention should be on the training and further training of senior staff who are at the forefront of promoting and enhancing higher education relevance by organizing the training of trainers and professionals to meet up the changing needs of the job markets.

In essence, to meet the challenges and expectations of higher education institutions in Cameroon, the issue of enhancement of relevance in higher education must be treated appropriately. When looking at the arena in which higher education and the vast numbers of people who inhabit and work either directly or indirectly in higher education, it is easy to see changes. Within the educational system, the various stakeholders (administrative staff, students, and teachers) have varying problems, needs, views, demands and expectations in view of change. It is believed that education is to develop creativity, skills, employment, professionalization and a sense of initiative in learners (Law No. 005 of 16th April 2001). However, the relevance is still an issue of concern with the challenges and changes in our society today; it requires higher quality of education, levels of learning and advanced knowledge to cope and meet the demands of these realities. Coping with the shift in the teaching learning process recently from just the normal face-to-face to online is one of the most difficult tasks facing educational institutions and its administrative unite (Sato, *et al.,* 2024). Today, higher education operates in an environment which is continually changing and thus needs attention. Therefore, a change in teaching methods and a change in programmes are very significant aspects for and the enhancement of relevance in state higher education system in Cameroon.

This study has as major objective to evaluate how pedagogy and programmes change and enhances the relevance of state higher education system in Cameroon. Specifically, the study investigates:

1. Change in teaching methods and the enhancement of relevance of state higher education system in Cameroon.

2. Change in programmes and the enhancement of relevance of state higher education system in Cameroon.

The main research question of this study was: does pedagogic and programmes change enhance the relevance of state higher education system in Cameroon? Specifically, the following research questions guide this study:

1. How does change in teaching methods enhance the relevance of state higher education system?

2. To what extent does administrative change enhance the relevance of state higher education system?

Based on the above objectives, one general hypothesis was tested which verified the significant relationship between pedagogic change and the enhancement of relevance in state higher education system in Cameroon.

2. Literature review

The imperative for pedagogic change and enhanced relevance within Cameroon's state higher education system has gained significant attention in recent decades. Proponents argue that modernizing teaching methods and realigning academic programs is crucial for developing the necessary knowledge, skills, and competencies for national development is supported by various educational reforms and initiatives (Al-Ansi, 2017). Kam (2008) defines pedagogic change as tasks involved in re-organizing the conventional model of education, from the 'direct transfer' model of broadcast to based teaching, to the interactive (or collaborative) model of knowledge construction. According to Hargreaves (2005), pedagogic change encompasses "changes in teachers' beliefs, knowledge, and practices in relation to teaching and learning." It involves teachers critically examining their instructional approaches, reflecting on their effectiveness, and being open to adopting new methods that better meet the needs of diverse learners. Pedagogic change is driven by the recognition that effective teaching requires adapting to the evolving needs of students, advancements in educational technology, and new insights into how students learn best.

Both state and private HEIs continue to experience rapid and regular changes in their curricula (McShane & Eden, 2015). These changes require teachers to possess the new pedagogic skills and knowledge to implement curricula with fidelity (Wiles & Bondi, 2014). Adopting new curricula is a complex process that significantly relies on teachers' confidence in both the delivery and the purpose of the materials they are using. This confidence is crucial for ensuring accurate implementation and maximizing the effectiveness of the new instructional materials. To build this confidence, it is essential to provide teachers with aligned professional learning opportunities. These opportunities should focus on both content knowledge and teaching strategies within the context of the new materials being used. Curriculum-based professional learning (CBPL) has been identified as an effective approach that combines these elements, helping teachers to feel more competent and prepared (Pickford & Poteet, 2024). Identifying reasons that support or prevent teachers' effective implementation of a new curriculum may provide direction for helping them with curriculum changes. Teachers play a crucial role in the effective delivery of curriculum, which directly impacts student progress and growth. Their ability to implement the curriculum consistently and effectively is essential for fostering an environment conducive to learning. Teachers are responsible for translating curriculum goals into actionable teaching strategies (Hattie, 2009). Their understanding of the curriculum and their students' needs allows them to adapt lessons to ensure that all students can engage with the material effectively. The assertion that teachers will not effectively and efficiently implement new curriculum using old pedagogy reflects a significant concern in educational reform. Simply introducing a new curriculum without corresponding changes in pedagogical approaches can lead to ineffective implementation. Teachers often rely on familiar methods, which may not be suitable for new curricular demands (Tep, 2024).

Concerns have been raised by authors worldwide on the quality of curriculum and programmes offered by HEI with respect to skills needed by graduates to meet the need of the ever-changing society (De la Harpe, *et al.,* 2000), rising need for a pedagogic change. Managers of HEIs in Cameroon have sought to restructure old reforms and introduce new ones in a bid to improve on the quality of HEIs. One of the main goals of the 1993 reforms was professionalization of classical programmes was to make graduates adapted and responsive to the needs of the job market, provide programs that would enable graduates find employment

in the private sector as well as create employment" (Njeuma, *et al.,* 1999). This was justified by the high level of unemployed graduates of higher education due to inadequate skills to meet the demands of the labour market, especially the private sector. Programmes offered in higher education institutions in Cameroon are approved by the Ministry of Higher Education. Generally, universities in Cameroon offer two major categories of programmes which include the classical (non-professional) programmes and professional programmes.

Al-Ansi (2017) maintain that revolutionising teaching methods and realigning academic programs are essential to develop the knowledge, skills and competencies required for national development. There is a recognition that traditional teaching methods may not adequately prepare students for the complexities of the modern job market. Innovative pedagogical approaches, including the integration of technology and active learning strategies, are seen as vital for enhancing student engagement and learning outcomes (Alaa, 2024). However, the implementation and impact of these reforms warrants closer examination. A key focus of pedagogic change efforts has been the shift from traditional lecture-based instruction towards more student-centred, active learning approaches. This shift is intended to foster critical thinking, problem-solving, and the application of knowledge (Tamukong, 2004). Yet, the extent to which these new teaching methods have been systematically adopted across state universities and colleges remains unclear. Institutional resistance, resource constraints, and the predominance of faculty comfortable with familiar lecture formats continue to impede widespread pedagogic transformation (Ramiz & Georgiou, 2014).

Alongside teaching method reforms, state higher education institutions have also restructured academic programs to better align with national development priorities. This has included introducing new degree programs in high-demand fields and revising existing curricula to incorporate more practical, work-relevant content (Njeuma *et al*., 1999). However, the effectiveness of these efforts in enhancing graduate employability and meeting employer needs has been mixed. Inadequate coordination between academia and industry, as well as persistent quality issues in program delivery, have limited the impact. A further critique is that the drive for pedagogic change and program relevance in Cameroon's state higher education system has been overly supply-driven, focused on modernizing educational practices and offerings without sufficiently incorporating the perspectives and needs of students, employers, and other stakeholders. A more participatory, demand-driven approach could help ensure reforms are responsive to the evolving human capital requirements of the Cameroonian economy and society (Donkeng, 2022). Leading Through Learning Global Platform (2024) advocates that university should provide learning opportunities tailored to the needs and capabilities of diverse learners. It should nurture a culture and an environment in which reciprocal learning between students and teachers can take place. Students are actively engaged as co-creators in all aspects of the learning experience, and share the responsibility for their own learning, in partnership with the staff of the institution.

The impact of pedagogic change on the relevance of state higher education systems is of paramount importance. Kaput (2018) found that student-centred learning and the use of technology had a positive impact on student engagement and academic performance. The study also highlighted the importance of interdisciplinary learning in preparing students for the workforce. Furthermore, a report by the National Academies of Sciences, Engineering, and Medicine (2018) emphasized the need for higher education institutions to adapt to the

changing needs of society. The report recommended a shift towards more interdisciplinary learning and the integration of technology in teaching methods to enhance the relevance of higher education.

Change in teaching methods in higher education refers to the evolution of instructional practices and pedagogical approaches that aim to enhance student learning outcomes (National Education Policy, 2021). This change is driven by various factors, including technological advancements, research-based evidence, and student needs and preferences. One of the important changes in teaching methods in the higher education sector, is the shift from traditional lecture-based teaching to student-centred learning approaches. This transformation reflects a broader recognition of the need to engage students actively in their learning processes, thereby enhancing their educational experiences and outcomes (Nurassyl, Zhanat, Rustam, & Vladimir, 2023). Traditional lecture-based methods often result in passive learning, where students receive information without actively participating. In contrast, student-centred learning encourages active engagement, allowing students to take charge of their learning through discussions, group work, and hands-on activities. In this approach, students are actively involved in the learning process, and teachers act as facilitators and guides. This approach emphasizes collaborative learning, problem-solving, critical thinking, and creativity. Another change in teaching methods in higher education is the integration of technology into the classroom. Technology has transformed the way teaching and learning take place by providing new tools and resources that enhance student engagement and interaction. With technology, teachers can deliver content in multimedia formats, use interactive simulations and games to reinforce learning, and provide instant feedback to students (Niyaz, *et al.*, 2014). A further concern is that the teaching method change agenda in Cameroon's state higher education system has been predominantly driven by top-down policy directives, without sufficient consideration of faculty perspectives and classroom realities. A more inclusive, collaborative approach that empowers instructors to experiment with innovative pedagogies and share best practices could foster greater ownership and sustained transformation of teaching and learning (Donkeng, 2022).

Furthermore, there has been a growing emphasis on experiential learning in higher education. This approach involves providing students with hands-on experiences that allow them to apply what they have learned in real-world situations (Thaniya, *et al.,* 2023). Experiential learning can take various forms, including internships, service-learning projects, and research opportunities. Change in teaching methods in higher education is an ongoing process that seeks to improve student learning outcomes. By embracing new instructional practices and pedagogical approaches, teachers can create engaging and effective learning environments that meet the diverse needs of their students (Caduceus International, 2023).

As the world continues to evolve rapidly, the methods of teaching in higher education must also change to keep up with the times. In recent years, a growing trend in education towards student-centred learning, which focuses on engaging students actively in their learning processes. This approach not only enhances student participation but also aims to equip them with the necessary skills for professionalization and effective skills acquisition. Recent studies highlight that higher education institutions are increasingly adopting student-centred methodologies (Kerimbayev et al, 2023). These reforms are designed to create a more interactive and engaging learning environment, which is essential for developing critical

thinking and practical skills among students. Brodowicz (2024) emphasized the importance of practical, real-world applications in higher education. The study found that students who were given opportunities to apply what they had learned to real-world problems were more engaged and motivated in their coursework. Pedagogic change is essential in enhancing the relevance of state higher education systems. Student-centred learning, the use of technology, practical applications, and interdisciplinary learning are all important components of modern teaching methods that can prepare students for the challenges of the future (Bok, 2022).

One of the most significant changes in teaching methods in higher education is the use of technology. With the advent of online learning platforms and educational apps, students can now access course materials and participate in discussions from anywhere in the world (Allen, & Seaman, 2021). This has made education more accessible and convenient for students who may not be able to attend traditional classes. Another important change in teaching methods is the emphasis on practical, real-world applications of course material. Rather than simply memorizing facts and figures, students are encouraged to apply what they have learned to real-world problems and situations. This helps to enhance the relevance of higher education and prepare students for the workforce (Pandya, *et al.*, 2023).

In addition, there has been a shift towards interdisciplinary learning, which involves combining multiple fields of study to solve complex problems. This approach helps students develop critical thinking skills and provides a more comprehensive understanding of the world around them. General changes in teaching methods have enhanced the relevance of higher education and provided students with a more engaging and practical learning experience aligns with current educational research. Modern teaching methods increasingly emphasize student engagement and active participation. This shift from traditional, lecture-based approaches to more interactive and experiential learning environments has been shown to improve student motivation and learning outcomes (Kong, 2021). As technology continues to advance and the world becomes increasingly complex, it is essential that higher education institutions continue to adapt and evolve their teaching methods to meet the needs of their students. The imperative to reform academic programs and enhance their relevance has been a key part of the broader agenda to modernize Cameroon's state-run higher education system. Donkeng (2022) argues that aligning degree offerings and curricula with national development priorities is crucial to produce graduates with the knowledge, skills and competencies required to drive economic and social progress. A major focus of program change efforts has been the introduction of new degree programs in high-demand, career-oriented fields such as business, engineering, and information technology. This is intended to make university education more responsive to evolving labour market needs and improve graduate employability (Njeuma *et al.*, 1999). Yet, the extent to which these new programs have been efficiently and effectively rolled out across the state higher education system remains unclear. Challenges such as inadequate staff expertise, obsolete equipment and facilities, and lack of industry partnerships have hindered the quality and practical relevance of many newly introduced programs. For instance, the integration of quality and safety competencies in nursing education highlights the importance of having qualified faculty and adequate resources to ensure that educational programs meet the necessary standards for preparing students for practice (Ayoko, *et al.,* 2023).

Alongside new program development, state universities have also sought to revise existing academic curricula to incorporate more applied, work-relevant content. This has included increased emphasis on internships, capstone projects, and other forms of experiential learning intended to bridge the gap between theory and practice (Tamukong, 2004). However,

the impact of these curricular reforms in enhancing graduate preparedness for the workforce has been mixed. Persistent misalignment between academia and industry, as well as variable quality of program delivery, have undermined the effectiveness of these efforts. A further critique is that the program change agenda in Cameroon's state higher education system has been overly supply-driven, focused on expanding and modernizing academic offerings without sufficiently incorporating the perspectives and needs of key stakeholders such as students, employers, and regional development authorities. A more participatory, demand-driven approach that actively engages these stakeholders in program design and evaluation could help ensure reforms are responsive to evolving human capital requirements (Donkeng, 2022).

European University Association (2019) holds that a change in programmes will create active and participatory learning in students. Active learning consists of a broad range of pedagogical processes that emphasises the importance of student ownership and activation. It harnesses the benefits of curiosity-driven methods, research-based/problem-based learning and diverse assessment practices, thus stimulating the learner's critical thinking skills. It is defined by a student-centred approach to learning and teaching, in which teachers are seen as facilitators of learning. Freeman, Eddy, McDonough, Smith, Okoroafor, Jordt, & Wenderoth, (2014) indicate that a change in programmes to active learning will work across disciplines, genders and contexts and that it is transformational and long-term. Risk-taking and moving beyond comfort zones is necessary. Students and teachers need to rethink what it means to learn, and that learning is a continuous, life-long process for all. Hence methodologies such as flipped classroom, scenario-based learning, field work, role play, and simulation emphasise innovation and open new possibilities for learning.

To improve on the relevance of higher education, the shift toward a transition pedagogy seeks to capture the entirety of students' experiences and their engagement with their academic programs. This approach should address all dimensions of the student experience, including academic, social, and support elements, while emphasizing the educational context in which students are placed (Kift, 2009a) and includes the co-curricular opportunities offered (outside the formal curriculum) with which students are encouraged to engage. The term 'transition pedagogy' has been coined to express the broader, holistic view of curriculum and the intentional design of learning, teaching and assessment approaches that inform its enactment in ways that acknowledge the reality of the contemporary student context. Specifically, a transition pedagogy seeks to mediate the diversity in preparedness and cultural capital of students. The concern is that if we do not come in from the periphery (for example, of de-contextualised, 'bolt-on' skills courses) and harness the curriculum as the academic and social 'organising device' as the 'glue that holds knowledge and the broader student experience together (McInnis, 2001).

A transition pedagogy in this sense is a logical 'second generation change strategy' that moves beyond the traditional 'first generation approaches' which mainly centred on co-curricular activities (Gale, 2009; Wilson, 2009, 10). A third-generation approach is a further collaborative and strategic leap again that requires whole-of-institution transformation. This optimal approach will only occur when first generation co-curricular and second-generation curricular approaches are brought together in a comprehensive, integrated, and coordinated strategy that delivers quality on its disciplines, programs, and services. Third generation strategies will require an institutional vision for professionalization and skills acquisition for sustainable development that is shared by academic and professional staff who form sustainable partnerships across institutional boundaries to ensure its enactment (Kift,

Nelson, & Clarke, 2010). A transition pedagogy seeks to attend to each of these aspects of student engagement in a coherent, embedded, and integrated way, utilising the curriculum to mediate as many student-institution interactions as possible to enhance the broader student experience.

It has been argued that Higher Education Institutions should listen carefully to the changing needs and expectations of the society. The call for universities to be more responsive when introducing new study programs or courses is increasingly recognized as essential in the current educational landscape. As institutions face rapid changes in job markets and student needs, they must adapt their offerings to remain relevant and competitive. Universities need to align their programs with the interests and career aspirations of students. This involves not only updating existing courses but also creating new ones that reflect emerging fields and technologies (Rosowsky, 2014). Institutions should embrace flexibility in their curriculum design, allowing for innovative approaches that can quickly respond to changes in the job market and societal needs. This includes integrating interdisciplinary studies and modern teaching methods (Clark & Wallace, 2015). To act globally in a competitive environment, the HE institutions must offer programs to students that cover their needs and wishes and meet the 21st century's HE demands (Rae, 2007 & American Council on Education [ACE], 2006). Higher education institutions are increasingly recognizing the necessity to reformat and reorganize their courses, programs, and structures to better serve a new generation of students who are more sophisticated and market-knowledgeable (Oblinger & Oblinger, 2005). Today's students are more informed and have higher expectations regarding their education. They seek programs that not only provide theoretical knowledge but also practical skills that are directly applicable in the workforce. Rosowsky (2014) further stated that HE should respond to students' demands by redesigning or aligning their curriculum to support today's students to fit globally.

Moore (2006) guided that a change in pedagogy should reflect the quality if staff stating that the best-organized institution is worth nothing if it does not have a qualified teaching staff; an unqualified staff means poor teaching and unimaginative research. Bridges (2000) stated that to teach the curriculum including employability skills successfully which is a relevant aspect in education, Universities need to develop the new capacities among their traditional teaching staff and new approaches to their teaching. HE institutions need to develop faculty and staff dedicated to engaging a diversity of learners with more complex learning needs. According to Biggs and Tang (2007), HE Institutions can offer different types of training for their staff so that they can be up to date with current HE environment and can develop themselves where necessary. New generation of staff should consider the education a continuing process. Hence, they always need to develop for being up to date with the current changing HE environment.

From a theoretical point of view, the improvement theory by Benthum, Gulikers, Jong and Mulder (2011) hold that Higher Education Institutions are arguably responsible for bringing changes that will enhance relevance to enable students gain the skills, knowledge and attributes required of them in the initial stages of their careers and for ensuring students' ability to adapt to changing workforce needs. Although not all educators may agree with these changes, most institutions are moving to accept this responsibility. The professionalization of HE programmes through pedagogic changes enhance relevance that was a principal goal during the 1993 reforms, and subsequently MINESUP (2001) law of orientation to HE. This reform emphasized on the professionalization of programmes in HE to meet the changing demands of the labour market. Therefore, this theory of improvement focuses on the need

to change and to improve on the quality of education. Teachers' professionalisation of good practices is very instrumental because of its capability to enhance graduates' professional growth (Imants & Van Veen, 2010). Therefore, the approach and the theory of improvement should be highly reflected in context of educational change for better reforms.

This informs stakeholders that for the enhancement of relevance of HE academic programmes to take place with its objective to improve on graduates' as seen in the 1993 reforms and MINESUP (2001) law of orientation to HE, there is the need to adopt and implement effective change mechanism to improve on teachers' professional competencies. As stated in the Sector Wide Approach to Education (2006), some mechanisms were recommended to improve on HE teachers' quality and one of it is the creation of teacher education centres. Professionalisation of HE academic programmes might be difficult to attain if ways to improve on the teacher's competencies are lacking in educational reforms or if present and not effectively implemented. According to the Law of orientation to HE (MINESUP, 2001), teachers have been described as guarantors of quality education and Hattie (2009) stated that the quality of teachers, quality of the curriculum, the teaching methods, have a larger impact on the relevance of HE system.

The relevance of this theory to the study is that the world has evolved and that the type of university education, skills and knowledge in the past can no longer effectively serve the needs of the modern era/labour market (relevance). It is for this reason that Universities in developing countries like Cameroon must work in close collaboration with other stakeholders like employers, parents, educationists from other advanced countries enjoying huge benefits from their university education systems to improve and uphold relevance in designing their academic programmes.

3. Methodology

The concurrent mixed-methods research design specifically the concurrent triangulation design was adopted for the study. The population of the study comprise of the eight (08) long state universities of Buea, Yaounde II, Douala, Bamenda, Yaounde I, Dschang, Maroua and Ngaoundere. The sample population for the study was made up of 1,915 lecturers and 40 administrators (HODs) from the universities. The purposive and stratified sampling techniques was adopted for the study. Among the 1718 lecturers successfully work with, 14.4% (247) are from University of Yaoundé I̦, 14.3% (246) are from University of Dschang, 14.2% (244) from University of Douala, 12.5% (215) University of Buea, 11.8% (203) from University of Maroua, 11.6% (200) from University of Yaoundé II, 10.9% (187) from University of Ngaoundere and 10.3% (176) from University of Bamenda. Based on gender, 56.5% (970) of the lecturers are male and 43.6% (748) are female. With reference to longevity in service, 32.6% (560) have worked for less than 5 years, 29.0% (499) have worked for 5-10 years, 26.7% (459) have worked for 11-15 years, 7.7% (133) for 16-20 years and 3.9% (67) for above 20 years. Finally, based on professional rank, 19.3% (331) of the lecturers are instructors, 23.0% (395) are assistant lecturers, 33.3% (571) are senior lecturers, 17.2% (295) are associate professors and 7.3% (126) are professors. This implies that Cameroon state Universities has only a small number of professors with plenty of senior and assistant lecturers. Among the 40 administrators' sample, 65.0% (26) are male and 35.0% (14) female. All 40 administrators were head of department (HOD). Based on longevity in position, 22.5% (9) have been HOD for less than 2 years, 27.7% (11) for 3-5 years, 32.5% (13) for 6-7 years and 17.5% (7) for 8 years and above. Finally, based on professional rank of the administrators, 20.0% (8) are

senior lecturers, 52.5% (21) are associate professors and 27.5% (11) are professors. The instruments use for data collection were a questionnaire (closed and open-ended questions) for lecturers and an interview guide for university administrators (HODs). Data from the close ended questions was analysed using SPSS 23.0, with the aid of descriptive and inferential statistical tools while open ended questions were analysed thematically. The hypotheses of the study were tested using a non-parametric test (Spearman's Rho test) presented at 95% level of confidence interval with alpha set at 0.05 levels accepting 5% margin of error.
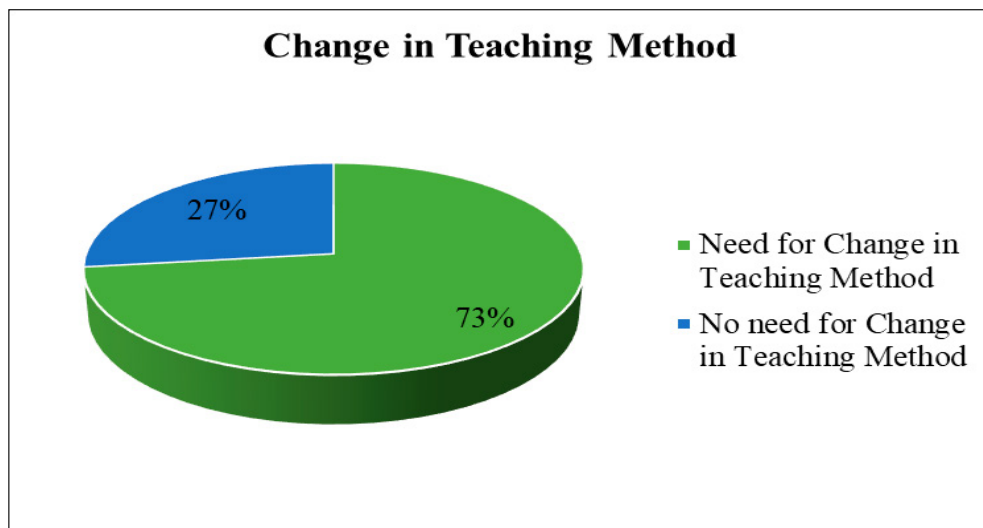
4. Findings and discussion

The findings of the study are presented and supported by literature and the works of other researchers. Quantitative data is presented first followed qualitative data.

4.1 Change in teaching methods and the enhancement of relevance in higher education

The table below depicts lecturers' opinion on change in teaching methods and the enhancement of relevance in higher education.

Table 1: lecturers opinion on change in teaching method and the enhancement of relevance in higher education

Statements	Stretched				Collapsed	
	SA	A	D	SD	SA/A	D/SD
I usually work with colleagues to enhance collaborative pedagogic practice (e.g. Co-teaching and supervision)	1117 (65.0%)	573 (33.4%)	13 (0.8%)	15 (0.9%)	1690 (98.4%)	28 (1.6%)
I provide practical training to students (egg practical work)	852 (49.6%)	795 (46.3%)	58 (3.4%)	13 (0.8%)	1647 (95.9%)	71 (4.1%)
I can teach effectively using online platforms	638 (37.1%)	745 (43.4%)	250 (14.6%)	85 (4.9%)	1383 (80.5%)	335 (19.5%)
Up to date pedagogic materials exist in the university	190 (11.1%)	593 (34.5%)	661 (38.5%)	274 (15.9%)	783 (45.6%)	935 (54.4%)
I evaluate students using online pedagogic platforms such as google classrooms	329 (19.2%)	437 (25.4%)	587 (34.2%)	365 (21.2%)	766 (44.6%)	952 (55.4%)
Multiple Responses Set (MRS)	**3126 (36.4%)**	**3143 (36.6%)**	**1567 (18.2%)**	**752 (8.8%)**	**6269 (73.0%)**	**2319 (27.0%)**

Change in Teaching Method

27%

73%

■ Need for Change in
   Teaching Method

■ No need for Change
   in Teaching Method

Figure 1: Lecturers opinion on change in programmes

This data suggests that the majority (73.0%) of lecturers believe there is a need for change in teaching methods. This indicates that a significant portion of the lecturing population feels that the current teaching approaches could be improved or updated. The student body may be evolving in terms of learning styles, technological familiarity, or other factors that require adjustments to teaching methods. New evidence-based teaching techniques or technologies may have emerged that could enhance the learning experience. Lecturers often express concerns that current teaching approaches may not be as effective as they could be regarding student engagement, knowledge retention, and overall learning outcomes. Research indicates that student engagement is crucial for enhancing learning outcomes. Factors such as the teacher-student relationship and positive teaching behaviours significantly influence students' willingness to participate actively in their learning process. Conversely, negative teaching behaviours can hinder engagement and retention (Li, & Xue, 2023). On the other hand, the remaining 27.0% of lecturers who see no need for change in teaching methods may be satisfied with the current approaches, believe they are still effective, or be resistant to implementing new methods due to factors such as workload, time constraints, or lack of training or support.

Specifically, 98.4% (1690) of lecturers agreed to often work with colleagues to enhance collaborative pedagogic practice. Hargreaves & Fullan (2012) highlight the importance of improving the relevance of higher education to achieve changing need of the society. At the heart of their concern for effective educational change is the crucial role school leadership plays, building a shared vision and collaborative environments for development and learning in and across schools (Harris, *et al.,* 2002).

Similarly, 95.9% (1647) of lecturers accepted to provide practical training to students. Also 80.5% (1383) of lecturers accepted to teach effectively using online platforms while 19.5% (335) denied. In support of this, the idea that a change in teaching methods should reflect teacher quality is supported by various educational theories and research findings (Machost & Stains, 2023). This perspective emphasizes the importance of aligning instructional strategies

with the competencies and effectiveness of educators. Engaging in reflective practices allows teachers to assess their effectiveness and make necessary adjustments to their teaching methods. This process not only enhances their teaching quality but also fosters a culture of continuous improvement within educational institutions. One of the notions of the improvement theory of Benthum, Gulikers, Jong and Mulder (2011) is centred on improving teachers' professionalism for enhancement of quality. The implication here is that the adoption of changes in pedagogy without looking at the teacher factor is more likely to be unattainable and this justifies the reason why the employment of trained and competent teachers appears as one of the frequently mentioned changes in pedagogy needed.

Furthermore, 54.4% of lecturers disagreed that they have up-to-date pedagogic materials available in their universities indicates that there is still a significant gap in access to modern, relevant teaching resources. This could be a barrier to implementing more interactive, student-centred teaching approaches, as mentioned in the previous paragraphs. The fact that 55.4% of lecturers disagreed that they use online platforms like Google Classroom to evaluate students suggests that the integration of educational technologies for teaching and assessment is not yet widespread. This aligns with the challenges discussed earlier around the effective deployment of technology in Cameroon's state higher education institutions (Mbakwa, 2019). Improving access to up-to-date, high-quality teaching and learning materials, whether in physical or digital formats. This could involve increasing funding for resource development and procurement, as well as strengthening faculty capacities to curate and create relevant pedagogic materials. Accelerating the adoption of online and digital tools for teaching, learning, and assessment. This would entail addressing the infrastructure gaps, digital skills deficits, and technical support issues that have hindered the effective integration of educational technologies, as discussed earlier. ALAIR (2000) defines information literacy as the ability to identify an issue and then to identify, locate and evaluate relevant information to solve it. Information Literacy empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goal Kumar (2018) holds that a change in teaching methods gives university teachers more impetus to effective instruction, and Logvinova, Vittenbek & Ivanova (2020) said an active university-level instructor needs desirable pedagogy changes.

4.2 Change in programmes and the enhancement of relevance in higher education

The table below depicts lecturers' opinion on change in programmes and the enhancement of relevance in higher education.

Table 2: Lecturers opinion on change in programmes and the enhancement of relevance in higher education

Statements	Stretched				Collapsed	
	SA	A	D	SD	SA/A	D/SD
Restructuring of pedagogic reforms will improve on the relevance of higher education	1182 (68.8%)	468 (27.2%)	43 (2.5%)	25 (1.5%)	1650 (96.0%)	68 (4.0%)

Statements	Stretched				Collapsed	
	SA	A	D	SD	SA/A	D/SD
The quality of university programmes today requires a need for a pedagogic change.	1105 (64.3%)	486 (28.3%)	93 (5.4%)	34 (2.0%)	1519 (92.6%)	127 (7.4%)
The university curriculum is relevant to the needs of society (e.g. job creation and employment)	334 (19.4%)	754 (43.9%)	466 (27.1%)	164 (9.5%)	1088 (63.3%)	630 (36.7%)
Educational programmes are built to meet the demands of the labour market	252 (14.7%)	804 (46.8%)	525 (30.6%)	137 (8.0%)	1065 (61.5%)	662 (38.5%)
University programmes make graduates responsive to the needs of the job market	221 (12.9%)	828 (48.2%)	453 (26.4%)	216 (12.6%)	1049 (61.1%)	669 (38.9%)
Multiple Responses Set (MRS)	**3067 (35.7%)**	**3340 (39.0%)**	**1580 (18.6%)**	**576 (6.7%)**	**6407 (74.7%)**	**2156 (25.3%)**
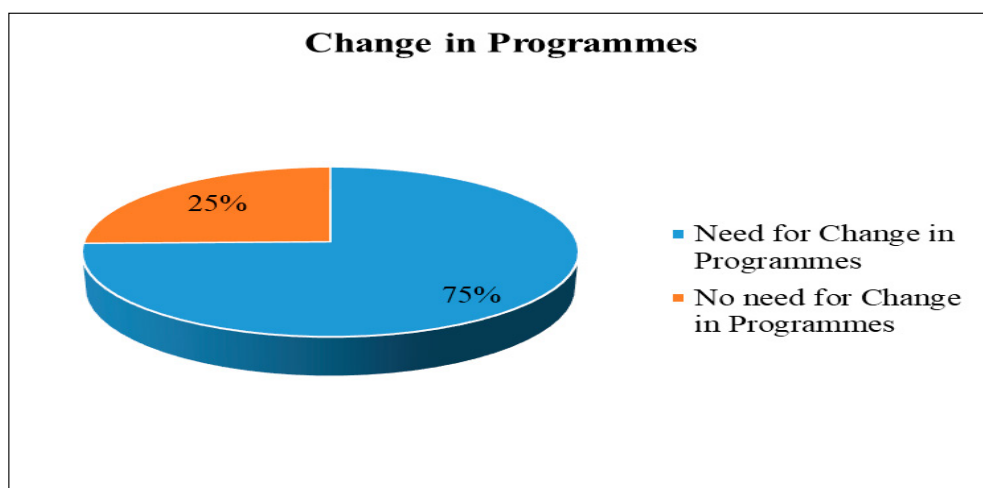
Figure 2: Lecturers opinion on change in programmes

In aggregate, 74.7% of lecturers indicate the need for change in programmes while 25.3% saw no need. Specifically, 96.0% (1650) accepted that restructuring of pedagogic reforms will improve on the relevance of higher education. The University of Buea's strategic plan of (2007-2015) defines the roadmap for achieving the 2015 objectives set out in the education sector policy of Cameroon and defined more rigorously in the 2001 and 2005 texts related to higher education in Cameroon (UB annual report 2009/2010). According to the plan, the university takes the opportunity to grow from a mainly teaching to a teaching, research and service university. The plan therefore makes provisions for restructuring of teaching, research and service.

Similarly, 92.6% (1519) of lecturers agreed that the quality of university programmes today requires a need for a pedagogic change. Smith (2017) highlighted the necessity for universities to embrace pedagogical changes to ensure that their programs are aligned with the needs of today's students and the job market. Johnson *et al.* (2020) demonstrated that pedagogical

changes, such as incorporating active learning strategies and technology-enhanced teaching methods, can significantly enhance the quality of university programs and better meet the needs of diverse student populations. Also 63.3% (1088) accepted the university curriculum as relevant to the needs of society while 36.7% (630) denied. Recently, techniques for strategic planning, management by objectives, skills and results, as well as quality assessment and relevance have been incorporated to ensure that the standard of higher education doesn't drop (Escotet, 2006).

Furthermore, 61.5% (1065) said educational programmes are built to meet the demands of the labour market while 38.5% (662) denied. Several scholars have emphasized the importance of ensuring that educational programs are designed to meet the demands of the labour market. For example, a study by Carnevale, Smith, and Melton (2011) highlighted the growing importance of aligning higher education with workforce needs, emphasizing that educational programs should equip students with the skills and knowledge required by employers. Conversely, some scholars have expressed concerns about the disconnect between educational programs and the labour market. For instance, a study by Arum and Roksa (2011) raised questions about the extent to which traditional higher education programs adequately prepare students for the realities of the labour market, pointing to potential gaps in skills and competencies. The finding that a significant proportion of respondents denied that educational programs are built to meet the demands of the labour market reflects ongoing debates and concerns in the literature regarding the alignment of higher education with workforce needs.

Finally, 61.1% (1049) accepted that University programmes make graduates responsive to the needs of the job market while 38.9% (669) disagreed. Previously, De la Harpe, Radloff, and Wyber (2000) did not only raise a concern about the curriculum but, also about programmes quality before then, one of the main goals of the 1993 reforms was the professionalization of classical programmes and made graduates adapted and responsive to the needs of the job market and, the professionalisation of programmes was one of the pedagogy changes that many of the lecturers were calling for. The quality of every society is largely predicated on the quality of its educational system thus, the need for pedagogy change in our state Universities cannot be over-emphasized.

Table 3:   Changes lecturers expect from university pedagogy

Themes	Quotations
More infrastructures (Classrooms, library, offices, laboratories	*"Expect more classrooms, offices for lectures, and more up-to-date books in the library."*
	'More investment in the construction of classrooms and research funding."
	'Increase in work infrastructure to better schedule classes and even avoid overcrowding in the classroom."
	'Improve infrastructure and increase quality of human resources"
	"Improve infrastructure, lecture halls, and classrooms, and Modernize teaching materials. Focus on practical training"
	"Library equipment and infrastructure development of the work environment."
	'All Cameroonian universities have to improve investments on libraries".

Themes	Quotations
Teachers' training and employment	*"Training of trainers"*
	"The employment of more teachers"
	'More pedagogic training for university teachers"
	'Recruitment of more lecturers"
	'Employ lecturers who can best explain to the students understanding.
	"Lecturers should explain well for students to comprehend not reading notes given to students as a passage.".
	"Pedagogic seminars for university staff."
	'Qualified and experienced teachers are needed"
	"Recruit qualified and competent lecturers teach students how to create jobs instead of becoming job seekers"
Digitalisation of teaching, learning	*"Computerize the university systems"*
	"The real computerization of teaching by computer laboratories, and video projectors in the classroom"
	"The teaching-learning process should be computerized."
	'To digitalise courses."
	'Digital teaching equipment should be provided".
	'Remote monitoring of students (techno pedagogy) The improvement of distance courses."
	'Recommend full implementation of digital learning."
Professionalisation of programmes	*"Revision and professionalism of academic programs"*
	"The professionalization of teaching."
	"Professionalize teaching to be more and more competitive in the job market"
	'Give more and more effective place to the professionalization of teaching"
	'Lecturers should be professional to implement professionalization. The university should be more supportive and provide facilities needed to make professionalization real."
	'Actual professionalization of every program"
Practicalisation of courses	*"Making courses: more practical lessons to meet business needs.'*
	'Get most practical done and work in collaboration with experts / job market."
	'The University should go beyond theory to practice."
	'Avoid theories and add emphasis on practical"
	'More practical sessions should be introduced"

Themes	Quotations
Curriculum modification	*"The modification of curricula"*
	'Curriculum reform"
	"We need an innovative curriculum that meets today's needs."
	'More of practical work should be included in the higher education pedagogy"
	'Review programs adapted to the world and the need for employment"
	'An update or revision of the quality of university programs to respond to the demand of the job market."
	'The curriculum should be the need of the society"
Modern didactic materials	*"Provision of teaching materials."*
	'More availability of teaching materials."
	'Course content: books and adequate equipment for courses."
	'Provision of more didactic materials"
	'Change outdated didactic materials"
	'Bring in modern pedagogic materials."
	'Make available modern didactic materials."
Supervision, follow up and monitoring	*"Permanent monitoring (control) of teaching coupled with pedagogical teaching for new teachers."*
	'Effective follow up"
	'Monitoring teaching and learning"
	'Effective monitoring of the teaching and learning process."
	"The Dean should make sure teachers handle the various courses well"
Intensify internship	*"Internship partnerships with companies"*
	'Practical and internships should be intensified to the needs of the student and society."
	'That the university should try to put more emphasis on practice by finding internships for students."
	"More internships that can go for two years"
Equipping library	*"The library should be well equipped with textbooks.*
	'The library should be equipped for students."
	"Library should also be well equipped."
	'Libraries should be made available and well equipped"
	"The library should be well equipped".
Teaching method	*"Changes in teaching methods and certain teaching programs that do not match the offers on the labour market."*
	"Change of teaching method or approach"

Themes	Quotations
Collaboration with private sector, industries	*"To create a collaborative platform with enterprises and private sector individuals to facilitate the social rehabilitation of students."* *"More integration between the university and industry for a better curriculum."* *'Involvement of professionals and economic operators in the drawing of programmes."*
Good internet and Online platforms	*'Quality of the internet connection"* *"Online platforms should be provided in universities"*

Based on changes required in pedagogy, many of the lecturers said more infrastructure (Classrooms, library, offices, laboratories) be provided. More qualified and trained teachers be employed. The need for more and better-equipped classrooms, libraries, offices, and laboratories has been highlighted. This aligns with research showing that adequate academic infrastructure is crucial for effective teaching and learning (Gbadegesin & Okonkwo, 2017; Olutola & Olatoye, 2015). Employing more qualified and trained teachers is recommended. Studies have demonstrated the positive impact of highly skilled and motivated faculty on student outcomes (Darling-Hammond, 2000; Ingersoll & Strong, 2011).

Some said teaching and learning be digitalised, academic programmes be professionalised, courses should be made more practical, curriculum reform be carried out, modern and adequate teaching resources be provided. The call for increased digitalization of teaching and learning processes reflects the growing importance of technology in education. Effective integration of digital tools can improve engagement, collaboration, and access to information (Tondeur *et al.*, 2017). The suggestion to professionalize academic programs may involve aligning curricula with industry needs, emphasizing practical skills, and fostering stronger industry-academia collaboration. This is supported by research on the benefits of such approaches (Okolie *et al.*, 2019).

Also, others said supervision, follow-up and monitoring of teachers and students be adequately carried out. Others said internships should be intensified, library be well equipped with books for students and teachers, teaching methods be change, and there should be adequate collaboration between universities and private sectors and industries. Enhancing internship opportunities and promoting stronger collaboration between universities and the private sector/industry can improve the practical relevance of education and facilitate the transition from academia to the workforce (Okolie *et al.*, 2019). Well-stocked and well-equipped libraries are essential for supporting student and faculty research and learning. The importance of libraries in higher education is well-documented (Sarkar & Banerjee, 2023).

Equally that supervision, follow-up and monitoring of teachers and students be adequately carried out, youth service should be introduced, internships be intensified, library should be well equipped with books for students and teachers. Teaching methods change, indication that *"Changes in teaching methods and certain teaching programs that do not match the offers on the labour market."* Research has shown that the use of innovative, student-centred teaching methods can improve engagement, critical thinking, and problem-solving skills. Methods

such as problem-based learning, flipped classrooms, and interactive teaching have been found to improve academic performance and cultivate critical thinking skills among students. These approaches encourage active participation and collaboration, which are essential for developing higher-order cognitive skills (Bhuttah, *et al.*, 2024). The implementation of student-centred teaching methods has been linked to increased student engagement and improved learning outcomes. To further crave for the need of change in pedagogy to enhance relevance. Proper collaboration with the private sectors, and industries will enable policy makers to know the demands of the job market and the type of programmes to incorporate in the curriculum. Other pedagogy changes mentioned are the non-employment of aged lecturers, collaboration among lecturers, provision of good internet connection, and the availability of online platforms. Fostering stronger collaboration between universities and private sectors/industries can help policymakers better understand the skills and knowledge required by the job market, enabling them to design more relevant academic programs and curricula (Okolie *et al.*, 2019). Ensuring reliable internet access and the availability of online platforms can enhance the integration of digital technologies in teaching and learning, which has been shown to improve engagement, collaboration, and access to information (Tondeur *et al.*, 2017).

Among the lecturers who saw the need for change in pedagogy, many of these lecturers and administrators said more infrastructure (Classrooms, libraries, offices, laboratories) should be provided *"Improve infrastructure, lecture halls, and classrooms, and Modernize teaching materials"*, more qualified and trained teachers should be employed, teaching and learning should be digitalised, academic programmes be professionalised, and courses should be made more practical. Ensuring that teachers are well-qualified and have access to ongoing professional development is crucial for improving teaching quality and student learning outcomes (Ingvarson *et al.*, 2005). The integration of digital technologies in education can enhance teaching and learning by promoting interactivity, access to information, and the development of digital skills (Tondeur *et al.*, 2017). Professionalizing academic programs, by aligning them more closely with the demands of the job market, can help prepare students for successful careers and improve their employability.

They also recommended curriculum reform be carried out as indicated '*More of practical work should be included in the higher education pedagogy and Review programs adapted to the world and the need for employment.* Modern and adequate teaching resources be provided; lecture halls should have public address systems to ease the teaching learning process in large class size. Regularly reviewing and updating the curriculum to ensure its relevance and responsiveness to the changing needs of society and the job market is crucial for improving the quality and effectiveness of higher education (Stark, 2000). Safeguarding that teaching materials and resources, such as public address systems in lecture halls, are modern and adequate can significantly enhance the teaching and learning process, especially in large class sizes (Yelkpieri, *et al.,* 2012). Modern public address systems improve the clarity of communication between instructors and students, which is crucial in large lecture halls where distance can hinder auditory comprehension. Clear audio helps maintain student engagement and reduces misunderstandings.

Other pedagogy changes mentioned are non-employment of aged lecturers, the use of microphones in teaching, provision of good internet connection and the availability of online platforms. In this light, Marcia & Gayani (2010) investigated the criteria of effective teaching in a changing higher education context, and their findings revealed that, context is critical, and universities must continually respond to the contexts in which teaching and learning are

undertaken to remain relevant. The current challenges of the 21st century, the Sustainable Development Goals, and Agenda 2030 as well as Agenda 2063 have all mentioned the need for quality higher education with the notion to ensure relevance in relation to the present and future challenges.

Table 4: *Changes administrators expect in university pedagogy*

Themes	Quotations
More practical than theory	*"The system is more theoretical oriented than practical"*
	'Schools should have laboratory to build more of practical skills in students"
	'The duration for practical skills is so limited and at the end students live the University with mostly theories"
	"A practical system of one-year youth services should be introduced in the HE education system of Cameroon to better build practical skills in students"
	'Universities should have practicing schools or institution attach to them for effective practical and problem-solving skills in students"
	'With respect to change in curriculum students can't be competent without practical skills'
Professionalisation of programmes	*"Also, the pedagogy should build in students Job creation skills and not just Job seeking like what we have in our HE"*
	'Students will be more professionalized"
	"Most programs should be professional in our HE system if really we want to enhance relevance."
	"Professionalization of graduate studies"
	"Professionalization of higher cycles"
	'There should be the professionalization of universities programmers"
Employ competent teachers	*"Competent teachers should be taken in the university system"*
	"Bring in competent teaching staff (lecturers who have knowledge on subject matter)"
	"More qualified teachers should be brought in the university system"
	'Reinforce the capacities and quality of lecturers"
Teaching method	*"Change in teaching methods that will place students at the centre"*
	'New didactic tools and innovative teaching strategies"
	"Teaching and learning ought to be more student-centred"
Curriculum	*"There should be a change in the curriculum for HE. It should be more scientific oriented, more practical oriented, job oriented. It should meet the need of the Cameroonian society"*
	'Pedagogy and course design need to change"
Digitalisation	*"Introduction of assistive technology"*
	"Effective incorporation of Technology-based learning"
	"Teaching and learning using modern technologies, especially ICT devices"

Themes	Quotations
Increase internship duration	*"The duration of practice or internship programmes should be a full academic year like that of Nigeria"*
Collaboration among lecturers	*"Expect more collaboration among lecturers"* *"Some collaboration among lecturers"*
Incorporation of youth service	*"The youth services should be introduced to the University system of education so that after three years of class work they are sent out for one-year practice skills"*
Encouragement of assignment to students	*"More should be done on Individualized learning through assignments"*
Distance learning	*"Distance learning courses should be introduced"*

Furthermore, based on changes in pedagogy that administrators expect in university pedagogy, just like the lecturers, many of the administrators said training should be more practical than theoretical to empower students with practical skills, programmes be professionalised to enable graduates acquire job creation skills, and competent and qualified lecturers be employed. The emphasis on more practical-oriented training, as opposed to a purely theoretical approach, is well-supported by research. Hands-on, experiential learning has been shown to better prepare students for the demands of the workplace and enhance their employability. This approach allows students to engage directly with real-world scenarios, which not only helps them apply theoretical knowledge but also develops essential skills that are highly valued by employers (Spanjaard, *et al.,* 2018). This method is particularly effective in career development, as it immerses students in actual work environments, allowing them to acquire and apply relevant skills. Many educational institutions are recognizing the value of integrating experiential learning into their curricula. Programs designed to enhance career readiness often include components that provide students with practical experiences, thereby bridging the gap between academic learning and workplace demands (Shore & Dinning, 2023).

Changing of teaching method to learner centred, improvement in curriculum, digitalisation, increase duration of internship, collaboration among lecturers, incorporation of youth service, encouragement of individual assignment to students than group work and incorporation of distance learning are other pedagogic changes reported by some administrators. Regular review and updating of the curriculum, as mentioned in the previous response, is essential for ensuring the relevance and effectiveness of higher education programs (Stark, 2000). Encouraging collaboration among lecturers can foster the sharing of best practices and the development of innovative teaching strategies (Pataraia *et al.*, 2015). Integrating youth service programs into the curriculum can help develop students' civic engagement, leadership skills, and sense of social responsibility (Moely *et al.*, 2002).

The world depends on higher education as a major contributor to economic growth, development, and manpower production. Therefore, it will be important for our higher education system in Cameroon to embark on pedagogic changes to enhance relevance now and in the future. In support of the above, McShane and Eden (2015) said both state and private HEIs continue to experience rapid and regular changes in their curricula, and, Wiles and Bondi (2014) said these changes require teachers to possess the new pedagogic skills and knowledge to implement curricula with fidelity. This point ties to one of the calls, many of the lecturers said the university needs to train and employ more competent lecturers which

constitutes one of the pedagogy changes. This is to say that higher education relevance cannot be enhanced without the presence of well-trained and competent lecturers in the institution.

Teacher quality does not only influence curriculum, but it enhances the potential for research, consultancy, and extension, best use of infrastructure and learning resources, student support and progression, leadership and good governance, innovations, and best practices. Digitalisation, improvement in infrastructures, practicalisation of courses and teaching, and use of modern resources are some pedagogy changes frequently mentioned. Fullan (2007) in *The New Meaning of Educational Change* indicates that change in education is about bringing or harnessing relevance from the perspective of students to the national government, and various types of change agents.

Fullan's model in recent years has reiterated the need for educational change for the attainment of skills and professionalization to meet the changing demands of globalisation and digitalisation. Thus, a change in pedagogy, for example, will not only enhance the relevance of HE but will most importantly revitalize the system that will benefit the citizens (graduate employability) through high-quality teaching, research, and outreach for eventual sustainable economic, political, and socio-cultural development.

Table 5:   Administrators opinion if changes in university pedagogy would enhance higher education relevance

Pedagogy changes would enhance HE relevance	Themes	Quotations
Yes	**Job creation by students**	*"Yes, I strongly believe that if we professionalise our educational programs students will be able to create jobs after graduation instead of looking for jobs"*
		'It will provide a way through which graduates from higher education will acquire knowledge and skills that are of positive values to themselves and the society in which they live. And thus, help them to be job creators rather than job seekers"
	Meet societal needs/solving society problems	*"The relevance of HE can really be enhanced if we design our pedagogy to meet the need of our own society"*
		'The university curriculum will become more society centred"
		'It will solve societal problems"
		'The university pedagogy will become more society centred"
	Foster practical skills in students	*"If we use practical teaching method the students will lean practical skills which will enable them to be problem solvers and job Creators"*
	Employability	*"Yes, I think changes in the university pedagogy can enhance the relevance of the higher education system in Cameroon in that it will be able to graduate more people into the job market"*
		"Yes, I think changes in the university pedagogy can enhance the relevance of the higher education system in Cameroon. The system should be able to graduate more people into the job market"
	Promote entrepreneurship	*"It will enable graduates to be able to create businesses for themselves"*
	Enhance teachers' effectiveness	*"Changes in university teaching learning process or pedagogy will enhance teachers' effectiveness"*
		'Yes, more improvement in the teaching and learning process would help boost the competence of learners and staff again at the end of the day"
		"I think that if our university system changes and effectively implement its pedagogy it will lead to productivity on both the part of the teachers and the students"
	Improve graduate quality	*"Yes, increased positive changes in the teaching-learning process will improve the quality of graduates discharged every year in many higher education institutions"*
	International competitiveness	*"Global learning to enhance students' ability to participate in a globally interconnected world"*
	Improve teaching efficiency	*"Yes, because changes in university pedagogy will lead to efficiency in the teaching learning process'*
No		*"I don't think so"*

Furthermore, many of the administrators said changes in pedagogy will enhance higher education relevance in that graduates will become job creators and not job seekers, the University will better address societal problems, it will foster practical skills in students, enhance employability of graduates, promote entrepreneurship in students. This is in line with current global trends in higher education, by which several academic disciplines are merged to create new and relevant knowledge (Vermeulen, *et al.,* 2014). The global development agenda greatly focuses on science, technology, engineering, financial literacy, mathematics and entrepreneurship (Montanini, 2013; Mujtaba & Reiss, 2015).

Also, some said it will enhance effectiveness of teachers and teaching efficiency, improve on graduate quality, and will enable graduates to compete internationally. Higher education does not just widen the opportunities of graduates to access employment; it is the main provider of the human capital needed by the economy of every country for effectiveness and efficiency in the labour market (Etomes, 2021).

Others indicated that the change in university pedagogy especially the teaching method will better address societal problems *"If we use practical teaching methods the students will lean practical skills which will enable them to be problem solvers and job Creators".* It will foster practical skills in students, enhance the employability of graduates, promote entrepreneurship in students, enhance the effectiveness of teachers and teaching efficiency, improve graduate quality, and will enable graduates to compete internationally. Walton Family Foundation (2022) says change is an ongoing process of delivering, an innovation to better the educational system for skills and professionalization. The origins of a change and its nature will clearly affect teachers' responses, practical teaching methods, subject leaders' approaches to managing the change for a better system of education.

5. Verification of hypothesis: There is no significant relationship between pedagogic change and the enhancement of relevance of state higher education system

Table 6: Relationship between Pedagogic Change and the Enhancement of Relevance of State Universities

		Pedagogic changes	Enhancement of higher education relevance	Explanatory power of relationship in terms of percentage (Nagelkerke statistics)
Spearman's rho	R-value	1	.246**	36.3% (0.363)
	p-value	.	.000	
	N	1718	1718	

**. Correlation is significant at the 0.01 level (2-tailed).

The hypothetical statistics showed that there is a significant, positive and moderate relationship between pedagogic change and the enhancement of relevance of state Universities (R-value 0.246**, p-value < 0.001 < 0.05). The positive sign of the correlation value implies that changes in pedagogic will contribute to the enhancement of higher education relevance and this is supported with an explanatory power of 36.3% (Nagelkerke statistics= 0.363). Thus, the null hypothesis was rejected while the alternative that states there is a significant relationship between pedagogic change and the enhancement of relevance of state Higher Education

system was accepted. Besson, Huber, Mompoint-Gaillard, & Rohmann (2014) holds that for relevance in HE to be upheld to meet the changing need of the society attention should be on pedagogic change. These forces also bring about the need for educational change. In educational institutions, changes are imposed from outside or motivated by internal pressure. The goal of change is to make practice better or more effective in the work. The findings are consistent with the literature on the importance of pedagogic change in improving the relevance of higher education. Researchers have emphasised the need for universities to adapt their teaching and learning practices to meet the evolving needs of students, employers, and society (Biggs & Tang, 2011; Ramsden, 2003). The study's results further corroborate this notion, suggesting that changes in pedagogy can contribute to enhancing the relevance of state universities.

6. Conclusion

Based on the findings, the study highlights the importance of adapting higher education to meet the changing needs of society. This requires the implementation of innovative teaching methods and programs to ensure that higher education remains relevant. The improvement theory by Benthum, Gulikers, Jong and Mulder (2011) hold that Higher Education Institutions are arguably responsible for bringing changes that will enhance relevance to enable students gain the skills, knowledge and attributes required of them in the initial stages of their careers and for ensuring students' ability to adapt to changing workforce needs. Although not all educators may agree with these changes, most institutions are moving to accept this responsibility. The professionalisation of HE programmes through pedagogic changes enhance relevance that was a principal goal during the 1993 reforms, and subsequently MINESUP (2001) law of orientation to HE.

7. Recommendations

It is recommended that entrepreneurship should be taught at all levels of study. For policy makers, the curriculum for academic programmes should address technical skills to enhance employability of graduates. More classrooms should be constructed to prevent students from standing during classes in most cases and equipment and accessories for the 21st century classroom should be provided. For teachers, workshops and capacity building programmes should constantly be organised to improve on the pedagogical competences of academic staff. There should be adequate collaboration between universities, private sectors, and industries. For students, internship/placement, field work and industrial training should be actively incorporated in the curriculum for each degree programme where applicable while effective follow up, supervision and monitoring should be accompanied.

Acknowledgment

References

Alaa, A. H. 2024. Innovative teaching methods enhancing engagement and learning outcomes. Al-Iraqa Foundation for Culture and Development website (scientific website), 3, 1-33. https://www.researchgate.net/publication/382241063

ALAIR 2000. *Information Literacy Competency Standards for Higher Education.* ALAIR http://hdl.handle.net/11213/7668

Al-Ansi, A. M. 2017. Reforming education system in developing countries. *International Journal of Education and Research*, 5(7). 349-366 www.ijern.com

Allen, I. E., & Seaman, J. 2021. *Digital learning compass: Distance education enrollment report 2021.* Babson Survey Research Group.

American Council on Education [ACE] 2006. *Addressing the challenges facing American undergraduate education.* http://www.acenet.edu/am/template.cfm?section=home&contentid=18299&template=/cm/contentdisplay.cfm.

Ayoko, V O., ThankGod, P. & Oluwaseun, J. D. 2023. Inadequacy of infrastructural facilities in public universities in nigeria: causes, effects and solutions. *International Journal on Integrated Education*, 6(3), 36-45. https://journals.researchparks.org/index.php/IJIE

Benthum, N.V., Gulikers, J., Jong, F.D. & Mulder, M. 2011. *A theory of improvement for teacher professional development in assessment for learning*. EAPRIL.

Besson, B., Huber, J., Mompoint-Gaillard, P. & Rohmann, S. 2014. *Education for change, Change for education.* Council of Europe. https://rm.coe.int

Bhuttah, T.M., Xusheng, Q., Abid, M.N. & Sharma, S. 2024. Enhancing student critical thinking and learning outcomes through innovative pedagogical approaches in higher education: the mediating role of inclusive leadership. *Scientific Reports,* 14, 24362. https://doi.org/10.1038/s41598-024-75379-0

Biggs, J., & Tang, C. 2011. *Teaching for quality learning at university: What the student does (4th ed.).* McGraw-Hill Education.

Bok, D. 2022. *Higher education in America (2nd ed.).* Princeton University Press.

Bridges, W. 2000. *Transitions: Making sense of life's changes.* Da Capo Lifelong Books.

Brodowicz, M. 2024. *The Importance of practical experience in the field of education.* https://aithor.com/essay-examples/the-importance-of-practical-experience-in-the-field-of-education

Caduceus International 2023. *Pedagogical approaches to teaching in higher education.* https://www.cipcourses.com/blog/pedagogical-approaches-to-teaching-in-higher-education.

Clark, S. G. & Wallace, R. L. 2015. Integration and interdisciplinarity: concepts, frameworks, and education. *Policy Sciences,* https://doi.org/10.1007/s11077-015-9210-4.

Darling-Hammond, L. 2000. Teacher quality and student achievement: A review of state policy evidence. *Education policy analysis archives,* 8, 1. https://epaa.asu.edu/ojs/article/view/392. https://doi.org/10.14507/epaa.v8n1.2000

De La Harpe, B., Radloff, A. & Wyber, J. 2000. Quality and generic (professional) skills. *Quality in Higher Education,* 6(3), 231-243. https://doi.org/10.1080/13538320020005972

Donkeng, N. A. 2020. Cameroon's higher education reform for socio-economic relevance and recommendations based on China's experience—A summary. *Journal of Sino-African Studies*, 1(1),195–204. https://doi.org/10.56377/jsas.v1n1.9504

Escotet, M. A. 2006. University Governance, Accountability and Financing, In GUNI (ed.), *Higher education in the world 2006: the financing of universities*. Palgrave Macmillan.

Etomes, S. E. 2021. Skills acquisition and labour market opportunities for graduates of higher education in Cameroon. *African Journal of Development Studies*, 11(1), 251-274. https://doi.org/10.31920/2634-3649/2021/v11n1a12.

European University Association 2019. *EUA Annual Report 2019. In 2019, the university sector in Europe was bracing for change: a new European Parliament.* European University Association https://www.eua.eu/publications/reports/eua-annual-report-2019.html

Fonkeng, G.E. 2010. *The History of Education in Cameroon, 1884-2010. Maryland* Press.

Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. 2014. Active learning increases student performance in science, engineering, and mathematics. *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 111(23), 8410–8415. https://www.pnas.org/doi/10.1073/pnas.1319030111.

Fullan, M. 2007. *The new meaning of educational change (4th ed.).* Teachers College Press.

Gale, T. 2009. Towards a southern theory of student equity in Australian higher education: Enlarging the rationale for expansion. *International Journal of Inclusive Education,* 13(5), 481-496. https://doi.org/10.4471/rise.2012.14

Hargreaves, A. 2005. Educational change takes ages: Life, career and generational factors in teachers' emotional responses to educational change. *Teaching and Teacher Education,* 21(8), 967–983. https://doi.org/10.1016/j.tate.2005.06.007.

Hargreaves, A., & Fullan, M. 2012. *Professional capital: Transforming teaching in every school*. Teachers College Press. https://doi.org/10.1080/15582159.2012.733288

Harris, A., Day, C., Hopkins, D., Hadfield, M., Hargreaves, A. & Chapman, C. 2002. *Effective leadership for school improvement.* Routledge. https://doi.org/10.4324/9780203754849

Hattie, J. 2009. *Visible learning: a synthesis of over 800 meta-analyses relating to achievement.* Routledge. https://doi.org/10.4324/9780203887332

Imants, J. & Van Veen, K. 2010. Teacher learning as workplace learning. In E. Baker, B. Mcgaw & P. Peterson (Eds), *International encyclopaedia of education, 3rd Ed. (Pp. 569-574).* Elsevier Scientific Publishers. https://doi.org/10.1016/B978-0-08-044894-7.00657-6

Ingersoll, R. M., & Strong, M. 2011. The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of educational research,* 81(2), 201-233. https://doi.org/10.3102/0034654311403323

Ingvarson, L., Beavis, A., & Kleinhenz, E. 2005. Factors affecting the impact of teacher education programmes on teacher preparedness: Implications for accreditation policy. European *Journal of Teacher Education,* 28(2), 119-143. https://doi.org/10.1080/02619760701664151

Kam, H. V. 2008. *E-Portfolio and Pedagogical Change for Virtual Universities.* University of Macau Press. https://doi.org/10.4018/978-1-59904-885-7.ch067

Kaput, K. 2018. *Evidence for Student-Centered Learning.* Education Evolving. www. educationevolving.org.

Kerimbayev, N., Zhanat, U., Rustam, S. & Vladimir, J. 2023. A student-centered approach using modern technologies in distance learning: a systematic review of the literature. *Smart Learning Environments,* 10(61), 1-28. https://doi.org/10.1186/s40561-023-00280-8

Kift, S. 2009a. *Articulating a transition pedagogy to scaffold and to enhance the first year student learning experience in Australian higher education.* Learning and Teaching Council Ltd. https://transitionpedagogy.com.au/wp-content/uploads/2014/05/Kift-Sally-ALTC-Senior-Fellowship-Report-Sep-09.pdf

Kift, S. M., Nelson, K. J., & Clarke, J. A. 2010. Transition pedagogy: A third-generation approach to FYE-A case study of policy and practice for the higher education sector. *The International Journal of the First Year in Higher Education,* 1(1), 1-20. https://doi.org/10.5204/intjfyhe.v1i1.13

Kong, Y. 2021. The role of experiential learning on students' motivation and classroom engagement. *Frontiers in Psychology,* 12:771272, 1-14. https://doi.org/10.3389/fpsyg.2021.771272

Kumar, S. 2018. Use of teaching methods at higher education institutions. *Scholarly Research Journal for Interdisciplinary Studies,* 5(43). https://doi.org/10.21922/srjis.v5i43.11235

Leading Through Learning Global Platform, 2024. *Exploring Learners' Unique Challenges on the Journey to Higher Education.* USAID. https://www.edu-links.org/learning/exploring-learners-unique-challenges-journey-higher-education

Li, J. & Xue, E. 2023. Dynamic interaction between student learning behaviour and learning environment: meta-analysis of student engagement and its influencing factors. *Behav. Sci.* 13, 59. https://doi.org/10.3390/bs13010059

Logvinova, O. K., Vittenbek, V.K. & Ivanova G.P. 2020. Pedagogical Education for Future University Teachers: Determinants of Effective Implementation. *Вестник НВГУ.* 3, 60-66. https://doi.org/10.36906/2311-4444/20-3/09.

Machost, H. & Stains, M. 2023. Reflective Practices in Education: A Primer for Practitioners. *CBE—Life Sciences Education,* 22(2), 1–11. https://pmc.ncbi.nlm.nih.gov/articles/PMC10228263/pdf/cbe-22-es2.pdf. https://doi.org/10.1187/cbe.22-07-0148

Marcia, D. & Gayani S. 2010. The criteria of effective teaching in a changing higher education context. *Higher Education Research & Development,* 29(2), 111–124. https://doi.org/10.1080/07294360903244398.

Mbakwa, P. N. 2019. The state and challenges of technology enhanced learning in Cameroon's English subsystem of education: Case study of colleges. *Advances in Social Science, Education and Humanities Research,* 440, 121-124. http://creativecommons.org/licenses/by-nc/4.0/.

McInnis, C. 2001. Researching the first-year experience: Where to from here? *Higher Education Research & Development,* 20(2), 105-114. https://doi.org/10.1080/07294360125188

McShane, S. L., & Eden, D. 2015. Big data and evidence-based decision making in human resource management: A review of the literature. *Academy of Management Annals,* 9(1), 479-508.

MINESUP 2001. *Law No. 005 of 16 April 2001 to Guide Higher Education.* Ministry of Higher Education, Cameroon.

Moely, B. E., McFarland, M., Miron, D., Mercer, S., & Ilustre, V. 2002. Changes in college students' attitudes and intentions for civic involvement as a function of service-learning experiences. *Michigan Journal of Community Service Learning,* 9(1), 18-26. http://hdl.handle.net/2027/spo.3239521.0009.102

Montanini, M. 2013. Supporting tertiary education, enhancing economic development: strategies of effective higher education funding in Sub-Saharan Africa. ISPI Working Paper, 49,1-26. https://www.ispionline.it/it/EBook/WP_49.pdf.

Moore, S. J. 2006. *The Workplace Matters, Teacher Quality, Retention, and Effectiveness.* National Education Association. www.nea.org/books.

Mujtaba, T. & Reiss, M. J. 2015. The millennium development goals agenda: constraints of culture, economy and social mobility of Pakistani girls on mathematics and science related higher education courses in Universities in Pakistan. *Canadian Journal of Science, Mathematics and Technology Education,* 15(1), 51-68. https://doi.org/10.1080/14926156.2014.992556

National Academies of Sciences, Engineering, and Medicine. 2018. *How People Learn II: Learners, Contexts, and Cultures.* The National Academies Press. https://www.nationalacademies.org/our-work/how-people-learn-ii-the-science-and-practice-of-learning

National Education Policy 2021. *Guidelines for Innovative Pedagogical Approaches & Evaluation Reforms*. https://www.ugc.gov.in/pdfnews/7900069_Guidelines-PEA.pdf.

Niyaz P., Habeeb, U. R., Riha, P. S. M., Shareena, P., Madhura, K. Yatheen, E. & Shakeera I. 2014. Revolutionizing pedagogy: navigating the integration of technology in higher education for teacher learning and performance enhancement. *Higher Education,* 11(1), 230-8430. https://doi.org/10.1080/2331186X.2024.2308430.

Njeuma, D. L., Endeley, H. N., Mbuntum, F. F., Lyonga, N., Nkweteyim, D. L., Musenja, S., & Titan, E. 1999. *Reforming a national system of higher education: The case of Cameroon*. Association of African Universities. http://www.adeanet.org/archives/publications/wghe/wghe_cameroon_en.pdf

Oblinger, D. G., & Oblinger, J. L. (Eds.). 2005. *Educating the Net Generation*. EDUCAUSE.

Obonyo, R. 2022. Preparing young Africans for jobs of the future. *Africa Renewal,* 14, 1-19. https://www.un.org/africarenewal/magazine/september-2022/preparing-young-africans-jobs-future.

Okolie, U. C., Nwosu, H. E., & Mlanga, S. 2019. Enhancing graduate employability: Why do higher education institutions have problems with practice-theory nexus? *International Journal of Manpower,* 40(4), 700-725. https://doi.org/10.1177/1478210319864824

Olaide, A. 2013. Curriculum reform in African higher education: solving society's problems and meeting its needs. *Curriculum Perspectives,* 43 (1), S141–S149. https://doi.org/10.1007/s41297-023-00206-x

Olutola, A. T., & Olatoye, O. O. 2015. Challenges of e-learning technologies in Nigerian university education. *Journal of Educational and Social Research,* 5(1), 301-306. https://www.mcser.org/journal/index.php/jesr/article/view/5648. https://doi.org/10.5901/jesr.2015.v5n1p301

Pandya, B., Ruhi, U. & Patterson, L. 2023. Preparing the future workforce for 2030: The role of higher education institutions. *Frontiers in Education,* 8, 1-10. https://doi.org/10.3389/feduc.2023.1295249.

Pickford, J. & Poteet, K. 2024. States take many paths to advance high-quality curriculum and align professional learning. *The Journal of the National Association of State Boards of Education,* 24(1), https://www.nasbe.org/states-take-many-paths-to-advance-high-quality-curriculum-and-align-professional-learning/

Rae, D. 2007. Connecting enterprise and graduate employability: challenges to the higher education culture and curriculum? *Education Training,* 49 (8/9), 605–619. https://doi.org/10.1108/00400910710834049

Ramiz, A. & Georgiou, H. 2014. A Process for Institutional Adoption and Difusion of Blended Learning in Higher Education. *Higher Education Policy.* https://doi.org/10.1057/s41307-024-00359-y

Ramsden, P. 2003. *Learning to teach in higher education (2nd ed.).* Routledge. https://doi.org/10.4324/9780203507711

Republic of Cameroon, 2006. *Draft document of the sector wide approach/Education.* MINEDUB.

Rosowsky, D. 2014. *Universities need a new language to attract students, fill majors and create a future-proof generation of graduates.* https://www.forbes.com/sites/davidrosowsky/2024/04/14/universities-need-a-new-language-to-attract-students-fill-majors-and-create-a-future-proof-generation-of-graduates/

Sarkar, T. & Banerjee, S. 2023. Role of libraries in higher education: a review of literature. *Library Philosophy and Practice (e-journal),* 8044, 1-11. https://digitalcommons.unl.edu/libphilprac/8044

Sato, S.N., Condes Moreno, E., Rubio-Zarapuz, A., Dalamitros, A.A., Yañez-Sepulveda, R., Tornero-Aguilera, J.F. & Clemente-Suárez, V.J. 2024. Navigating the new normal: adapting online and distance learning in the post-pandemic era. *Education Sciences,* 14(19), 1-25. https://doi.org/10.3390/educsci14010019

Shore, A. & Dinning, T. 2023. Developing student's skills and work readiness: an experiential learning framework. *Journal of Work-Applied Management,* 15(2), 188-199. https://doi.org/10.1108/JWAM-02-2023-0016

Spanjaard, D., Hallb, T. & Stegemann, N. 2018. Experiential learning: Helping students to become 'career-ready'. *Australasian Marketing Journal,* 26, 163–171. https://doi.org/10.1016/j.ausmj.2018.04.003

Stark, J. S. 2000. Planning introductory college courses: Content, context and form. *Instructional Science,* 28(5), 413-438. https://doi.org/10.1023/A:1026516231429

Tamukong, J. A. 2004. Towards better management of public education in Cameroon. *Africa Development*, XXIX (2), 134-157. https://journals.codesria.org

Tep, V. 2024. Teacher educators as curriculum developers: a case study of teacher education colleges in Cambodia. *Front. Educ.* 9:1328023. https://doi.org/10.3389/feduc.2024.1328023

Thaniya, Y., Natcha M., Nutchanat, J., Nuttapong, S., Magnus S. G. 2023. *Experiential Learning for Higher Education Students: Why, what, and how?* 8th International Conference in Education and Social Science (ICESS-2023).

Tondeur, J., van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. 2017. Understanding the relationship between teachers' pedagogical beliefs and technology use in education: a systematic review of qualitative evidence. *Educational Technology Research and Development,* 65(3), 555-575. https://doi.org/10.1007/s11423-016-9481-2

UB Annual Report 2009/2010. *University at Buea Annual Report.* https://www.buea.edu/content/dam/www/annual-report/documents/UBAnnualReport2009-10.pdf.

University of Buea (UB), 2010. *Annual Report 2009/2010.* https://www.buea.edu/content/dam/www/annual-report/documents/UBAnnualReport2009-10.pdf.

University of Buea 2006. *UB Strategic Plan 2007-2015.* University of Buea

Vermeulen, W. J. V., Bootsma, M. C. & Tijm, M. 2014. Higher education level teaching of (master's) programmes in sustainable development: analysis of views on prerequisites and practices based on a worldwide survey. *International Journal of Sustainable Development and World Ecology,* 21(5), 430-448. https://doi.org/10.1080/13504509.2014.944956.

Walton Family Foundation 2022. *Changing Perspectives on Education.* Walton Family Foundation.

Wilson, K. 2009. The impact of institutional, programmatic and personal factors on postgraduate student experience. *Teaching in Higher Education,* 14(4), 403-414. https://www.tandfonline.com/doi/abs/10.1080/13562510903050389.

Yelkpieri, D., Namale, M., Esia-Donkoh, K., & Ofosu-Dwamena, E. 2012. Effects of Large Class Size on Effective Teaching and Learning at the Winneba Campus of the UEW (University of Education, Winneba), Ghana. *US-China Education Review,* 3(2012), 319-332. https://files.eric.ed.gov/fulltext/ED532900.pdf