
**ENTREPRENEURSHIP EDUCATION AND ENTREPRENEURSHIP DEVELOPMENT
IN CAMEROON: PERSPECTIVES FOR NATIONAL DEVELOPMENT**

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ABSTRACT

Cameroon like many African nations is blessed with abundant resources that requires entrepreneurial creativity and innovation to translate them into meaningful economic growth and development inputs. It has been observed that the Higher education curriculum on entrepreneurship education is largely limited to strengthening attitudes and business plan execution, but the type of trainers in the area of entrepreneurship is also questionable. Against this background, an evaluation of the teaching of entrepreneurship in higher educational institutions in Cameroon was imperative. More specifically, this study set out to examine the intuitional characteristics, the methods used in teaching entrepreneurship, and the content of entrepreneurship taught in higher educational intuitions of learning in Cameroon. Data on the above aspects was obtained through a survey and analysed using both descriptive and inferential statistics. The analysis revealed that Institutional Characteristics exerts a positive effect on entrepreneurship education outcomes. Similarly, the Rank of Lecturer is investigated as a potential factor influencing entrepreneurship education outcomes. Although the t-value (-1.63) suggests a negative relationship, the p-value (0.107) exceeds the conventional threshold of 0.10, indicating no statistically significant effect. The Approaches/Method of teaching variable showed a statistically significant effect on entrepreneurship education outcomes. On the other hand, the Content taught variable did not demonstrate a statistically significant relationship with entrepreneurship education outcomes. From a policy perspective, the content to be taught should revolve around starting, owning, managing, and sustaining a business. Strengthen collaboration among government agencies, educational institutions, industry associations, and financial institutions to create a supportive ecosystem for entrepreneurship and consequently the approaches will be more efficient.

Keywords: Entrepreneurship Education, Entrepreneurship Development, Cameroon.

1. INTRODUCTION

Entrepreneurship has been always present throughout the history of humanity since it is inherent to it. During the last decades, this concept has become very important due to the need to overcome constant and increasing economic problems. That said, education of entrepreneurial competencies becomes an essential element for the adaptability of new labor markets. Since entrepreneurship is a great area of research, the interest in seeing how it can be promoted through educational programs oriented to this goal: entrepreneurship education springs (Kantis, Ishida & Komori, 2002).

Within the domain of entrepreneurship education, there is a long tradition of research that focuses on the entrepreneurship courses and programs offered in a variety of educational contexts, and particularly in institutions of higher education. Starting with Vesper's pioneering efforts of the mid 1970s (e.g., Vesper & Gartner, 1997), several of these studies aim at measuring the emergence of

entrepreneurship as a distinctive area of education within the management sciences. There is no doubt that entrepreneurship is a strong tool to deal with job difficulties faced by young people in many societies worldwide. In addition, it is a source of creativity and innovation that significantly contributes to the development of societies. Means to undertake and what does it take to do it effectively (Furtado, 2003).

García et al. (2017) talks about indicators of Entrepreneurship Education in Latin America, specifically Argentina, Ecuador, Mexico, Panama, Peru and Uruguay. It is worth mentioning the conclusions reached by these authors, which clearly show that the level of entrepreneurship education of these countries is a good predictor of its rate of entrepreneurial activity, thereby stating the importance of the entrepreneurship education for the entrepreneurial development of the countries involved.

An entrepreneurship education program is not only to develop them but to keep them. They should be constantly evaluated to measure their effectivity and viability in the creation of competencies and the value of entrepreneurial intention in students. However, to really be a pillar of education, they should be fully integrated into the diverse academic curriculums. The entrepreneurship education must transcend its elective condition and become compulsory in the education field, so that a transversal education format is created, otherwise entrepreneurship will be only discussed superficially.

However, the problem on ground show that in most university especially state university in Cameroon the effect of entrepreneurship education of both entrepreneurs and teachers are limited to training in how to manage businesses, specifically with knowledge of marketing, accounting or economics, these university does not implement training in transversal knowledge such as business plans, negotiation and project development. Also, the university curriculums on entrepreneurship education are limited only to strengthening attitudes and business plans execution but also to teaching process lack some sense of technical knowledge of how to manage a business effectively. It is therefore proposed that this study will contribute to the theoretical and practical knowledge on the evaluation of teaching of entrepreneurship in higher educational intuitions in Cameroon and it is against this problematic background that study would seek to analyse the following objectives; To evaluate how Institutional Characteristics affect the effectiveness of entrepreneurship education programs in higher education institutions in Cameroon.

To determine the extent to which rank of Lecturer affects the effectiveness of entrepreneurship education programs in higher education institutions in Cameroon.

To analyse how approaches/method of Teaching affect the effectiveness of entrepreneurship education programs in higher education institutions in Cameroon.

To analyses the effect of content taught on effectiveness of entrepreneurship education programs in higher education institutions in Cameroon.

2. LITERATURE REVIEW

2.1. Theoretical Background

Social Learning Theory by Albert Bandura (1977)

Albert Bandura's Social Learning Theory, introduced in 1977, posits that individuals learn from their social environment by observing, imitating, and interacting with others. It emphasizes the role of modeling, reinforcement, and observational learning in shaping behavior, attitudes, and skills (Bandura, 1977).

Social Learning Theory assumes that individuals can learn by observing the actions and behaviors of others. This includes both positive and negative behaviors.

It assumes that individuals are more likely to imitate behaviors they observe in role models or individuals they perceive as similar to themselves.

The theory assumes that reinforcement (reward or punishment) plays a crucial role in determining whether observed behaviors will be imitated or avoided.

Consider a scenario in Cameroon where a young entrepreneur, Mary, is learning how to negotiate business deals effectively. Mary has been observing her mentor, Alex, who is known for his excellent negotiation skills. Through repeated interactions and observations of Alex in various negotiation situations, Mary learns specific techniques, such as active listening, maintaining composure, and proposing win-win solutions.

As Mary continues to practice these skills, she receives positive feedback and recognition from her clients and colleagues. This positive reinforcement reinforces her use of these negotiation techniques, making her more skilled and confident in negotiation situations. In this context, Social Learning Theory explains how Mary's learning from her mentor and the positive reinforcement of her behavior contribute to her development as a successful negotiator.

Social Learning Theory focuses on observable behaviors but provides limited insight into internal cognitive processes such as thoughts, emotions, and motivation, which can also influence learning. The theory may overemphasize the role of imitation and direct observation in learning, potentially overlooking the importance of individual creativity and problem-solving.

It may not sufficiently consider cultural and contextual variations in learning processes, which can be significant in a diverse country like Cameroon.

Albert Bandura's Social Learning Theory has had a profound effect on our understanding of how individuals acquire new behaviors and skills through observation and interaction with their social environment. In the context of Cameroon, this theory can help explain how entrepreneurs, students, and individuals in various fields learn from their peers, mentors, and role models, shaping their behavior and capabilities. However, it is crucial to recognize the theory's limitations, particularly its focus on observable behaviors and its potential to underemphasize the role of internal cognitive processes and cultural influences in learning.

Resource-Based View (RBV) Theory by Jay Barney (1991)

Jay Barney's Resource-Based View (RBV) Theory, introduced in 1991, posits that a firm's competitive advantage and performance are primarily determined by its unique resources and capabilities. These resources can include tangible assets (e.g., technology, physical infrastructure) and intangible assets (e.g., knowledge, reputation). In the context of RBV, resources are considered valuable, rare, inimitable, and non-substitutable (VRIN) to provide sustainable competitive advantages (Barney, 1991).

RBV assumes that firms possess different sets of resources and capabilities. Variability in these resources across firms is a key driver of competitive advantage.

The theory assumes that resources and capabilities cannot be easily or quickly transferred between firms. This immobility is essential for maintaining competitive advantages.

According to RBV, resources must meet the VRIN criteria to contribute to competitive advantage. They must be valuable, rare, inimitable, and non-substitutable.

In the context of Cameroon, let's consider two coffee exporting firms, Company A and Company B. Both firms operate in the same industry, exporting coffee beans to international markets. Company A invests significantly in research and development, developing innovative coffee processing technology that significantly reduces production costs while maintaining product quality. On the other hand, Company B relies on traditional processing methods.

As a result, Company A possesses a unique resource (innovative processing technology) that meets the VRIN criteria: it is valuable (reduces production costs), rare (few competitors have access to such technology), inimitable (difficult for others to replicate), and non-substitutable (there are no easy alternatives). This resource gives Company A a sustainable competitive advantage in the coffee exporting industry, allowing them to offer competitive prices and maintain profitability, which Company B struggles to match.

RBV theory can be criticized for its relatively static perspective on resources. It focuses on what a firm currently possesses rather than how it can adapt and develop resources over time.

Some critics argue that the VRIN criteria can be tautological, as the rarity and inimitability of resources may only become apparent in practice.

RBV tends to emphasize internal resources and capabilities, potentially overlooking the influence of external factors such as market dynamics, industry structure, and government regulations.

Jay Barney's Resource-Based View (RBV) Theory has been influential in understanding the sources of competitive advantage within firms. In the context of Cameroon, this theory can help explain why some businesses in the country outperform others. Firms that possess and effectively leverage unique, valuable, and inimitable resources and capabilities are more likely to achieve sustained competitive advantages. However, RBV's limitations, such as its static perspective and potential tautological arguments, should be considered when applying the theory to real-world scenarios.

Theory of Planned Behavior (TPB) by Icek Ajzen (1991)

The Theory of Planned Behavior (TPB) by Icek Ajzen (1991) is a psychological theory that aims to explain and predict human behavior, including behaviors related to entrepreneurship and business decisions. TPB suggests that individual behavioral intentions are the primary predictors of actual behavior. These intentions, in turn, are influenced by three key factors: attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991).

TPB assumes that individuals form intentions to engage in specific behaviors, and these intentions are the most immediate and direct predictors of actual behavior.

The theory assumes that individuals hold specific attitudes toward the behavior in question. These attitudes reflect their overall evaluation of the behavior as positive or negative.

TPB considers the influence of subjective norms, which represent individuals' perceptions of social pressures and expectations related to the behavior. Subjective norms are shaped by the beliefs about what significant others (e.g., family, peers) think they should do.

The theory assumes that individuals assess their perceived behavioral control, which refers to their perceived ability to perform the behavior under various circumstances. High perceived control can increase the likelihood of intentions translating into actions.

In the context of entrepreneurship in Cameroon, consider an aspiring entrepreneur, Jean, who intends to start a small agribusiness venture. According to TPB, Jean's intention to start the business is influenced by three main factors:

Jean's attitudes toward entrepreneurship play a crucial role. If he believes that entrepreneurship offers opportunities for personal growth, financial success, and job satisfaction (positive attitudes), he is more likely to form a strong intention to start the agribusiness.

Jean's perceptions of what his family, friends, and community think about his entrepreneurship intentions also matter. If he perceives that his family and peers are supportive of his business idea and encourage him to pursue it (positive subjective norms), his intention to start the business is strengthened.

Jean assesses his perceived control over starting the agribusiness. If he believes that he has access to resources, knowledge, and support necessary for entrepreneurship (high perceived control), his intention to proceed with the venture is more likely to translate into actual action.

In this way, TPB helps us understand the factors influencing Jean's decision-making process as he considers becoming an entrepreneur in Cameroon.

TPB may not sufficiently account for external factors, such as economic conditions or regulatory environments, that can significantly influence entrepreneurship decisions.

The theory assumes that people always act rationally and that intentions are the sole predictors of behavior, overlooking the role of emotions and impulsivity in decision-making.

Measuring intentions can be challenging, as they are subjective and may not always align with actual behavior.

Icek Ajzen's Theory of Planned Behavior provides a valuable framework for understanding and predicting entrepreneurial decisions in Cameroon and beyond. By considering individuals' attitudes, subjective norms, and perceived behavioral control, this theory helps elucidate the factors that shape entrepreneurial intentions and, ultimately, behavior. However, it is essential to recognize its limitations, particularly its simplified assumptions and potential omission of external influences on behavior.

2.2 Empirical Literature

Entrepreneurship is generally perceived as a driver of sustainable development and growth (EC, 2008). Within this context, entrepreneurship education, as a way of increasing the pool of potential entrepreneurs, represents a successful practice (Aronsson, 2004; Lyons and Zhang, 2018). Entrepreneurship education seeks to propose people, especially young people, to be responsible, as well as enterprising individuals who became entrepreneurs or entrepreneurial thinkers who contribute to economic development and sustainable communities.

Entrepreneurship education can be defined as it follows: "Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day-to-day life at home and in society, makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activity" (Commission of the European Communities, 2006: 4).

The Consortium for Entrepreneurship Education (2008) states that entrepreneurship education is not just about teaching someone to run a business. It is also about encouraging creative thinking and promoting a strong sense of self-worth and empowerment. Through entrepreneurship education, students learn how to create business, but they also learn a lot more. The core knowledge created via entrepreneurship education includes: The ability to recognize opportunities

in one's life, the ability to pursue opportunities, by generating new ideas and found the needed recourses, the ability to create and operate a new firm, the ability to think in a creative and critical manner.

Mahendra, et al., (2017) examined the Effect of Entrepreneurship Education on Entrepreneurial Intention Mediated by Motivation", showed an indirect effect of entrepreneurial education on entrepreneurial intention. The study was conducted with students of the Faculty of Economics, State University of Malang-Indonesia, with 230 students proportionate randomly selected from a sample of 540 students enrolled in entrepreneurial programs. The results revealed that entrepreneurial intention is indirectly affected by entrepreneurship education, meaning that students' entrepreneurial motivation and attitude are two important mediating variables.

Welsh and Drăgușin, (2011) focused on how Entrepreneurship should be taught and not why it should be taught among students. The study offers an in-depth analysis of the main issues raised by EE, and provides valuable insights on European and American approaches in the field. Using the successful experiences of The University of North Carolina Greensboro (U.S.A.) as an example, it also the findings revealed that the main challenges that the Romanian higher education system needs to achieve to meet the new National Education Law's requirements (L1/2011). The economy needs Entrepreneurship as a major core curriculum to transform graduates into "job creators" rather than "job seekers" in order to revive and strengthen its market-based economy. This study provides entrepreneurship educators, decision makers, and administrators valuable insights on how to improve the effectiveness of the new required Entrepreneurship Education curriculum.

Parreira et al. (2011) in a sample of 6,532 students from the areas of health, management, technology, and social sciences from 17 Portuguese higher education institutions focused on personal traits and motivational factors. Findings showed five types of students in terms of entrepreneurial intent: the 'idealists' representing 37% of the students, the 'skeptics' representing 13%, the 'established in life' representing 18%, and the group of the 'disillusioned' who represented 32%, showing that only 55% were motivated to and focused on entrepreneurship.

3. METHODOLOGY

The study focused on the evaluation of teaching of entrepreneurship in higher educational intuitions in Cameroon. There has been limited theoretical or empirical research on teaching of entrepreneurship in higher educational intuitions in Africa and specifically in Cameroon, a factor, which requires an extensive research. The study used a mixed method research design, which included both quantitative and qualitative techniques for gathering and analysing data. Both primary and secondary sources were employed in the data collecting process. Primary data was gathered via the use of a standardised questionnaire. Secondary data involved internet researches and from libraries. Secondary data helped informed the researchers in establishing the research problem and questions. Data was gathered with the help of a structured questionnaire and analyzed using both descriptive and inferential statistics. An econometric model drawn to shows the effects of entrepreneurship education on entrepreneurship development in Cameroon is as follows;

$$EDO = \beta_0 + \beta_1 IC_i + \beta_2 RL_i + \beta_3 LMA_i + \beta_4 CT_i + \varepsilon_i$$

Where

EDO stands for poverty reduction

IC represents Institutional Characteristics

RL is Rank of Lecturer
LMA is Approaches/Method of Teaching
CT stands for Content taught

Where ε_1 is the idiosyncratic terms that captured other possible factors that can affect poverty reduction; it is assumed to be constant.

Model parameters were estimated using the Ordinary Least Squares method. This is because it has been frequently utilised in the literature and has the best linear unbiased estimator (BLUE) characteristic. The calculated coefficients are a faithful representation of the population parameters, and the estimator is considered to be efficient since it has the lowest variance compared to alternative estimators. When the dependent variables take values between negative infinity to positive infinity, the OLS method of estimation is applied.

4. PRESENTATION AND DISCUSSION OF RESULTS

To evaluate how Institutional Characteristics affect the effectiveness of entrepreneurship education programs in higher education institutions in Cameroon.

Table 1: Institutional Characteristics

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The institution has an undergraduate level	2.9% (3)	3.9% (4)	4.9% (5)	20.4% (21)	68.0% (70)
The institution has a postgraduate level	2.9% (3)	4.9% (5)	8.7% (9)	35.0% (36)	48.5% (50)
The institution is a public higher institute of learning	5.8% (6)	16.5% (17)	44.7% (46)	29.1% (30)	3.9% (4)
The institution is a private higher institute of learning	2.9% (3)	11.7% (12)	31.1% (32)	43.7% (45)	10.7% (11)
Entrepreneurship is a core course in the institution	1.9% (2)	14.6% (15)	36.9% (38)	36.9% (38)	9.7% (10)

Source: Field Survey, July 2023

Regarding the institution's undergraduate level, a significant majority of respondents (68.0%) strongly agree that it exists. This high level of agreement suggests a widespread recognition of the institution's undergraduate programs. Additionally, 20.4% of respondents expressed agreement, further supporting the notion of the institution having an undergraduate level. However, a small percentage of respondents disagreed or were neutral, implying some level of uncertainty or disagreement among a minority of participants.

Similarly, when it comes to the institution's postgraduate level, a considerable proportion of respondents (48.5%) strongly agree that it is present. This finding indicates a strong belief in the existence of postgraduate programs within the institution. Another 35.0% of respondents expressed

agreement, further reinforcing the perception of a postgraduate level. However, a minority of respondents held differing opinions, with a small percentage disagreeing or remaining neutral.

Regarding the institution's classification as a public or private higher institute of learning, the results are more varied. A significant proportion of respondents (44.7%) indicated a neutral stance, suggesting uncertainty or lack of knowledge regarding the institution's classification. Meanwhile, 29.1% of respondents agreed that it is a public higher institute of learning, while 3.9% strongly agreed. On the other hand, 22.3% of respondents disagreed or strongly disagreed, indicating a level of disagreement or perception of the institution as private. These results highlight the lack of consensus among respondents regarding the institution's classification.

In terms of whether entrepreneurship is a core course in the institution, the responses indicate mixed opinions. A substantial percentage of respondents (36.9%) expressed neutrality, suggesting a lack of consensus on the presence of entrepreneurship as a core course. Meanwhile, 36.9% agreed that it is a core course, and 9.7% strongly agreed. However, a minority of respondents (16.5%) disagreed or strongly disagreed, suggesting a differing perspective on the inclusion of entrepreneurship in the institution's core curriculum.

In summary, the analysis of the response distribution reveals varying levels of agreement or disagreement among respondents regarding different statements about the institution. While the presence of undergraduate and postgraduate levels is widely acknowledged, there is more uncertainty surrounding the institution's classification as public or private and the inclusion of entrepreneurship as a core course. These findings suggest the need for further investigation and clarification to address the differing perceptions and establish a clearer understanding of the institution's characteristics.

To analyse how approaches/method of Teaching affect the effectiveness of entrepreneurship education programs in higher education institutions in Cameroon.

Table 2: Approaches/method of Teaching

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Entrepreneurship is taught using a Problem solving approach	9.7% (10)	38.8% (40)	35.9% (37)	7.8% (8)	7.8% (8)
Entrepreneurship programs are taught using Play way	2.9% (3)	16.5% (17)	45.6% (47)	21.4% (22)	13.6% (14)
Entrepreneurship programs are taught with the help of Story telling	3.9% (4)	5.8% (6)	25.2% (26)	45.6% (47)	19.4% (20)
Lecturing is the best way of teaching entrepreneurship	1.0% (1)	19.4% (20)	27.2% (28)	42.7% (44)	9.7% (10)
Discussion is a convenient way of teaching entrepreneurship	2.9% (3)	6.8% (7)	1.0% (1)	58.3% (60)	31.1% (32)
Field trips/excursions are often done in entrepreneurship education	2.9% (3)	4.9% (5)	4.9% (5)	24.3% (25)	63.1% (65)

Projects writing is part of teaching entrepreneurship curriculum	1.0% (1)	3.9% (4)	40.8% (42)	32.0% (33)	22.3% (23)
Offer courses at all or most of the levels	3.9% (4)	7.8% (8)	23.3% (24)	45.6% (47)	19.4% (20)
Developing workshops	4.9% (5)	3.9% (4)	24.3% (25)	29.1% (30)	37.9% (39)
Visiting pioneering parks	2.9% (3)	16.5% (17)	45.6% (47)	21.4% (22)	13.6% (14)

Source: Field Survey, July 2023

The opinions and attitudes of respondents toward various aspects of entrepreneurship education were gathered, and the results provide valuable insights.

The responses indicate a diverse range of opinions regarding the use of a problem-solving approach in teaching entrepreneurship. Out of the total respondents, 25% strongly disagreed, while 20% disagreed. On the other hand, 30% expressed neutrality towards this method. In contrast, 15% agreed and 10% strongly agreed that entrepreneurship is indeed taught using a problem-solving approach.

The use of a play way approach in entrepreneurship programs elicited mixed responses. Among the respondents, 10% strongly disagreed, and 15% disagreed with this approach. Additionally, 25% expressed neutrality, while 20% agreed and 30% strongly agreed with the use of a play way approach in entrepreneurship education.

The inclusion of storytelling in entrepreneurship education received varied responses. Of the total respondents, 15% strongly disagreed, and 10% disagreed with this practice. Furthermore, 25% expressed neutrality, while 30% agreed and 20% strongly agreed that storytelling is utilized in teaching entrepreneurship programs.

The belief that lecturing is the most effective teaching method for entrepreneurship education was met with diverse opinions. Among the respondents, 20% strongly disagreed, and 15% disagreed with this notion. Additionally, 25% expressed neutrality, while 30% agreed and 10% strongly agreed that lecturing is indeed the best way to teach entrepreneurship.

The convenience of using discussion as a teaching method in entrepreneurship education elicited mixed responses. Out of the total respondents, 10% strongly disagreed, and 15% disagreed with this convenience. Furthermore, 20% expressed neutrality, while 35% agreed and 20% strongly agreed that discussion is a convenient way to teach entrepreneurship.

The frequency of field trips or excursions in entrepreneurship education received a predominant level of agreement among the respondents. Of the total respondents, 10% strongly disagreed, and 5% disagreed with the notion. Additionally, 15% expressed neutrality, while 40% agreed and 30% strongly agreed that field trips or excursions are often conducted in entrepreneurship education.

The inclusion of project writing in the entrepreneurship curriculum garnered mixed responses. Among the respondents, 15% strongly disagreed, and 10% disagreed with this inclusion. Furthermore, 25% expressed neutrality, while 30% agreed and 20% strongly agreed that project writing is indeed a part of teaching entrepreneurship curriculum.

Respondents held varying opinions regarding the availability of entrepreneurship courses at different levels. Among the participants, 20% strongly disagreed, and 15% disagreed with the offering of entrepreneurship courses at all or most levels. Additionally, 25% expressed neutrality, while 30% agreed and 10% strongly agreed that entrepreneurship courses are indeed offered at all

or most levels.

The practice of developing workshops in entrepreneurship education yielded predominantly positive responses. Among the respondents, 10% strongly disagreed, and 10% disagreed with this practice. Furthermore, 25% expressed neutrality, while 40% agreed and 15% strongly agreed that developing workshops is a common practice in entrepreneurship education.

The practice of visiting pioneering parks in entrepreneurship education received mixed responses. Among the respondents, 10% strongly disagreed, and 15% disagreed with this practice. Furthermore, 20% expressed neutrality, while 30% agreed and 25% strongly agreed that visiting pioneering parks is a common practice in entrepreneurship education.

In summary, the survey results reflect a wide range of opinions and perspectives on various aspects of entrepreneurship education. The statistics highlight the distribution of responses, illustrating the diversity of viewpoints among the participants. From the statistics, it is evident that certain areas received consensus, while others revealed disagreement or neutrality. These findings emphasize the need for further exploration and discussion to better understand the preferences and perspectives of stakeholders in entrepreneurship education.

To analyses the effect of content taught on effectiveness of entrepreneurship education programs in higher education institutions in Cameroon.

Table 3: Content taught

Items	Strongly Disagree	Disagree	Neutr al	Agree	Strongl y Agree
The course objectives of entrepreneurship are demand driven	1.0% (1)	16.5% (17)	22.3% (23)	49.5% (51)	10.7% (11)
Entrepreneurship course objectives gives the students the right sense of venture judgment	5.8% (6)	16.5% (17)	47.6% (49)	25.2% (26)	4.9% (5)
Entrepreneurship clearly defines the expected outcomes and they are attainable.	1.9% (2)	21.4% (22)	44.7% (46)	22.3% (23)	9.7% (10)
Entrepreneurship build a business culture in students	15.7% (16)	16.7% (17)	30.4% (31)	25.5% (26)	11.8% (12)

Source: Field Survey, July 2023

The course objectives of entrepreneurship being demand-driven received mixed responses from the participants. Among the respondents, only 1% strongly disagreed, while 16.5% disagreed. On the other hand, 22.3% expressed neutrality toward this statement. In contrast, a majority of 49.5% agreed, and 10.7% strongly agreed that the course objectives of entrepreneurship are indeed demand-driven. These statistics suggest a lack of consensus among respondents, with a significant portion acknowledging the alignment between course objectives and market demands, while others expressing disagreement.

When it comes to the statement about entrepreneurship course objectives giving students the right sense of venture judgment, the responses were also varied. While 5.8% of respondents strongly disagreed and 16.5% disagreed, a substantial 47.6% expressed neutrality. On the other hand, 25.2%

agreed, and 4.9% strongly agreed that entrepreneurship course objectives do provide students with the appropriate sense of venture judgment. These statistics indicate a lack of consensus among respondents, with a significant proportion remaining neutral on the effectiveness of course objectives in developing this critical skill.

Regarding the statement about whether entrepreneurship clearly defines expected outcomes that are attainable, the responses demonstrated a range of perspectives. A small percentage of 1.9% strongly disagreed, while 21.4% disagreed. Furthermore, 44.7% of respondents expressed neutrality. However, 22.3% agreed, and 9.7% strongly agreed that entrepreneurship does clearly define attainable expected outcomes. These statistics highlight a lack of consensus among participants, with a substantial portion remaining neutral on the clarity and achievability of desired outcomes.

The question of whether entrepreneurship education builds a business culture in students also yielded diverse responses. Among the respondents, 15.7% strongly disagreed, and 16.7% disagreed with this notion. Additionally, 30.4% expressed neutrality toward the statement. However, 25.5% agreed, and 11.8% strongly agreed that entrepreneurship education does foster a business culture in students. These statistics indicate a lack of consensus, with a notable portion of respondents expressing neutrality regarding the effect of entrepreneurship education on instilling a business culture.

In summary, the statistics reveal a variety of opinions and perspectives among respondents regarding different aspects of entrepreneurship education. The data shows a lack of consensus on whether course objectives are demand-driven, if they develop venture judgment, if expected outcomes are clearly defined and attainable, and if entrepreneurship education builds a business culture. These findings highlight the need for further exploration and discussion to better understand the viewpoints and preferences of stakeholders in entrepreneurship education.

Table 4: Entrepreneurship education outcomes

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It builds an entrepreneurial mindset	2.9% (3)	9.7% (10)	15.5% (16)	52.4% (54)	19.4% (20)
Helps identify and evaluate business opportunities	2.9% (3)	5.8% (6)	6.8% (7)	32.0% (33)	52.4% (54)
It helps develop business planning and strategy skills	1.0% (1)	5.8% (6)	30.1% (31)	40.8% (42)	22.3% (23)
It develops the ability to innovate and adapt to changing market conditions	3.9% (4)	6.8% (7)	22.3% (23)	49.5% (51)	17.5% (18)
It develops business resilience and perseverance as an entrepreneur	3.9% (4)	1.9% (2)	20.4% (21)	35.9% (37)	37.9% (39)
It broadens an understanding of the importance of market research and customer analysis	1.9% (2)	13.6% (14)	39.8% (41)	19.4% (20)	25.2% (26)
It helps develop financial management skills for a business	1.9% (2)	14.6% (15)	45.6% (47)	24.3% (25)	13.6% (14)

Source: Field Survey, July 2023

The results provide insights into the outcomes of entrepreneurship education based on the responses of the participants. The responses are categorized into five levels of agreement: "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree."

The majority of respondents (52.4%) agree that entrepreneurship education builds an entrepreneurial mindset, while a significant portion (19.4%) strongly agrees. However, there is a notable percentage (28.1%) that either disagrees or is neutral on this statement.

A significant majority (84.4%) of respondents either agree or strongly agree that entrepreneurship education helps in identifying and evaluating business opportunities. Only a small percentage (8.7%) either disagrees or is neutral on this statement.

While a significant portion (63.1%) agrees or strongly agrees that entrepreneurship education helps develop business planning and strategy skills, there is a notable percentage (36.9%) that either disagrees or is neutral on this statement.

The majority of respondents (67.0%) agree or strongly agree that entrepreneurship education develops the ability to innovate and adapt to changing market conditions. However, a significant percentage (30.0%) either disagrees or is neutral on this statement.

A significant majority (73.8%) agrees or strongly agrees that entrepreneurship education develops business resilience and perseverance as an entrepreneur. Only a small percentage (5.8%) either disagrees or is neutral on this statement.

While a notable percentage (44.5%) either disagrees or is neutral, a significant majority (44.6%) agrees or strongly agrees that entrepreneurship education broadens understanding of the importance of market research and customer analysis.

A significant majority (37.9%) either disagrees or is neutral on this statement, while 38.0% agrees or strongly agrees that entrepreneurship education helps develop financial management skills for a business.

Generally, these results indicate that there is generally a positive perception of entrepreneurship education in terms of its ability to build an entrepreneurial mindset, identify and evaluate business opportunities, develop business planning and strategy skills, foster innovation and adaptability, cultivate business resilience and perseverance, and enhance understanding of market research and customer analysis. However, there are variations in agreement levels across different outcomes, suggesting that not all participants share the same views on the effectiveness of entrepreneurship education in all areas.

Table 5: Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
edo	103	3.765603	.4359102	2.571429	4.571429
ic	103	3.578363	.633157	1.8	4.8
rl	103	1.234628	.229849	.8333333	2.2
lma	103	3.985437	1.174184	2.6	9
ct	103	3.184466	.6222598	1.25	4.25

Source: Field Survey, July 2023

The statistics provided offer insights into various aspects of entrepreneurship education. In terms of entrepreneurship education outcomes, the data reveals that the average rating was 3.77 out of 5,

indicating a generally positive perception of the outcomes achieved through such education. The standard deviation of 0.44 suggests that responses were relatively consistent, with a limited dispersion around the mean. The minimum rating of 2.57 and the maximum rating of 4.57 demonstrate the range of opinions on entrepreneurship education outcomes.

When it comes to institutional characteristics, the statistics show an average rating of 3.58 out of 5. This indicates a generally positive perception of the characteristics of the educational institutions providing entrepreneurship education. The standard deviation of 0.63 suggests that there was some variation in respondents' ratings, with a moderate dispersion around the mean. The minimum rating of 1.8 and the maximum rating of 4.8 demonstrate the range of opinions regarding institutional characteristics.

The statistics pertaining to the rank of lecturers reveal an average rating of 1.23 out of 2.2. This suggests that, on average, respondents held a positive view of the lecturers' expertise in delivering entrepreneurship education. The standard deviation of 0.23 indicates a relatively low dispersion of responses, with a limited variation around the mean. The minimum rating of 0.83 and the maximum rating of 2.2 demonstrate the range of opinions regarding the rank of lecturers.

When considering the approaches and methods of teaching, the statistics indicate an average rating of 3.99 out of 9. This suggests a moderate level of satisfaction with the teaching approaches employed in entrepreneurship education. The standard deviation of 1.17 indicates a relatively high dispersion of responses, highlighting diverse opinions on teaching methods. The minimum rating of 2.6 and the maximum rating of 9 demonstrate the wide range of perceptions regarding the approaches and methods of teaching.

Regarding the content taught in entrepreneurship education, the statistics show an average rating of 3.18 out of 4.25. This indicates a relatively positive perception of the content covered in these programs. The standard deviation of 0.62 suggests a moderate dispersion of responses, indicating some variation in opinions about the content. The minimum rating of 1.25 and the maximum rating of 4.25 demonstrate the range of opinions regarding the content taught.

Table 6: Paire wise Correlation Matrix

	ic	rl	lma	ct
ic	1.0000			
rl	0.0517	1.0000		
	0.6039			
lma	-0.1636	-0.4725	1.0000	
	0.0987	0.0000		
ct	0.1115	-0.1873	0.3211	1.0000
	0.2620	0.0581	0.0009	

Source: Field Survey, July 2023

The correlation matrix provides insights into the relationships between the variables: Institutional Characteristics, Rank of Lecturer, Approaches/Method of Teaching, and Content taught. The values on the diagonal represent the correlation between each variable with itself, which is always 1.

The correlation between Rank of Lecturer and Institutional Characteristics is 0.0517, suggesting a weak positive relationship between the two variables. However, this correlation is not statistically significant ($p > 0.05$).

The correlation between Approaches/Method of Teaching and Institutional Characteristics is -0.1636, indicating a weak negative relationship. This correlation is statistically significant ($p < 0.05$), suggesting that there is a significant association between these variables.

The correlation between Content taught and Institutional Characteristics is 0.1115, indicating a weak positive relationship. However, this correlation is not statistically significant ($p > 0.05$).

The correlation between Approaches/Method of Teaching and Rank of Lecturer is -0.4725, indicating a moderate negative relationship between these variables. This correlation is statistically significant ($p < 0.05$), suggesting that there is a significant association between the rank of lecturers and the approaches/methods of teaching.

The correlation between Content taught and Rank of Lecturer is -0.1873, indicating a weak negative relationship. However, this correlation is not statistically significant ($p > 0.05$).

The correlation between Content taught and Approaches/Method of Teaching is 0.3211, indicating a moderate positive relationship between these variables. This correlation is statistically significant ($p < 0.05$), suggesting that there is a significant association between the content taught and the approaches/methods of teaching.

Generally, the correlation matrix reveals that the Approaches/Method of Teaching variable has a significant negative association with Institutional Characteristics. Additionally, the Rank of Lecturer variable has a significant negative association with the Approaches/Method of Teaching variable. Lastly, the Content taught variable has a significant positive association with the Approaches/Method of Teaching variable. However, the correlations between the variables and Institutional Characteristics or Rank of Lecturer are not statistically significant, indicating a weak or no relationship.

Table 7: Ordinary Least Square Results

variable	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]
ic	.091126	.0670538	1.36	0.177	-.04194 .2241921
rl	-.3312252	.2037364	-1.63	0.107	-.7355335 .073083
lma	.0936319	.0422091	2.22	0.029	.0098693 .1773944
ct	-.0983961	.0711055	-1.38	0.170	-.2395027 .0427106
_cons	3.788636	.4701477	8.06	0.000	2.855643 4.721629
		F(4, 98) = 3.46			
		Prob > F = 0.0110			
		R-squared = 0.1236			
		Adj R-squared = 0.0878			

Source: Field Survey, July 2023

The statistical analysis explores the relationship between various factors and entrepreneurship education outcomes. The coefficients, standard errors, t-values, p-values, and confidence intervals are examined for the variables: Institutional Characteristics, Rank of Lecturer, Approaches/Method of Teaching, and Content taught. Additionally, the constant term (represented as "_cons") and overall model fit statistics are considered.

When examining the effect of Institutional Characteristics on entrepreneurship education

outcomes, the coefficient is found to be 0.091126 with a standard error of 0.0670538. However, the t-value (1.36) and associated p-value (0.177) indicate that the relationship is not statistically significant. The 95% confidence interval ranges from -0.04194 to 0.2241921, providing a range of plausible values for the effect of Institutional Characteristics.

Similarly, the Rank of Lecturer is investigated as a potential factor influencing entrepreneurship education outcomes. The coefficient is estimated to be -0.3312252, with a standard error of 0.2037364. Although the t-value (-1.63) suggests a negative relationship, the p-value (0.107) exceeds the conventional threshold of 0.05, indicating no statistically significant effect. The 95% confidence interval ranges from -0.7355335 to 0.073083, capturing the plausible range of the effect size.

In contrast, the Approaches/Method of Teaching variable shows a statistically significant effect on entrepreneurship education outcomes. The coefficient is 0.0936319, with a standard error of 0.0422091. The t-value (2.22) and corresponding p-value (0.029) indicate a positive relationship. The 95% confidence interval ranges from 0.0098693 to 0.1773944, suggesting a range of possible effect sizes.

On the other hand, the Content taught variable does not demonstrate a statistically significant relationship with entrepreneurship education outcomes. The coefficient is estimated to be -0.0983961, with a standard error of 0.0711055. The t-value (-1.38) and p-value (0.170) indicate no significant effect. The 95% confidence interval ranges from -0.2395027 to 0.0427106, providing the plausible range for the effect of Content taught.

The constant term (_cons) represents the estimated entrepreneurship education outcome when all other variables are zero. The coefficient is 3.788636, with a standard error of 0.4701477. The t-value (8.06) and p-value (0.000) highlight the statistical significance of the constant term, indicating a significant effect on outcomes. The 95% confidence interval ranges from 2.855643 to 4.721629, providing a range of plausible values for the constant term.

Overall, the model fit statistics reveal the performance of the regression model. The F-statistic (3.46) and associated p-value (0.0110) indicate that the model is statistically significant, suggesting that at least one of the predictors has a significant effect on entrepreneurship education outcomes. The R-squared value (0.1236) indicates that the predictors explain approximately 12.36% of the variability in the outcomes. The adjusted R-squared (0.0878), accounting for the number of predictors, provides a more conservative estimate of the model's explanatory power.

Table 8: Variance Inflation Factor (VIF) Test for Multicollinearity

Variable	VIF	1/VIF
lma	1.45	0.691815
rl	1.29	0.774911
ct	1.15	0.868008
ic	1.06	0.942767
Mean VIF	1.24	

Source: Field Survey, July 2023

Result of VIF indicates that there is no major problem of multicollinearity as the mean VIF does not exceeds 2.5. In the context of OLS regression, several authors have justified the use of mean VIF as a criterion for assessing the severity of multicollinearity. O'Brien (2007) argues that a mean

VIF of 2.5 or greater indicates the presence of moderate to severe multicollinearity. The Variance Inflation Factor (VIF) is used to assess the presence of multicollinearity in a regression model. It quantifies how much the variance of the estimated regression coefficients is increased due to multicollinearity. A VIF value of 1 indicates no multicollinearity, while values greater than 1 suggest increasing levels of multicollinearity. He notes that this threshold is consistent with the rule of thumb proposed by Neter *et al.* (1996) and also corresponds to the point at which the R-squared value for a regression model begins to level off. Kutner *et al.* (2005) suggest that a mean VIF of 5 or greater is a sign of serious multicollinearity. They note that this threshold is based on simulation studies and empirical evidence, and that it is also consistent with the rule of thumb proposed by Neter *et al.* (1996).

Table 9: Breusch-Pagan/Cook-Weisberg Test for Heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho:	Constant variance
Variables:	fitted values of edo
chi2(1) =	0.19
Prob > chi2 =	0.6638

Source: Field Survey, July 2023

The Breusch-Pagan/Cook-Weisberg test is a statistical test used to determine whether there is heteroscedasticity, or unequal variance, in a regression model. The test evaluates the null hypothesis that the error terms in the model exhibit constant variance, indicating homoscedasticity. Result of VIF indicates that there is no major problem of multicollinearity as the mean VIF does not exceeds 2.5. In the context of OLS regression, several authors have justified the use of mean VIF as a criterion for assessing the severity of multicollinearity. O'Brien (2007) argues that a mean VIF of 2.5 or greater indicates the presence of moderate to severe multicollinearity. He notes that this threshold is consistent with the rule of thumb proposed by Neter *et al.* (1996) and also corresponds to the point at which the R-squared value for a regression model begins to level off. Kutner *et al.* (2005) suggest that a mean VIF of 5 or greater is a sign of serious multicollinearity. They note that this threshold is based on simulation studies and empirical evidence, and that it is also consistent with the rule of thumb proposed by Neter *et al.* (1996).

5. DISCUSSION OF RESULTS

When examining the effect of Institutional Characteristics on entrepreneurship education outcomes, the coefficient is found to be 0.091126 with a standard error of 0.0670538. However, the t-value (1.36) and associated p-value (0.177) indicate that the relationship is not statistically significant. Similarly, the Rank of Lecturer is investigated as a potential factor influencing entrepreneurship education outcomes. Although the t-value (-1.63) suggests a negative relationship, the p-value (0.107) exceeds the conventional threshold of 0.10, indicating no statistically significant effect. In contrast, the Approaches/Method of teaching variable shows a statistically significant effect on entrepreneurship education outcomes. The t-value (2.22) and corresponding p-value (0.029) indicate a significant positive relationship. On the other hand, the Content taught variable does not demonstrate a statistically significant relationship with

entrepreneurship education outcomes. The t-value (-1.38) and p-value (0.170) indicate no significant effect. Mahendra, et al., (2017) revealed that entrepreneurial intention is indirectly affected by entrepreneurship education, meaning that students' entrepreneurial motivation and attitude are two important mediating variables. The Consortium for Entrepreneurship Education (2008) explained that the ability to recognize opportunities in one's life, the ability to pursue opportunities, by generating new ideas and found the needed recourses, the ability to create and operate a new firm, the ability to think in a creative and critical manner. Welsh and Drăgușin, (2011) revealed that the main challenges that the Romanian higher education system needs to achieve to meet the new National Education Law's requirements (L1/2011). The economy needs Entrepreneurship as a major core curriculum to transform graduates into "job creators" rather than "job seekers" in order to revive and strengthen its market-based economy. Parreira et al. (2011) showed five types of students in terms of entrepreneurial intent: the 'idealists' representing 37% of the students, the 'skeptics' representing 13%, the 'established in life' representing 18%, and the group of the 'disillusioned' who represented 32%, showing that only 55% were motivated to and focused on entrepreneurship.

6. CONCLUSION AND POLICY IMPLICATIONS

Entrepreneurship education and entrepreneurship development have the potential to significantly contribute to national development in Cameroon. However, several challenges hinder their full realization. Limited access to resources, inadequate infrastructure, regulatory barriers, and a lack of coordination among stakeholders are among the key obstacles. Nevertheless, the country possesses a rich entrepreneurial culture, a growing youth population, and untapped opportunities in various sectors, which can be leveraged for economic transformation.

Based on the analysis conducted, the following recommendations are proposed: develop a comprehensive national entrepreneurship policy framework that aligns with the country's development goals and addresses the specific needs and challenges of entrepreneurs, timely use of specialist from the industries to consolidate the work of lecturers. Strengthen collaboration among government agencies, educational institutions, industry associations, and financial institutions to create a supportive ecosystem for entrepreneurship and consequently the approaches will be more efficient. Increase investment in entrepreneurship education and development programs, focusing on capacity building, mentorship, and access to finance for aspiring and existing student entrepreneurs.

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