

Evaluating Higher Education Curriculum Framework and Inhibitions for Entrepreneurial Intentions

Pius Kwame Agyekum
M.S. Ramaiah University of Applied Sciences

K.M. Sharath Kumar
M.S. Ramaiah University of Applied Sciences

Stephen Asunka
Ghana Communication Technology University

The call on Universities to produce entrepreneurial-minded graduate entrepreneurs called for the development of the Entrepreneurial Curriculum Framework for Higher Education to enhance Entrepreneurial Intentions (EIs) and evaluation of factors that inhibit intentions. We evaluated factors inhibiting EIs and investigated Curriculum Framework for Higher Education that enhances intentions.

A total of 385 and 165 Students and Faculty participated in the survey in 2018 and 2020 respectively. Qualitative and Quantitative approaches were adopted in data collection. Demographic and 5-point Likert scale type of questions were sufficiently asked and analyzed using SPSS, EXCEL, and Smart PLS-SEM software. Research limitations included time constraints, low response rate, and lack of modern software for analysis. Startup Capital and Risk Taking propensity ranked higher as inhibiting factors to EIs. Outcomes, Pedagogy, Assessment, and Audience of Curriculum Framework impacted EIs but Planning Competencies, Context, Content, and Objective of curriculum Framework did not. Longitudinal research for actual job creation by Students and Faculty after graduation is recommended for future study.

Keywords: higher education, curriculum development framework, factors inhibiting EIs, entrepreneurial intentions, evaluation

INTRODUCTION

Entrepreneurship Education and Entrepreneurship Intentions (EIs) studies have engaged the attention of Researchers, Educational Authorities, and Governments all over the world (Baluku et al., 2018; Odewale et al., 2019). Entrepreneurship entails the creation and realization of values for entrepreneurs (Morris & Jones, 1999) while Entrepreneurship Education provides inspiration and motivation to students to become entrepreneurs, particularly at the University level (Swurupa and Goyal, 2020).

Entrepreneurship has become an important source of improvement in economies (Mitchell, 2005; Morris et al. 1995; Swurupa & Goyal, 2020). Entrepreneurship is all about solving problems whereas

Entrepreneurship Education creates an environment for students to learn by doing. Kisubi et al., (2021) opined that the incorporation of entrepreneurship training into strategic plans and educational curricula can stimulate EIs among Students which Bahadur (2015) supported and concluded that entrepreneurial knowledge and skills can be taught and learned. Patricia & Silangen (2016) affirmed that Entrepreneurship Education aims to direct students to start their businesses. Ebewo et al., (2017) reported on the positive effects of Entrepreneurship education while Michelle and Tendai, (2016) on the Negative effects without reaching any consensus.

Governments have continued to support activities and promote entrepreneurship drives among University Graduates to create their businesses. Wathanakom et al. (2020) and Bazkiaei et al., (2021) affirmed that Governments encourage entrepreneurship because it is recognized as a source of job creation and a key driver to promote economic growth. The quest to churn out entrepreneurial graduates to support national economies compels Universities to offer compulsory or elective courses on Entrepreneurship and Innovation at degree and master's levels. Entrepreneurial Intentions influence the decisions of students and faculty members to become entrepreneurs [Gopi, 2021].

It is against this background that this research sought to investigate how the development of a common entrepreneurial Curriculum Framework in Higher Education enhances the EIs of students and also evaluate the factors that inhibit EIs.

Entrepreneurial Intention has its root in Entrepreneurship and Intention (Barringer & Ireland, 2008, p32) and Intention has been described as "Person Motivation" to make an effort to act upon a conscious plan or decision (Conner and Amitage, 1998). The entrepreneurial inclination is what researchers had used to express the behavior of individuals to become an entrepreneur (Bird, 1988). Thompson (2009) argued that there was no clear definition and a reliable instrument to measure intentions. Krueger et al., (2000) opined that the decision to become an entrepreneur is reasonably voluntary and a conscious process.

Curriculum development and delivery of an entrepreneurship course need a philosophical approach and activities of participants to guide the teaching and learning as the pedagogical processes. Entrepreneurs learn better than the traditional methods through experimental learning which is learning by doing (Chang et al., 2014). This process of learning is a trained action that allows students to solve problems without clear solutions (Pittaway & Cope 2007). Participants learn by reflecting on the actions taken to solve all organizational problems together with others (Leitch and Harrison, 2009).

The underpinning roles and delivery of curriculum development are innovative pedagogies and cross-disciplinary activities.

Bager (2011) suggested that the traditional lecturing approach where students listen, read, memorize and reflect is not sufficient and should be married with other activities to ensure the personal involvement of students to sense, feel, and be confronted with complexities, uncertainties, and emotional challenges. The enterprising approach (Gibb, 1996; O'Gorman, 2004) benefits non-business students due to its multi-disciplinarily and problem-solving nature. It ensures mixed activities whose guests would involve Academics, Practitioners, Educators, Idea Providers, and Investors from inter-disciplinary backgrounds (Ollila and Middleton, 2013)

A well-thought-through framework makes curriculum development for entrepreneurship clearer (Fayolle and Gailly, 2008; Maritz and Brown, 2013). The Curriculum Framework should have seven components including Context, Audience, Objectives, Pedagogy, Content, Assessment, and Outcomes (Maritz and Brown; 2013). Entrepreneurial curricula are expected to embody various information such as opportunities, business concepts, development plans, funding, business launchings, and case studies for students (Kourilsky, 1995; OECD, 2010) and should be cross-disciplinary and cross-cultural in Nature.

Personal Creativity greatly impacts entrepreneurial ventures (Hamidi et al., 2008) as creativity development has become a critical factor in Entrepreneurship Curriculum development.

In an entrepreneurial key competencies model, Competency is defined as the total of all experiences of knowledge, skills and attitudes acquired to effectively perform a job (Kaur and Bains, 2013). It applies to all facets of life as managerial, job planning, team building, decision making, risk-taking, and others addressed by Arafeh (2016). Boyatzis (1982) further defined competency as the capacity of personal

behaviors which satisfy job demands and contributes to expected outcome within the organizational environment.

Dressen (2005) and Smith & Shanker (2015) developed and implemented the famous three-cluster computer software model at Harvard University over 30 years to predict the quality of an entrepreneur's overall key characteristics and competencies.

The three-cluster model with 10 key Personnel and Entrepreneurial Competencies, representing 30 behaviors associated with successful entrepreneurs was adapted in our research design and validated during the data collection for the curriculum development framework.

Barriers to EIs termed inhibitions, impact EIs negatively (Pruett et al., 2009; Malebana, 2015; Kebaili et al., 2017) and creates differences in behaviors of entrepreneurs (Lien et al., 2002). Barriers are considered context-specific (Katundu and Gabagambi, 2016) which may depend on the industry, region, and company type (Martins et al., 2004). Scholars described the barriers as survival & entry (Raeesi et al., 2013); perceived & actual (Finnerty and Krzystofik, 1985), and External & Internal and (Sitaridis & Kitsios, 2017). Luthje and Frank (2003), believe that social and environmental factors may support or hinder an individual's EIs. Amankwa et al. (2018) identified four factors that inhibit EIs of Public University students in Ghana which were described as Legal, Economic, Socio-cultural, and Personal.

Lalit Sharma (2018) categorized the major barriers to EIs of students into internal & external. The internal barriers are linked to personality (Giacomin et al., 2011, Sandhu et al., 2011), Fear of Taking Risks (Agyekum et al., 2020), education & competency (Shinnar et al., 2009), attitude (Smith & Beasley, 2011) and gender (Akehurst et al., 2012).

The external barriers are linked to Finance (Boateng et al., 2014), Society & Family Commitments (Martins et al 2004), institutional support (Sesen & Pruett, 2014), marketing challenges and poor infrastructural networks, knowledge of the market, lack of customers and tough competition (Asiedu & Nduro, 2015). The other linkages include legal & regulatory constraints (Lakovleva et al., 2014), the Affairs of the State, Government bureaucracy, taxation & corruption (Stamboulis & Balas, 2014), and socio-political, economic, and business environment (Ozaralli & Rivenburgh, 2016).

All these barriers were evaluated to assess their impact on the entrepreneurial intentions of students and faculty.

Hypotheses

Among the research, hypotheses tested included

H₀₁: Entrepreneurial Curriculum Framework Impact EIs

H₀₂: Models of Teaching Entrepreneurial Curriculum Impact EIs

H₀₃: Entrepreneurial Competencies Impact EIs

H₀₄: Power Competencies Impact EIs

H₀₅: Achievement Competencies Impact EIs

H₀₆: Planning Competencies Impact EIs

H₀₇: Pedagogical Issues with Entrepreneurial Teaching Impact EIs

H₀₈: Pedagogical Issues with Entrepreneurial Teaching Impact Entrepreneurial Curriculum Framework

H₀₉: Age, Sex, and Education Impact on EIs

H₁₀: External financial support to the University impact the EIs of students and faculty

H₁₁: Relationship between University climate and EIs through Knowledge and Skills Acquisition is moderated by personal and external inhibition factors

H₁₂: Relationship between University Climate and EIs are moderated by lack of start-up capital

H₁₃: Relationship between University Climate and EIs are moderated by Government Regulative Structures & Institutional Support

METHODS

The paper looks into the factors that inhibit EIs and the development of a common Curriculum Framework for Higher Education that enhances intentions in the Ghanaian Context. Qualitative and Quantitative surveys were carried out from 2018 to 2021 among students and faculty members at selected Universities in Ghana.

The research domains included models of entrepreneurial teaching, pedagogical issues with entrepreneurial teaching, entrepreneurial competencies, and entrepreneurial curriculum framework. Others were Internal and External barriers to entrepreneurial intentions. The rest were parents' background, external capital to the University, and socio-economic background of students and faculty. Tested questionnaires designed by research scholars (Kristiansen, 2003; Bager 2011; Ollila and Middleton, 2013) were adapted and used. Demographic and 5-points Likert scale type of questions were sufficiently asked and analyzed.

Personal interview schedules and Online Questionnaires in Google forms were the main instruments used to collect primary data from the eight participating Universities in Ghana. Lecturers, Student Class Representatives, Faculty Officers, and Friends served as Research Assistants in the information gathering. They compiled the contact email addresses and WhatsApp telephone numbers of students, faculty members, and University staff.

The online google forms short Link for example (<https://forms.gle/X2y4dRRm4F4LXTSu6>) was sent to respondents to answer the questionnaire. Online google form questionnaires used in 2020 were primarily due to the COVID-19 pandemic. In the case of the face-to-face interviews, printed questionnaires were physically distributed to participants to fill themselves or assisted by the Research Assistant. The filling of a questionnaire on average, lasted for 10-13 minutes to complete anonymously.

Pilot surveys were conducted to fine-tune the entire questionnaire before the actual surveys.

Responses to the surveys were sought among University students, Faculty members, University Management, Industrialists, and Educationists.

The selection of the eight Universities which participated in the survey was purposively done to ensure the inclusion of Government Universities, Private University Colleges, and Technical Universities where most students and faculty members received their professional training.

A combination of probability and non-probability sampling methods was used to select the interviewees to fill the questionnaires. A mixture of simple random, stratified, cluster, purposive, accidental, convenience, and Quota sampling techniques were employed to select the individual members of the interviewees.

The sample sizes of 385 and 165 used in the two surveys with an average response rate of 74% were calculated using the Cochran formula (Cochran. W.G 1977).

Statistical Package for Social Science (SPSS), Excel, and Smart PLS-SEM3 was used to analyze the data. We stopped the google forms link online to avoid receiving further responses from respondents. All uncompleted and half-filled responses were mostly deleted from the returned questionnaires. The filled returned questionnaires were coded and responses were entered into SPSS, Excel, and Smart PLS-SEM3 to design, compute and calculate, measurements such as Cronbach alpha values, p-values for a significant test at two-tailed, Mean, Median, Frequencies, and Percentages.

To ensure data quality, reliability, and validity, a test of Cronbach Alpha values was used. Composite Reliability was determined to ensure internal consistency reliability of all the constructs of the reflective Measurement models designed with the Smart PLS-SEM 3 and SPSS Software.

Cronbach Alpha assumes that all indicators in a model are equally reliable but Smart PLS-SEM 3 prioritizes the indicators according to their reliability. Cronbach Alpha again is sensitive to the number of items in the scale and generally tends to underestimate the internal consistency reliability. This limitation of Cronbach Alpha made us use the composite reliability in Smart PLS-SEM 3 which takes into account the different outer loadings of the indicator variables. Generally, a composite reliability value of 0.60 to 0.90 was regarded satisfactory (Nunnally & Bernstein, 1994)

A composite reliability value below 0.60 indicates a lack of internal consistency reliability.

We carried out a reliability and validity test on all the questionnaires for the surveys.

A desired threshold or reliability for Cronbach Alpha is 0.70 or higher was normally required for a pilot survey.

The average Cronbach Alpha value of 0.958 obtained on the constructs of the research domains signified that the data was highly consistent, reliable, and can be validated.

RESULTS

The results section discussed the impact of Planning, Achievement, and Power Competencies on EIs, Models of Teaching, Entrepreneurial Competencies, Pedagogical Issues, and Curriculum frameworks that impacted EIs. Internal and External Factors that Impacted EIs

The impact of Curriculum Framework for Entrepreneurial Teaching on EIs, ranking of Inhibiting Factors that Impacted EIs, Internal and External Factors that Impacted EIs as well as socioeconomic factors, parent background, and Skills Acquisition that impacted EIs were assessed.

Impact of Planning, Achievement, and Power Competencies on EIs

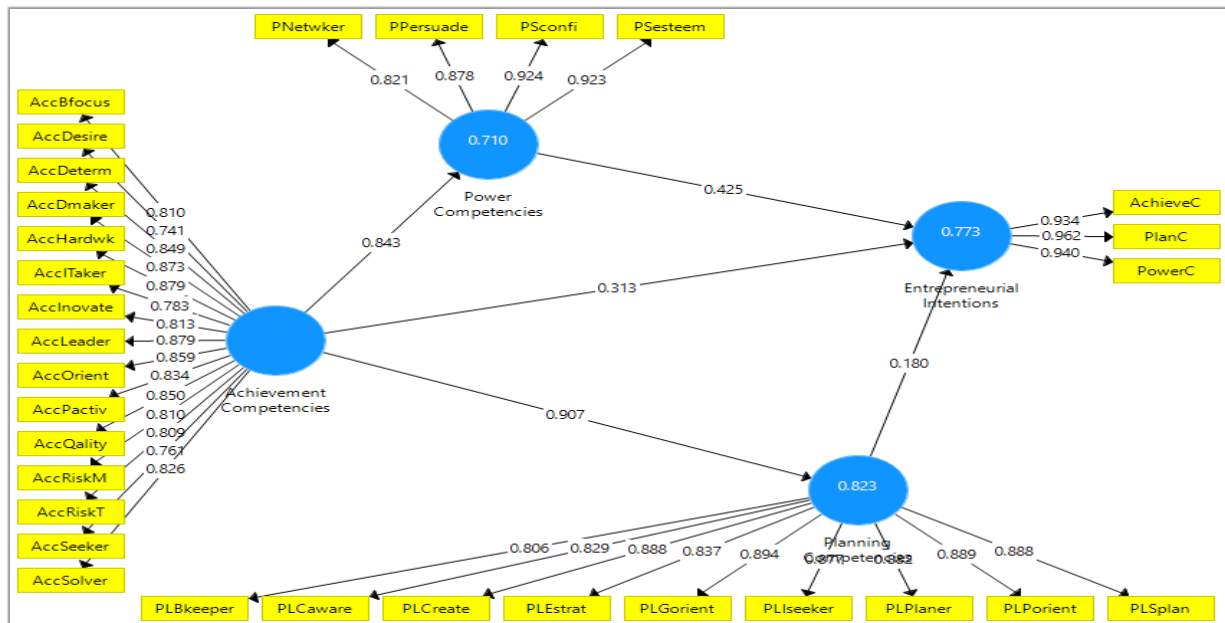
The following inferences could be deduced from the reflective Measurement Model of figure 1 which describes the relationships among planning, power, and achievement competencies and their impact on the EIs of Students and Faculty Members. The Power Entrepreneurial Competencies (**H3a**) significantly impact the EIs of Students and Faculty Members (EI). A unit change in Power competencies can cause a direct corresponding change of 0.43 units and an indirect change of 0.15 units in EI. It also served as a mediating factor to cause a total effect of 0.58 units on EIs. The significance value of 0.000, bootstrapped at 0.05% confidence indicated that Power Competencies significantly impact EI, which calls for the acceptance of the Null Hypothesis (H_0). Entrepreneurial Power Competency attributes include Persuasion, Networking, Independence, and Self-Esteem, and Self-Confidence. Training Students and Faculty Members in these attributes will make them Entrepreneurial

- 1) The Achievement Entrepreneurial Competencies (**H3b**) had a direct and indirect impact on EI. A unit change in the Achievement competencies causes a direct corresponding change of 0.30 units and an indirect change of 0.16 units on EI as a mediating factor with a total effect of 0.476 units on EIs. The significance value of 0.001, bootstrapped at 0.05% Confidence indicated that Achievement Competencies significantly impacted EIs. The Null hypothesis (H_0) is therefore accepted and the Alternative hypothesis (H_1) rejected.
- 2) Achievement Competencies significantly relate to the Power and Planning Competencies (**H3c**) and therefore impact significantly. A unit change in Achievement Competencies leads to a corresponding change of 0.9 units in Planning Competencies and 0.8 units in Power Competencies respectively. Their Null Hypotheses (H_0) are accepted and H_1 rejected. The Achievement Competency attributes include Opportunity Seeking Initiatives (*Initiative Taker, Innovative, Opportunity Seeker*); Persistence (*Decision Maker, Problem Solver, Leader*); Fulfilling Commitments (*Hard worker, Proactive, Business Focus*); Demand for Quality Efficiency (*Courageousness, Quality Consciousness, Efficiency – Oriented*) and taking Calculated Risks (*Risk-Taking, Risk- Managing and Desirable*)

- 3) Planning Competencies on the surface, have a positive but weak relationship with EI (H_{3d}). A unit change in Planning Competencies corresponds to a 0.2 unit change in EI. However, after bootstrapping at a 0.05% Confidence Level and obtaining a p-value of 0.149, the Planning Competencies which include creativity did not Impact EI

In my view, the most compelling explanation for this research finding is that Planning Competencies alone are not enough to impact EIs as stipulated by Hamidi *et al.* (2018). It needs to complement the effects of power and achievement competencies to impact EIs.

FIGURE 1
IMPACT OF PLANNING, ACHIEVEMENT, AND POWER COMPETENCIES ON ENTREPRENEURIAL INTENTIONS



Authors Construct: 2020

Models of Teaching, Entrepreneurial Competencies, Pedagogical Issues, Curriculum Framework that Impacts EIs

The following inferences are also deduced from figure 2 which captures the interrelationships among pedagogical issues with entrepreneurial curriculum, a curriculum framework for entrepreneurial teaching, models of teaching entrepreneurial curriculum, and entrepreneurial competencies and their impact on EIs of Students and Faculty members.

- 1) Entrepreneurial Competencies in general Impact the EIs of Students and Faculty Members significantly. A unit change in Entrepreneurial Competencies can cause a corresponding change of 0.5 units in EI. The p-value of 0.000 implies that its impact on EI is highly significant. The Null Hypothesis (H_0) is thus accepted.
- 2) The models of Teaching Entrepreneurial Curriculum in Higher Education also impact EI. A unit change in Models of Teaching Entrepreneurial Curriculum causes a corresponding change of 0.2 units in EI. The p-value of 0.001 after bootstrapping at a 0.05% Confidence Level implies that its impact on EI is significant. The Null Hypothesis (H_0) is also accepted.

The models of Teaching used for the analysis were: Case Studies; Lectures; Role Plays; Videos; Presentations and Handouts. Others were Group Discussions; Action Learning; Startup Development and Invitation of Entrepreneurs, Mentors, and visiting Professors to Classrooms to teach.

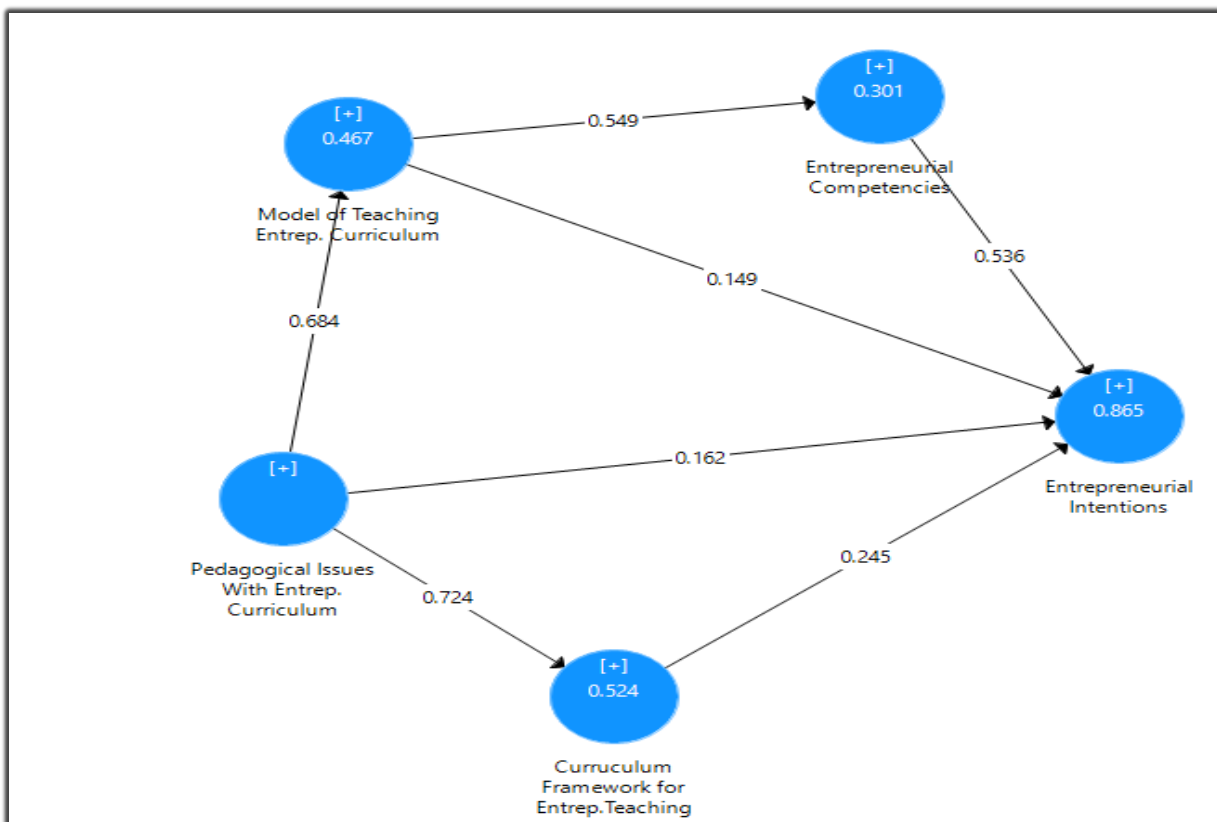
3) Pedagogical Issues with Entrepreneurial Curriculum, directly and indirectly, impact EI. The unit change correspondingly leads to 0.2 units of Change in EI. The Null Hypothesis (H_0) is consequently accepted with a p-value of 0.000 after bootstrapping at a 0.05% Confidence Level. It has a total effect of 0.339 units on EIs.

The Pedagogical issues considered were that Staff and Teachers must be developed to be Entrepreneurial in their Approaches, Constant review of Curriculum, use of Top-down and Bottom-up Approaches, producing Entrepreneurial graduates, review of content, and proper coordination.

4) Curriculum Framework for Entrepreneurial Teaching impacted EIs with a p-value of 0.000. A unit change in the Curriculum Framework for Entrepreneurial Teaching will almost lead to a corresponding change of 0.3 units.

5) The dominant predictor of EIs is the Entrepreneurial Competencies, followed by the Curriculum Development Framework, Pedagogical Issues, and Models of Teaching. The Coefficient of Determination (R^2) value of 0.866 indicates that 87% of all the variances in the Dependent variable (EIs) can be explained by the Independent Variables.

FIGURE 2
IMPACT OF MODELS OF TEACHING, ENTREPRENEURIAL COMPETENCIES, PEDAGOGICAL ISSUES AND CURRICULUM FRAMEWORK ON EIS



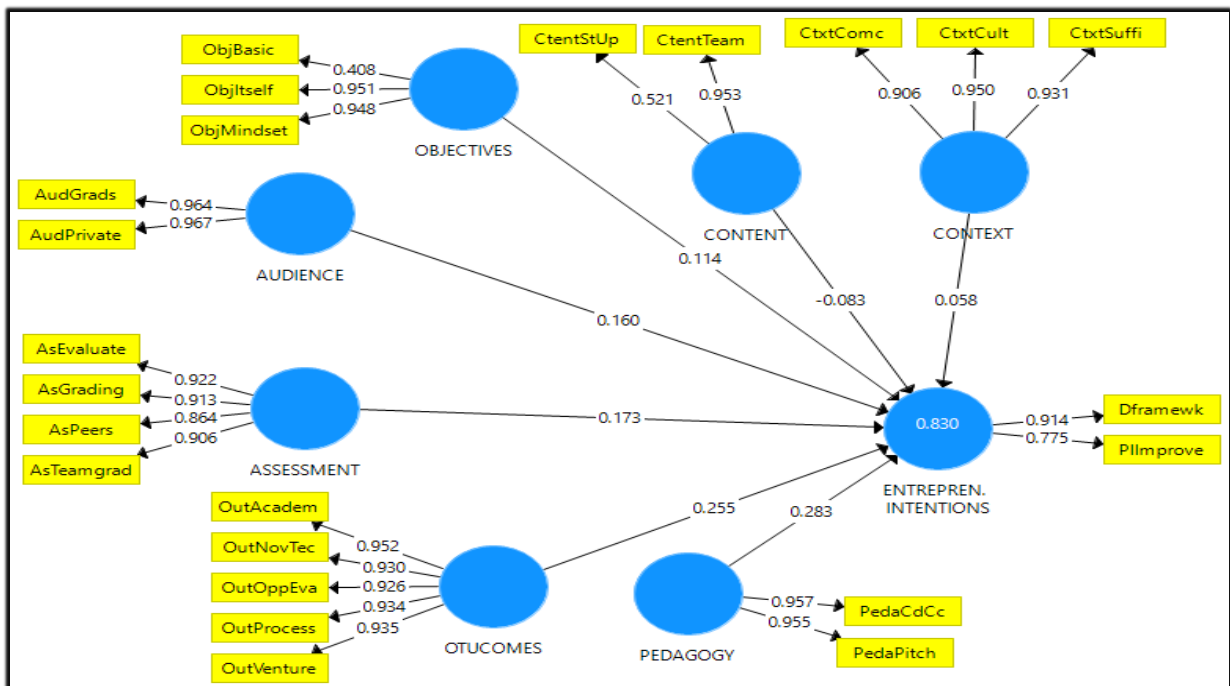
Authors Construct: 2020

Impact of Curriculum Framework for Entrepreneurial Teaching on EIs

The following can be inferred from the Curriculum Framework in figure 3 showing the impact of the factors (objectives, audience, context, content, pedagogy, outcomes, and assessment) of the curriculum framework for entrepreneurial teaching on the EIs of Students and Faculty.

- 1) Although, out of the seven factors considered for the Curriculum Framework the findings of the study supported four factors (Outcomes, Pedagogical Issues, Assessment, and Audience of the Curriculum Framework) as impacting EIs but three were not supported. A unit change in Outcomes, Pedagogy, Assessment, and Audience will lead to a corresponding change of 0.26, 0.28, 0.17, and 0.16 units respectively on EIs. The respective p-values of 0.031, 0.014, 0.024 and 0.026 being less than $p < 0.05$ implies positive relationships and significant impact to EIs
- 2) The Content of the Curriculum Framework had a negative and weak relationship with EIs. A unit change of Content will reduce EIs by 0.08 units. The p-value of 0.305, greater than $p < 0.05$ after bootstrapping at a 0.05% Confidence Level implies that Content has a weak relationship with EIs but does not impact EIs
- 3) Context and Objective of curriculum Framework with p-values of 0.504 and 0.210 respectively are greater than $p < 0.05$, signifying no impact on EIs. A unit change in Context and Objective will cause a corresponding change to EIs by 0.06 and 0.11 units respectively. The null Hypotheses of Context and Objective are consequently rejected, and Alternative Hypotheses accepted

FIGURE 3
IMPACT OF CURRICULUM FRAMEWORK ON ENTREPRENEURIAL TEACHING IN HIGHER EDUCATION ON ENTREPRENEURIAL INTENTIONS



Authors Construct: 2020

Results of Rankings of Inhibiting Factors That Impacted Entrepreneurial Intentions

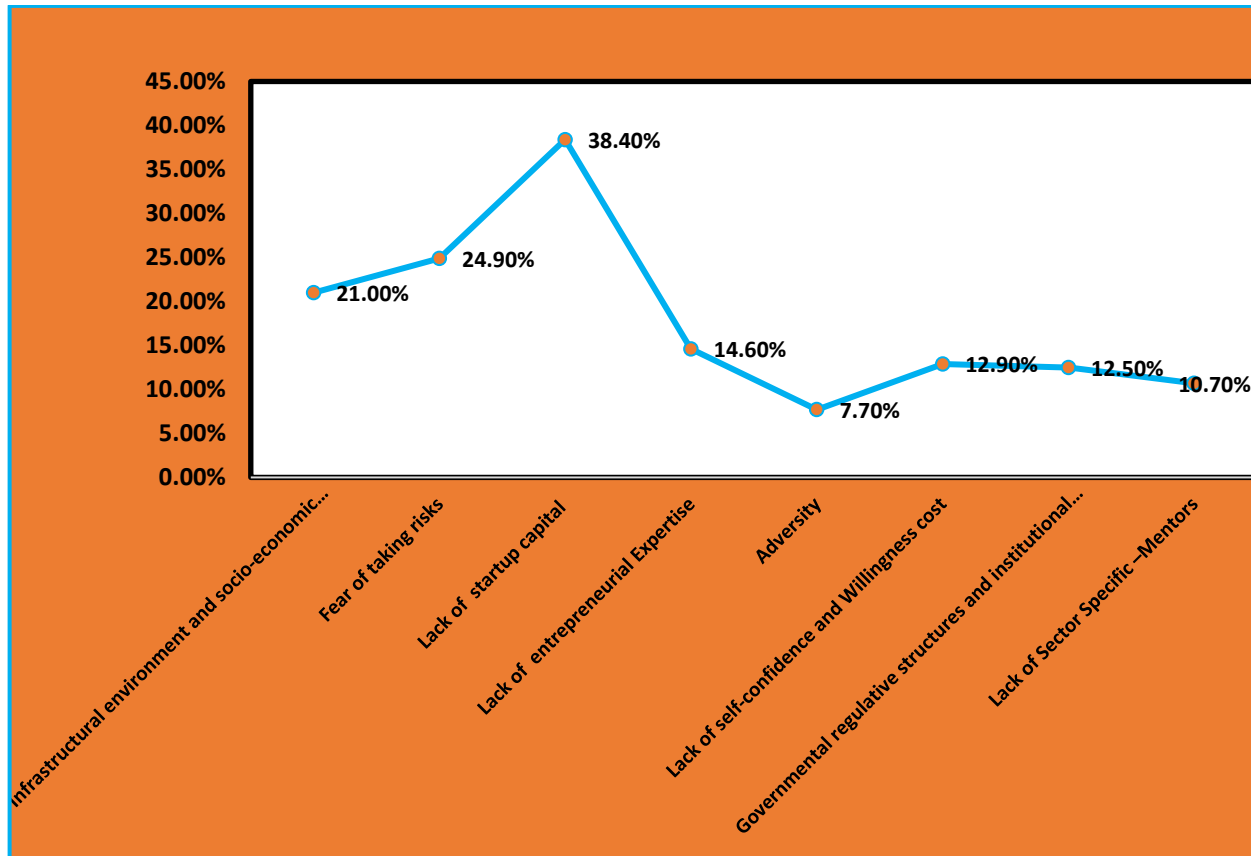
The research results revealed that the Lack of Startup Capital led to the rankings of factors that inhibit EIs followed by fear of taking Risks. The infrastructural, Environment and Socio-Cultural Structures of a country ranked third. Government Regulative Structures ranked fourth. Lack of specific sector Mentors and Adversity was ranked fifth and sixth respectively as shown in figure 4 depicting the rankings of inhibition factors to EIs.

Internal and External Factors That Impacted Entrepreneurial Intentions

The research results on internal and external factors that impacted the EIs of Students and Faculty as depicted in figure 5 are inferred as follows:

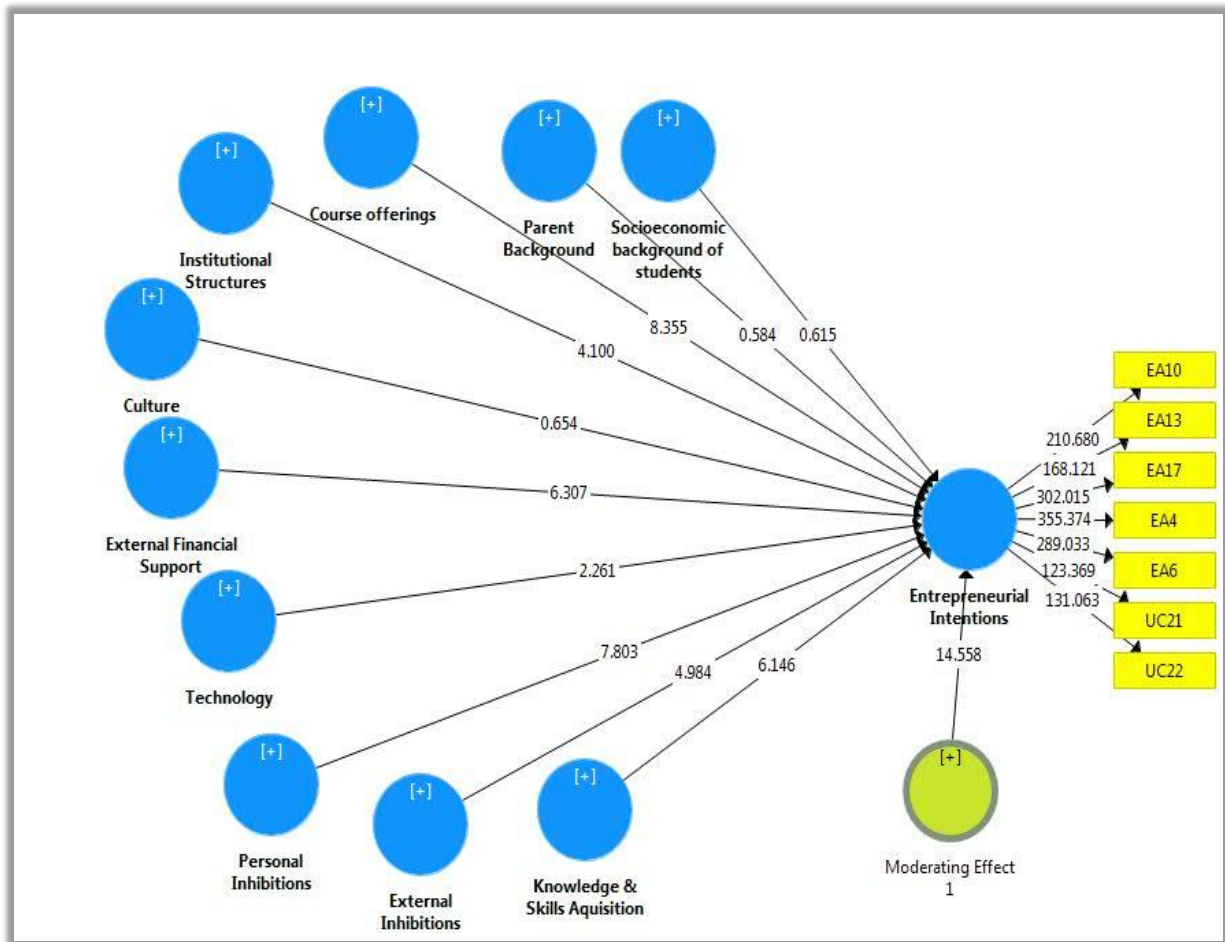
- 1) External financial support for the University significantly impacted EIs.
It had a sample mean of 0.245, a standard deviation of 0.039, T- Statistics of 6.307, and a significant p-value of 0.000. The Null Hypothesis (H_0) was accepted and the Alternative hypothesis (H_1) rejected
- 2) Internal/Personal Inhibitions Impact EIs.
The t-statistic was 7.803 with a p-value of 0.000. The Null Hypothesis was accepted and the Alternative hypothesis (H_1) rejected
- 3) External Inhibitions Impacted EIs.
It had a t-statistic of 4.984, sample mean of 0.144, and standard deviation of 0.028 with a p-value of 0.000. Legal and Regulatory Constraints, Government Bureaucracy, Taxation and Corruption, Socio-political, Economic and Business Environment impacted EIs

FIGURE 4
RANKING OF FACTORS THAT INHIBIT ENTREPRENEURIAL INTENTIONS OF STUDENTS AND FACULTY



Authors Construct: 2020

FIGURE 5
IMPACT OF UNIVERSITY CLIMATE, PARENT BACKGROUND, FINANCIAL SUPPORT, PERSONAL AND EXTERNAL INHIBITIONS TO EIS



Authors Construct: 2020

- 4) Socioeconomic and Parent Backgrounds Did Not Impact Entrepreneurial Intentions.
 The socio-economic and parent backgrounds of students and faculty did not impact their entrepreneurial Intentions. The t-statistics of socioeconomic and parent backgrounds were 0.615 and 0.584 respectively. Their p - values were also 0.539 and 0.584 respectively. Since the p-values are greater than ($p < 0.05$), the Null hypotheses are rejected and the Alternative hypotheses accepted.
- 5) Knowledge and Skills Acquisition Impacted Entrepreneurial Intentions.
 The impact of Knowledge and skills acquisition on students' entrepreneurial intentions was significant. The t- statistics was 6.146, the sample mean of 0.167, the standard deviation of 0.028, and a p-value of 0.000. The Null hypothesis is accepted and the Alternative hypothesis is rejected.

DISCUSSIONS

Our research evaluated the factors that inhibit EIs and investigated the development of a common Curriculum Framework for Higher Education that enhances intentions in the Ghanaian Context.

Our findings suggested the following:

- 1) Achievement Competencies significantly Impacted Entrepreneurial Intentions.
When we incorporate Achievement Attributes in Entrepreneurial Curriculum in Higher Education, it will impact students and faculty members to become entrepreneurial, and create their Jobs to support the Ghanaian local economy [Moses and Mosunmola, 2014]
- 2) Planning Competencies did not impact the EIs of Students and Faculty Members as expected. Planning Competencies involve attributes such as creativity, information seeking, systematic planning, goal & performance-oriented, and awareness of competitors which are in themselves important to the job creation process but not a standalone. This implies that Planning Competencies complement the efforts of the Power and Achievement Competencies to impact EIs
- 3) The findings of the research contribute to a growing body of evidence that power and achievement competencies impacted EIs and their incorporation into the Entrepreneurial Curriculum for Higher Education will churn out entrepreneurial students and faculty who will open their Jobs to support local economies as established by Moses & Mosunmola, [2014].
- 4) Content, Context, and Objective of Curriculum Framework failed the test of significance, contrary to the study conducted by Maritz and Brown (2013) which adduced that Content, Context, and Objective impacted EIs. The implication is that Curriculum Framework embedding Entrepreneurial Intentions may have a well-developed Content, Context, and Objective but could not impact EIs. The three would have to be driven together with Pedagogical Issues, Assessment, Audience, and Outcomes to impact EIs. Human, institutional and technological factors may explain why content, context, and objective failed to impact the curriculum framework.
- 5) Altogether, the research findings suggested that Models of teaching, entrepreneurial competencies, pedagogical issues, and curriculum framework are critical predictors of EIs and should be closely monitored in higher educational institutions. Interestingly, these findings support what scholars including Ollila & Middleton [2013]; Kourilsky [1995]; Gibb [1996]; O’Gorman [2004], and Bager [2011] have postulated. Despite these identified as predictors of EIs, It is suggested that the development of the Curriculum Framework for Entrepreneurial Teaching in higher education needs thoughtful & thorough design and implementation to impact the EIs of students and faculty in our Universities
- 6) External and Internal Inhibition factors impacted the EIs of students and faculty which must be addressed by University leadership, Governments, and Policy Makers. Scholars, [Lakovleva et al., 2014; Stamboulis & Balas, 2014; Ozaralli & Rivenburgh, 2016] had affirmed that external inhibitions impact EIs. This includes Poor Infrastructural Networks and a Lack of Customers. Asiedu & Nduro [2015] and Mahiuddin et al., [2015] also added Market Competition. Similarly, other Scholars had related internal inhibition factors of entrepreneurial intentions to personality [Sandhu et al. 2011], education and competency [Shinnar et al 2009], attitude [Smith and Beasley, 2011], and gender [Akehurst et al., 2012] which our research findings also affirmed as impacting EIs. Sitaridis and Kitsios (2017) affirmed that internal and external inhibiting factors impact EIs
- 7) The research finding suggested that socioeconomic and Parent Background did not Impact the Entrepreneurial Intentions of students and faculty. These had been affirmed by Churchill *et al.* [1987], Agyekum *et al.* (2020), and Krueger and Dickson [1993] that Entrepreneurs’ children do not proportionally become Entrepreneurs. Boyd et Vozikis [1994]; Lee et Wong [2004]; Tubbs & Ekelberg [1991] also hold a contrary view that the Demographic/Socioeconomic backgrounds of parents influence intentions
- 8) Knowledge and Skills Acquisition impacted EIs. The survey participants admitted having very high aptitude in recognizing entrepreneurial opportunity, skills in creativity, problem-solving, leadership, communications, and development of new products and services. Other skills included networking and making professional contacts. These abilities and skills set positively

impacted the EIs of Students and Faculty. Garzon [2010] asserted that the Knowledge and skills of an individual is an important factor to start a business. Looper [1985, 1993] and Scherer et al [1991] affirmed that experience and education impacted intentions and attitude

- 9) The research identified a lack of start-up capital as leading the rankings of factors that inhibit EIs, followed by fear of taking a risk. The other factors that inhibited EIs were Infrastructural Environment and Socio-Cultural Structures, Government Regulative Structures, Lack of specific sector Mentors, and Adversity. All the findings replicate previous study outcomes which beautifully adds to the body of knowledge. Brixiova and Kangoye [2019] affirmed the lack of Start-up capital as critical for a firm's creation, size, and performance whiles Memon et al., [2015] underscored the need for specific mentors. Etemad [2020] asserted that Adversity effects are more disabling to enterprises. Governments, Policy makers, and University leadership should not pay lip service to these inhibition factors of EIs if they support the job creation agenda among University graduates with their hearts.
- 10) External Financial Support for universities significantly impacted EIs in this study. Boateng et al., [2014], and Sesen & Pruett, [2014] supported the assertion that Finance and Institutional support impacted EIs which was also affirmed by the study. On the contrary, Agyekum et al., [2020] found that External Financial Support with t-statistics of 0.659 and p-value of 0.510 did not impact Entrepreneurial Intentions

CONCLUSIONS

The following conclusions can be drawn based on the research findings described in the previous sections.

- 1) Planning Competencies alone are not enough to impact EIs as stipulated by Hamidi *et al.* (2018). It needs to complement the effects of Power and Achievement competencies to impact EIs. Power and Achievement competencies, Models of teaching, Entrepreneurial competencies, Pedagogical Issues, and Curriculum Framework have been identified as Critical Predictors of EIs. These replicate previous study outcomes and beautifully add to the body of knowledge. The development of the Curriculum Framework for Entrepreneurial Teaching in Higher Education needs thoughtful & thorough design and implementation to impact EIs
- 2) Content, Context, and Objective which did not impact EIs contradict the work of Maritz and Brown (2013). Further studies with modified sampling techniques, selection criteria, and the increased sample size are needed to confirm or otherwise on why content, context, and objective could not predict EIs under Entrepreneurial Curriculum Framework. Governments, Educational leaders, and University leaders who support the move for graduates to get involved in entrepreneurial ventures to support the local economies should and cannot ignore the critical need for Startup Capital, good Infrastructural Networks, non-Counterproductive Regulations, External Financial Support to Institutions, proper Business Environment and continuous Support, if Entrepreneurship Education and Entrepreneurial Intentions of students and faculty are to be enhanced
- 3) Limitations of our research were time and resource constraints, and difficulty in getting respondents due to COVID-19. Overreliance on qualitative data more than quantitative because of a lack of modern software for analysis and the requisite knowledge.
- 4) A longitudinal study among Alumni of Universities to unearth actual venture creation by graduates is recommended for future study. One important question that needs an answer is whether graduates, churned out from the Universities yearly, really want to become entrepreneurs or self-employed and not continue to run after employers as jobseekers. An answer to this question will help enrich the entrepreneurial debate among students, faculty, and entrepreneurial scholars

REFERENCES

- Agyekum, P.K., Kumar, S.M., & Asunka, S. (2020). Analysis of entrepreneurial intention within the existing university system in Ghana. University of applied sciences in India. *Journal of Management and Commerce*, 6(2).
- Agyekum, P.K., Kumar, S.M., & Asunka, S. (2020). Assessment of the traits which transform the orientation of students and faculty members that impact their entrepreneurial intentions. *Asian Journal of Management*. ISSN 0976-495X (Print) 2321-5763 (Online).
- Akehurst, G., Simarro, E., & Mas-Tur, A. (2012). Women entrepreneurship in small service firms: Motivations, barriers and performance. *The Service Industries Journal*, 32(15), 2489–2505.
- Amankwah-Amoah, J., Boso, N., & Antwi-Agyei, I. (2018). The effects of business failure experience on successive entrepreneurial engagements: an evolutionary phase model. *Group and Organization Management*, 43(4), 648–682. <https://doi.org/10.1177/1059601116643447>
- Arafteh, L. (2016). An entrepreneurial key competencies' model 2016. *Journal of Innovation and Entrepreneurship*, 5(1), 1. DOI: 10.1186/s13731-016-0048-6
- Asiedu, M., & Nduro, K. (2015). Polytechnic students' entrepreneurial knowledge, preferences and perceived barriers to start-up business. *European Journal of Business Management*, 7(21), 20–28.
- Bager, T., (2011). The camp model for entrepreneurship teaching. *International Entrepreneurship and Management Journal*, 7(2), 279–296.
- Bahadur Ali Soomro (2015). Developing attitudes and intentions among potential entrepreneurs. *Journal of Enterprise Information Management*.
- Baluku, M.M., Bantu, E., & Otto, K. (2018). Effect of locus of control on entrepreneurial attitudes and self-employment intentions: The moderating role of individualism. *Journal of Enterprising Culture*, 26(3), 251–283.
- Barringer, B.R., & Ireland, R.D. (2008). *Entrepreneurship: Successfully launching new ventures: International Edition* (2nd Edition). Texas A&M University.
- Bazkiaei, H.A., Khan, N.U., Irshad, A.-U., & Ahmed, A. (2021). Pathways towards entrepreneurial intention among Malaysian universities' students. *Business Process Management Journal*, Vol. Ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/BPMJ-01-2021-0021>. ISSN; 1463-7154
- Bird, B.J. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13, 442–453.
- Boateng, G.O., Boateng, A.A., & Bampoe, H.S. (2014). Barriers to youthful entrepreneurship in rural areas of Ghana. *Global Journal of Business Research*, 8(3), 109–119.
- Boyatzis, R. (1982). The competent manager. A model for effective performance.
- Boyd, N.G., & Vozikis, G.S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 18(4), 63–77.
- Brixionva, S., & Kangoye, T. (2019). *Networks, start-up capital and women's entrepreneurial performance in Africa: Evidence from Eswatini*.
- Chang, J., Benamraoui, A., & Rieple, A. (2014). Learning-by-doing as an approach to teaching social entrepreneurship. *Innovations in Education and Teaching International*, 51(5), 459–471. DOI:10.1080/14703297.2013.785251
- Cochran. (1977). Sample size in statistics (how to find it): Excel, Cochran's formula, general tips.
- Conner, M., & Armitage, C.J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28(15), 1429–1464. <https://doi.org/10.1111/j.1559-1816.1998.tb01685.x>
- Driessen, M. (2005). *E-scan Ondernemerstest: beoordeling end ontwikkeling van ondernemerscompetenties*, PhD-thesis. Entrepreneur Consultancy, Gravenland.
- Ebewo, P.E., Rugimbana, R., & Shambare, R. (2017). Effects of entrepreneurship education on students' entrepreneurial intentions: A case of Botswana. *Management*, 5(4), 278–289.

- Etemad, H. (2020). Managing uncertain consequences of a global crisis: SMEs encountering adversities, losses, and new opportunities. *Journal of International Entrepreneurship*, 18, 125–144.
- Fayolle, A., & Gailly. (2008). From Craft to Science: Teaching models and learning processes in entrepreneurship education. *Journal of European Industrial Training*. ISSN: 0309-0590
- Finnerty, J.F., & Krzystofik, A.T. (1985). Barriers to Small Business Formation. *Journal of Small Business Management*, 23(3), 50–58.
- Garzon (2010). *Targeting micro RNAs in Cancer: Rationale, Strategies, and Challenges*.
- Giacomin, O., Janssen, F., Pruett, M., Shinnar, R.S., Llopis, F., & Toney, B. (2011). Entrepreneurial intentions, motivations, and barriers: differences among American, Asian and European students. *International Entrepreneurship and Management Journal*, 7(2), 219–238.
- Gibb, A. (1996). Entrepreneurship and small business management: can we afford to neglect them in the twenty-first-century business school? *British Journal of Management*, 7(4), 309–321. <https://doi.org/10.1111/j.1467-8551.1996.tb00121.x>
- Gopi, J. (2021). Understanding entrepreneurial intentions among management students of Kerala technological university. *Asian Journal of Economics, Finance, and Management*, 4(2), 41–49. Retrieved from <https://globalpresshub.com/index.php/AJEFM/article/view/1093>
- Hamidi, D.Y., Wennberg, K.J., & Berglund, H. (2008) Creativity in entrepreneurship education. *Journal of Small Business and Enterprise Development*, 15(2). DOI: 10.1108/14626000810871691
- Hytti, U., & O’Gorman, C. (2004). What is “enterprise education”? An analysis of the objectives and methods of enterprise education programmes in four European countries. *Education + Training*, 46(1), 11–23. DOI: 10.1108/00400910410518188
- Katundu, M.A., & Gabagambi, D.M. (2016). Barriers to business start-up among Tanzanian university graduates: Evidence from the university of Daressalaam. *Global Business Review*, 17(1), 16–37.
- Kaur H., & Bains, A., (2013) Understanding the concept of entrepreneur competency. *Journal of Business Management & Social Sciences Research (JBM&SSR)*, 2(11), 31–33.
- Kebaili, B., Al-Subyae, S.S., & Al-Qahtani, F. (2017). Barriers of entrepreneurial intention among Qatari male students. *Journal of Small Business and Enterprise Development*, 24(4), 833–849.
- Kisubi, Korir, & Bonuke (2021). The impact of entrepreneurship education and entrepreneurial attitude on entrepreneurial intentions among undergraduate students in Uganda. *Journal of Management and Business Review*.
- Kolvereid, L. (1996). *Prediction of employment status choice intentions*. *Entrepreneurship Theory and Practice*. First Published October 1, 1996, Research Article. <https://doi.org/10.1177/104225879602100104>
- Kourilsky, M. (1995). Entrepreneur Education: Opportunity in search of the curriculum. *Business Education Forum*, pp. 1–18
- Krueger, J.R., Norris, M.D., Reilly, A.C. (2000). Competing models of entrepreneurial intention. *Journal of Business Venturing*, 15(5–6), 411–432. DOI: 10.1016/S0883-9026(98)00033-0
- Krueger, N.F., Jr., & Dickson, P. (1993). Perceived self-efficacy and perceptions of opportunity and threat. *Psychological Reports*, 73(3), 1235–1240.
- Lakovleva, T.A., Kolvereid, L., Gorgievski, M.J., & Sørhaug, Ø. (2014). Comparison of perceived barriers to entrepreneurship in eastern and western European countries. *International Journal of Entrepreneurship and Innovation Management*, 18(2/3), 115–133.
- Lalit Sharma. (2018). Entrepreneurial intentions and perceived barriers to entrepreneurship among Youth in the Uttarakhand state of India: A cross-cultural investigation across genders. *International Journal of Gender and Entrepreneurship*. <https://doi.org/10.1108/IJGE-02-2018-0009>
- Lee, S.H., & Wong, P.K. (2004). An exploratory study of technopreneurs intentions: A career anchor perspective. *Journal of Business Venturing*, 19.
- Leitch, C., McMullan, C., & Harrison, T.R. (2009). Leadership development in SMEs: An action learning approach. *Action Learning Research and Practice*, 6(3), 243–264. <https://doi.org/10.1080/14767330903299464>

- Lien, N., Lytle, L.A., & Komro, K.A. (2002). Applying the theory of planned behavior to fruit and vegetable consumption of young adolescents. *American Journal of Health Promotion*, 16(4), 189–197.
- Luthje, C., & Franke, N. (2003). *The “making” of an entrepreneur: testing a model of the “making” of an entrepreneur: Testing a Model of R&D Management*.
- Malebana, M.J. (2015). Perceived barriers influencing the formation of entrepreneurial intention. *Journal of Contemporary Management*, 12(1), 881–905.
- Maritz, A., & Brown, C. (2013). Enhancing entrepreneurial self-efficacy through vocational entrepreneurship education programs. *Journal of Vocational Education and Training*, 65(4). <https://doi.org/10.1080/13636820.2013.853685>
- Martins, S., Couch, C., Parat, L., Federico, C., Doneddu, R., & Salmon, M. (2004). *Barriers to entrepreneurship and business creation*. Retrieved from www.adrimag.com.pt/downloads/Cooperacao/Barriers%20entrepreneurship%20and%20business%20creation.pdf
- Michelle, K., & Tendai, C. (2016). The association of entrepreneurship education and entrepreneurial intention among university students in the Eastern Cape Province of South Africa. *International Journal of Educational Sciences*, 12(3), 200–211.
- Mitchell, R.K. (2005). Turning up the global value creation engine: The road to excellence in international entrepreneurship education. In J.A. Katz & D. Shepherd (Eds.), *Cognitive Approaches to Entrepreneurship Research in Entrepreneurship, Firm Emergence and Growth* (vol. 6, pp. 185–248).
- Morris, M.H., & Jones, F.F. (1999). Entrepreneurship in established organizations: The case of the public sector. *Entrepreneurship Theory and Practice*, 24(1), 71–91.
- Moses, C., & Mosunmola, A. (2014). *Entrepreneurship curriculum and pedagogical challenges in captivating students’ interest in entrepreneurship education*.
- Nunally, J.C., & Bernstein, I.H. (1994). *Psychometric theory*. New York: McGraw-Hill
- Odeh, G., Titilayo, Shamsul, H.A., Rani, S.O. Migiyo, Adeyeye, P., Olufemi. (2019). Entrepreneurship education and students’ views on self-employment among international postgraduate students in University Utara Malaysia. *Journal of Entrepreneurship Education*, 22(1).
- OECD. (2010). *Education at a Glance 2010: OECD indicators*.
- Ollila, S., & Middleton, K.W. (2013). The venture creation approach: integrating entrepreneurial education and incubation at the university. *International Journal of Entrepreneurship and Innovation Management*, 13(13), 161–178. DOI: 10.1504/IJEIM.2011.038857
- Ozaralli, N., & Rivenburgh, N.K. (2016). Entrepreneurial intention: antecedents to entrepreneurial behavior in the USA and Turkey. *Journal of Global Entrepreneurship Research*, 6(1&3).
- Patricia, P., & Silangen, C. (2016). The effect of entrepreneurship education on entrepreneurial intention in Indonesia. DeReMa (Development Research of Management). *Journal Management*, 11(1), 67–86.
- Pittaway, J., & Cope, J. (2007). Entrepreneurship education: a systematic review of the evidence October 2007. *International Small Business Journal*, 25(5), 479–510. DOI: 10.1177/0266242607080656
- Pruett, M., Shinnar, R., Toney, B., Llopis, F., & Fox, J. (2009). Explaining entrepreneurial intentions of university students: A cross-cultural study. *International Journal of Entrepreneurial Behavior and Research*, 15(6), 571–594.
- Raeesi, R., Dastranj, M., Mohammadi, S., & Rasouli, E. (2013). Understanding the interactions among the barriers to entrepreneurship using interpretive structural modeling. *International Journal of Business and Management*, 8(13), 56–72.
- Sandhu, M.S., Sidique, S.F., & Riaz, S. (2011). Entrepreneurship barriers and entrepreneurial inclination among Malaysian postgraduate students. *International Journal of Entrepreneurial Behavior and Research*, 17(4), 428–449.
- Scherer, K., Rainer, B., Wallbot, H.G., & Goldbeck, T. (1991). Vocal cues in emotion encoding and decoding. *Motivation and Emotion*, 15(2), 123–148. DOI: 10.1007/BF00995674

- Sesen, H., & Pruett, M. (2014). The impact of education, economy and culture on entrepreneurial motives, barriers and intentions: A comparative study of the United States and Turkey. *Journal of Entrepreneurship*, 23(2), 231–261.
- Shinnar, R., Pruett, M., & Toney, B. (2009). Entrepreneurship education: attitudes across campus. *Journal of Education for Business*, 84(3), 151–159.
- Sitaridis, I.K., & Kitsios, F. (2017). *Students' perceptions of barriers to entrepreneurship*. Ekpad «ysh, Dia Bfoy M_ au hs h, _Er«y _a kai T«x_ol Logik _h A_ _ aptly j h, Kai _ot omía kai Oik o_omía, Vol. 1, 524–535.
- Smith, G., & Shankar, A. (2015). *Empowered entrepreneur training handbook, the global alliance for clean cookstoves*. Retrieved July 15, 2015, from <http://cleancookstoves.org/binary-data/RESOURCE/file/000/000/342-1.pdf>
- Smith, K., & Beasley, M. (2011). Graduate entrepreneurs: Intentions, barriers and solutions. *Education Training*, 53(8/9), 722–740.
- Stamboulis, Y., & Barlas, A. (2014). Entrepreneurship education impact on student attitudes. *The International Journal of Management Education*, 12(3), 365–373
- Swarupa, G.S., & Goyal, R.K. (2020). Entrepreneurial intentions of students: A review of academic literature. *International Journal of Scientific & Engineering Research*, 11(1), 1146. ISSN 2229-5518
- Thompson, E.R. (2009). Individual Entrepreneurial Intent: Construct Clarification and Development of an Internationally Reliable Metric. *Entrepreneurship Theory and Practice*, 33(3), 669–694. <https://doi.org/10.1111/j.1540-6520.2009.00321.x>
- Wathanakom, N., Khlaisang, J., & Songkram, N. (2020). The study of the causal relationship between innovativeness and entrepreneurial intention among undergraduate students. *J Innov Entrep*, 9, 15. <https://doi.org/10.1186/s13731-020-00125-5>