

Entrepreneurship among secondary school students: opportunities, challenges, and the role in fostering innovation

Abstract

Entrepreneurial education refers to the process of equipping individuals with the knowledge, skills, and mindset needed to develop an entrepreneurial mindset and succeed in entrepreneurial endeavors. The study adopted a descriptive survey research, designed to examine entrepreneurship among secondary school students: Opportunities, challenges, and the role in fostering innovation. The study was carried out at Community secondary school, Nkpor and Community secondary school, Ogbogoro. The population of study was 48 senior secondary school three students from Community secondary school, Nkpor and 50 senior secondary school three from Community secondary school three Ogbogoro. Sample size of 48 students was used for the study. A Structured questionnaire titled Entrepreneurship among Secondary School Students: Opportunities, Challenges, and the Role in Fostering Innovation (ESSOCRFI) with 25 items were used for the study. Face and content validity was used for the study. Reliability coefficient of 0.74 was obtained. Mean and t-test was the statistical tools used for the study. The study found that many secondary school students have a basic awareness of entrepreneurship, often influenced by media, social networks, and popular culture; they may recognize entrepreneurship as a pathway to financial independence and innovation but may not fully grasp the complexities involved. Furthermore, the study found that students can participate in local, national, or international business plan competitions; these events encourage students to develop and present their business ideas, providing valuable feedback from judges and mentors. Based on the findings, the researchers recommended that Schools should incorporate entrepreneurship education into the existing curriculum, focusing on practical skills such as business planning, financial literacy, marketing, and innovation.

Keywords: entrepreneurship education, digitalization, sustainability, innovation, knowledge-driven economy, poverty reduction, employment generation

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Introduction

Entrepreneurship education among secondary school students is an essential component of modern educational reform, aimed at bridging the gap between traditional academic instruction and the demands of a knowledge-driven economy. As global economies shift towards digitalization, sustainability, and innovation, young people need skills beyond rote learning; they need entrepreneurial abilities that empower them to identify opportunities, address societal challenges, and create value in unique ways. Entrepreneurship education, therefore, provides an avenue for cultivating these skills early on, encouraging students to think beyond conventional career paths and fostering a proactive, problem-solving mindset.¹

Entrepreneurial education refers to the process of equipping individuals with the knowledge, skills, and mindset needed to develop an entrepreneurial mindset and succeed in entrepreneurial endeavors.² Opportunities for fostering entrepreneurship in secondary schools are manifold. Programs like business simulations, innovation hubs, and school-led enterprises allow students to experiment with their ideas in low-risk environments. Partnerships with local businesses, tech startups, and educational NGOs also provide experiential learning opportunities, connecting students to mentors who can guide them in areas like project management, customer relations, and financial literacy. Through project-based learning, students can explore real-world challenges, developing solutions and testing them with potential users.³ Furthermore, extracurricular activities such as student-led clubs, and business competitions, encourage teamwork, collaboration,

and competitive spirit, which are essential in any entrepreneurial journey.

Yet, the inclusion of entrepreneurship education in secondary school curricula faces several hurdles. For one, the lack of dedicated funding limits resources such as specialized materials, software, and professional development for teachers. Many teachers themselves may lack experience in entrepreneurship, creating a gap between curriculum objectives and actual implementation.⁴ Additionally, standardized testing pressures can make it challenging to incorporate flexible, creative learning processes into the classroom. In many regions, societal attitudes toward entrepreneurship as a viable career path are still evolving, and students may face skepticism or a lack of support in pursuing entrepreneurial interests.⁵ Despite these challenges, embedding entrepreneurship education at the secondary level plays a crucial role in fostering innovation. By engaging in entrepreneurial activities, students not only gain technical skills but also develop essential soft skills like leadership, resilience, and adaptability. This experiential learning approach prepares students to adapt to future labor markets that prioritize entrepreneurial mindsets and innovative problem-solving abilities. For instance, students learn to analyze market needs, conduct feasibility studies, and pitch their ideas skills that are highly transferable and valuable in nearly any career they may choose.⁶ Furthermore, fostering entrepreneurship among youth contributes to the wider economy by developing future business owners and job creators. Young entrepreneurs can inject fresh perspectives into the economy, often innovating sustainable solutions that address environmental, social, or community issues.

This alignment with sustainable development goals (SDGs) positions youth entrepreneurship as a strategic tool for addressing broader global challenges, such as poverty reduction, employment generation, and technological advancement.⁷

Policymakers, educators, and community stakeholders play vital roles in cultivating an entrepreneurial ecosystem within secondary education. By implementing flexible curricula that integrate entrepreneurial skills and supporting extracurricular programs, schools can provide a nurturing environment where students' innovative ideas are not only encouraged but refined.⁸ Support from government policies and private-sector partnerships can further bolster these efforts, ensuring that entrepreneurship education becomes a core component of a holistic, future-focused education. Importance of entrepreneurship includes:

- a) **Skill Development:** Entrepreneurship encourages essential skills such as critical thinking, problem-solving, creativity, communication, and leadership. Students learn how to set goals, manage resources, and work within a team skills valuable in any career path.⁹
- b) **Career Preparedness and Employability:** Exposure to entrepreneurial thinking helps students understand diverse career options beyond traditional employment. They become better prepared to navigate future job markets, where adaptability, innovation, and self-reliance are increasingly valued.¹⁰
- c) **Promoting Innovation and Creativity:** Entrepreneurship education nurtures creativity by encouraging students to think outside the box, identify unmet needs, and develop innovative solutions. This fosters a mindset of continuous improvement and curiosity.¹¹
- d) **Economic Awareness and Financial Literacy:** Entrepreneurship introduces students to fundamental concepts of economics, finance, and budgeting. These lessons in financial literacy prepare them for sound decision-making in both business and personal finance.
- e) **Empowerment and Confidence:** By taking ownership of projects and seeing their ideas come to life, students build self-confidence and develop a sense of responsibility. This empowerment helps them face challenges and setbacks more resiliently.¹²

Entrepreneurship education can also emphasize social entrepreneurship, teaching students to consider how businesses can positively impact their communities. This helps instill a sense of responsibility and a desire to contribute to social change. Entrepreneurship education creates an innovative school culture where students, teachers, and administrators collaborate on creative projects. This dynamic environment can enhance the overall learning experience and inspire continuous improvement in education.¹³

Statement of the problem

Fostering an entrepreneurial mindset among secondary school students is essential for driving innovation and building economic resilience. At this formative age, exposure to entrepreneurship can shape students' career goals, skillsets, and creativity. However, in many contexts, especially in Nigeria, students have limited access to entrepreneurship education, resulting in a gap between the need for entrepreneurial skills and the resources available to support them. Significant challenges hinder entrepreneurship integration into secondary education, such as a lack of structured programs, limited resources, inadequate mentorship, and societal preference for traditional careers over entrepreneurship. Socio-economic disparities

further restrict entrepreneurial access, especially for students from disadvantaged backgrounds, limiting their innovative potential and interest in entrepreneurship.

Additionally, Nigerian secondary schools often lack comprehensive strategies to support entrepreneurship and innovation, with teachers lacking the training and resources needed to deliver this education effectively. This study aims to explore the opportunities, challenges, and impact of entrepreneurship education in fostering innovation among secondary school students, proposing actionable recommendations to better integrate entrepreneurship into education and prepare students as proactive contributors to society.

Aim and objectives of the study

The aim of the study is to investigate entrepreneurship among secondary school students: Opportunities, challenges, and the role in fostering innovation. Specifically, the study intends to:

- a) Assess the level of awareness and understanding of entrepreneurship concepts among secondary school students in Community secondary school, Nkpor and Community secondary school, Ogbogoro
- b) Identify the opportunities available to secondary school students for developing entrepreneurial skills in Community secondary school, Nkpor and Community secondary school, Ogbogoro
- c) Examine the challenges faced by secondary school students in engaging with entrepreneurial activities in Community secondary school, Nkpor and Community secondary school, Ogbogoro
- d) Explore the role of school programs and curriculum in fostering innovation and entrepreneurial thinking among secondary school students in Community secondary school, Nkpor and Community secondary school, Ogbogoro

Research questions

Based on the objectives, the following questions were drawn:

- a) What is the level of awareness and understanding of entrepreneurship among secondary school students in Community secondary school, Nkpor and Community secondary school, Ogbogoro?
- b) What opportunities exist for secondary school students to develop entrepreneurial skills in Community secondary school, Nkpor and Community secondary school, Ogbogoro?
- c) What challenges do secondary school students face in engaging with entrepreneurship in Community secondary school, Nkpor and Community secondary school, Ogbogoro?
- d) How do school programs and curricula contribute to fostering innovation and entrepreneurial thinking among secondary school students in Community secondary school, Nkpor and Community secondary school, Ogbogoro?

Methodology

This study adopted a descriptive survey research design to investigate Entrepreneurship among Secondary School Students: Opportunities, Challenges, and the Role in Fostering Innovation. The study was carried out at Community secondary school, Nkpor and Community secondary school, Ogbogoro. The population of study was 48 senior secondary school three students from Community secondary school, Nkpor and 50 senior secondary school three

from Community secondary school three Ogbogoro. Sample size of 48 students was used for the study. Structured questionnaire titled Entrepreneurship among Secondary School Students: Opportunities, Challenges, and the Role in Fostering Innovation (ESSSOCRFI) with 25 items were used for the study. Face and content validity was used for the study. Reliability coefficient of 0.74 was obtained. Mean and t-test was the statistical tools used for the study.

Results

Research question 1: What is the level of awareness and understanding of entrepreneurship among secondary school students in Community secondary school, Nkpor and Community secondary school, Ogbogoro? (Table 1).

Table 1 Awareness and understanding of entrepreneurship among secondary school students

S/N	Items	SA	A	SD	D	X Mean	SD	Total No of Respondents
	Awareness and understanding of entrepreneurship among secondary school students							
1	Many secondary school students have a basic awareness of entrepreneurship, often influenced by media, social networks, and popular culture; they may recognize entrepreneurship as a pathway to financial independence and innovation but may not fully grasp the complexities involved.	46	2	-	-	3.95	0.23	48
2	Schools that incorporate entrepreneurship education into their curriculum tend to produce students with a higher level of understanding; programs that include business simulations, entrepreneurship clubs, and practical projects help foster this awareness and understanding.	44	4	-	-	3.91	0.28	48
3	In cultures that emphasize business and innovation, students may be more aware of entrepreneurship as a viable career path.	38	10	-	-	3.79	0.40	48
4	Students from entrepreneurial families or communities may have a better understanding of entrepreneurship due to firsthand experiences; conversely, those from less affluent backgrounds may lack access to resources and networks that promote entrepreneurial education.	33	15	-	-	3.68	0.48	48
5	Many students may have misconceptions about entrepreneurship, believing it requires substantial financial investment or advanced degrees; these barriers can hinder their interest and participation in entrepreneurial activities.	40	8	-	-	3.83	0.37	48
	Average Mean					3.83	0.35	

Table 1 shows that with the mean score of 3.8, the study found that many secondary school students have a basic awareness of entrepreneurship, often influenced by media, social networks, and popular culture; they may recognize entrepreneurship as a pathway to financial independence and innovation but may not fully grasp the complexities involved.

Research question 2: What opportunities exist for secondary school students to develop entrepreneurial skills in Community secondary school, Nkpor and Community secondary school, Ogbogoro? (Table 2).

Table 2 Opportunities that exist for secondary school students to develop entrepreneurial skills

S/N	Items	SA	A	SD	D	X Mean	SD	Total No of Respondents
	Opportunities that exist for secondary school students to develop entrepreneurial skills							
1	Many schools offer dedicated courses or modules that focus on entrepreneurship, teaching students about business planning, marketing, finance, and management; these programs often include theoretical knowledge as well as practical assignments.	30	18	-	-	3.62	0.48	48
2	Students can participate in local, national, or international business plan competitions; these events encourage students to develop and present their business ideas, providing valuable feedback from judges and mentors.	45	3	-	-	3.93	0.34	48
3	Many schools have clubs focused on entrepreneurship where students can brainstorm business ideas, collaborate on projects, and invite guest speakers from the business community; these clubs foster networking and collaboration.	39	9	-	-	3.81	0.40	48
4	Opportunities for internships or part-time jobs with local businesses allow students to gain firsthand experience in the workplace, understand business operations, and develop essential skills.	29	19	-	-	3.60	0.49	48
5	Pairing students with local entrepreneurs or business professionals can provide guidance and insights into starting and running a business; mentorship can also help students build confidence and gain valuable industry connections.	25	23	-	-	3.52	0.52	48
	Average Mean					3.69	0.44	

Table 2 shows that with the mean score of 3.69, the study found that students can participate in local, national, or international business plan competitions; these events encourage students to develop and present their business ideas, providing valuable feedback from judges and mentors.

Research Question 3: What challenges do secondary school students face in engaging with entrepreneurship in Community secondary school, Nkpor and Community secondary school, Ogbogoro? (Table 3).

Table 3 Challenges secondary school students face in engaging with entrepreneurship

S/N	Items Challenges secondary school students face in engaging with entrepreneurship	SA	A	SD	D	X Mean	SD	Total No of Respondents
1	Many students may not have a clear understanding of what entrepreneurship entails; limited exposure to business concepts and practices can prevent them from fully engaging in entrepreneurial activities.	35	13	-	-	3.72	0.44	48
2	Not all schools offer comprehensive entrepreneurship education; a lack of dedicated courses, resources, and qualified teachers can limit students' opportunities to learn about business planning, management, and financial literacy.	41	7	-	-	3.85	0.38	48
3	Balancing schoolwork, extracurricular activities, and personal life can be challenging. Students may struggle to find the time to engage in entrepreneurial projects, particularly if they have demanding academic schedules.	46	2	-	-	3.95	0.33	48
4	The stigma associated with failure can be a major deterrent; students may hesitate to take risks or try new ideas due to concerns about not succeeding or facing criticism from peers, teachers, or parents.	26	22	-	-	3.54	0.51	48
5	Building a network is crucial for entrepreneurial success; however, students may lack access to mentors, industry professionals, or entrepreneurial communities that can provide guidance and support.	20	28	-	-	3.41	0.56	48
Average Mean						3.69	0.44	

Table 3 shows that with the mean score of 3.69, the study found that balancing schoolwork, extracurricular activities, and personal life can be challenging. Students may struggle to find the time to engage in entrepreneurial projects, particularly if they have demanding academic schedules.

Research question 4: How do school programs and curricula contribute to fostering innovation and entrepreneurial thinking among secondary school students in Community secondary school, Nkpor and Community secondary school, Ogbogoro (Table 4).

Table 4 School programs and curricula contributing to fostering innovation and entrepreneurial thinking

S/N	Items School programs and curricula contributing to fostering innovation and entrepreneurial thinking	SA	A	SD	D	X Mean	SD	Total No of Respondents
1	Schools that incorporate entrepreneurship into various subjects such as business studies, economics, and even STEM help students see the relevance of entrepreneurial thinking across disciplines; this interdisciplinary approach can enhance critical thinking and problem-solving skills.	34	14	-	-	3.70	0.45	48
2	Dedicated courses in entrepreneurship teach essential skills such as business planning, marketing, finance, and operations; these courses can provide students with the knowledge and tools needed to turn their ideas into viable business ventures.	22	26	-	-	3.45	0.53	48
3	Clubs and organizations focused on entrepreneurship, innovation, or business provide students with additional opportunities to explore their interests outside the classroom; activities like organizing events, launching school-based businesses, or collaborating on community projects can enhance entrepreneurial skills.	33	15	-	-	3.68	0.46	48
4	Schools that organize or participate in business plan competitions or innovation challenges give students the chance to showcase their ideas and receive constructive feedback; this competitive environment can stimulate creativity and drive.	37	11	-	-	3.77	0.44	48
5	Programs that emphasize project-based learning encourage students to work on real-world problems, develop solutions, and implement their ideas; this hands-on experience helps students learn how to innovate and test their concepts in a practical setting.	30	18	-	-	3.62	0.48	48
Average Mean						3.64	0.47	

Table 4 shows that with the mean score of 3.69, the study found that schools that organize or participate in business plan competitions or innovation challenges give students the chance to showcase their ideas and receive constructive feedback; this competitive environment can stimulate creativity and drive.

Hypotheses

HO1: There is no significant difference between students' in Community secondary school, Nkpor and Community secondary school, Ogbogoro's awareness and understanding of entrepreneurship (Table 5).

Table 5 Table of analysis to determine the significant difference between students' in Community secondary school, Nkpor and Community secondary school, Ogbogoro's awareness and understanding of entrepreneurship

Group	Mean	Sum of Square	N	Df	Standard Error	t (Cal)	t (tab)	Decision
Community Secondary School, Nkpor	5.00	28.00	12	22	1.71	1.07	2.10	Accepted
Community Secondary School, Ogbogoro	3.16	17.66	12					

HO2: There is no significant difference between students' in Community secondary school, Nkpor and Community secondary school, Ogbogoro's opportunities that exist for secondary school students to develop entrepreneurial skills (Table 6).

Table 6 Table of analysis to determine the significant difference between students' in Community secondary school, Nkpor and Community secondary school, Ogbogoro's opportunities that exist for secondary school students to develop entrepreneurial skills

Group	Mean	Sum of square	N	Df	Standard Error	t (Cal)	t (tab)	Decision
Community Secondary School, Nkpor	4.16	17.66	12	22	1.21	0.54	2.10	Accepted
Community Secondary School, Ogbogoro	3.50	11.00	12					

HO3: There is no significant difference between students' in Community secondary school, Nkpor and Community secondary school, Ogbogoro's challenges face in engaging with entrepreneurship (Table 7).

Table 7 Table of analysis to determine the significant difference between students' in Community secondary school, Nkpor and Community secondary school, Ogbogoro's challenges face in engaging with entrepreneurship

Group	Mean	SD	N	Df	Standard Error	t (Cal)	t (tab)	Decision
Community Secondary School, Nkpor	3.83	36.66	12	22	1.50	0.55	2.10	Accepted
Community Secondary School, Ogbogoro	4.66	9.66	12					

HO4: There is no significant difference between students' in Community secondary school, Nkpor and Community secondary school, Ogbogoro's school programs and curricula contributing to fostering innovation and entrepreneurial thinking (Table 8).

Table 8 Table of analysis to determine the significant difference between students' in Community secondary school, Nkpor and Community secondary school, Ogbogoro's school programs and curricula contributing to fostering innovation and entrepreneurial thinking

Group	Mean	SD	N	Df	Standard Error	t (Cal)	t (tab)	Decision
Community Secondary School, Nkpor	5.91	20.87	12	22	1.29	0.39	2.10	Accepted
Community Secondary School, Ogbogoro	5.25	12.25	12					

Discussion of findings

Akpochofa & Alike⁴ found that secondary school students often have limited awareness of entrepreneurship, which hinders their ability to identify entrepreneurial opportunities. Their study emphasized the need for structured entrepreneurship education to enhance students' understanding of the subject and encourage engagement. Uduak & Aniefiok¹⁵ conducted a study revealing that participation in school-based entrepreneurship programs positively influences students' entrepreneurial intentions and skills. The authors noted that hands-on activities, such as business simulations and competitions, provide practical experience that encourages entrepreneurial thinking.

Alkali & Musa¹⁶ identified several barriers that secondary school students face in pursuing entrepreneurship, including lack of financial resources, limited access to mentorship, and insufficient family support. These challenges were found to significantly impact students' entrepreneurial aspirations and participation. Leonard, Ellis & Chigbo¹⁷ examined the effectiveness of entrepreneurship education in

secondary schools and found that integrating entrepreneurship into the curriculum fosters a more innovative mindset among students. Their research highlighted that schools with dedicated entrepreneurship programs saw higher levels of student engagement and creativity.

Kerroumia & Suwssan¹⁸ explored how socio-economic background influences students' perceptions of entrepreneurship. They found that students from higher socio-economic backgrounds tended to have more positive views of entrepreneurship, while those from lower socio-economic backgrounds often faced greater skepticism and lack of resources. Li, Jiang, Bi, Feng, & Cui¹⁹ highlighted the importance of role models in shaping students' entrepreneurial aspirations. Their study found that students who had access to mentors or entrepreneurial role models were more likely to consider entrepreneurship as a viable career option.

Lee & Herrmann²⁰ suggested that implementing comprehensive entrepreneurship education strategies, including real-world projects and community involvement, significantly increases students'

innovative practices. Their research indicated that active engagement in entrepreneurship education leads to improved problem-solving skills and creativity. Nwabueze & Nwankpa²¹ conducted a study that revealed a significant lack of awareness and understanding of entrepreneurship among school students. Their findings indicated that while many students recognize entrepreneurship's importance, formal education on the subject is minimal, leading to limited engagement in entrepreneurial activities.

Mareyke & Marlya²² found that entrepreneurship education programs in Nigerian secondary schools positively impact students' entrepreneurial intentions. Their research highlighted that schools that implemented programs involving business simulations and practical projects saw an increase in students' interest in starting their own businesses. Abamba, Lawanson & Sobowale²³ identified various challenges that hinder entrepreneurial engagement among secondary school students, including inadequate funding for school entrepreneurship programs, lack of experienced teachers, and societal perceptions of entrepreneurship as a risky endeavor. These barriers were shown to affect students' aspirations and willingness to pursue entrepreneurship.

Conclusion

Entrepreneurship education among secondary school students is pivotal in shaping a generation ready to thrive in an innovation-driven, globalized economy. By embedding entrepreneurial skills early in education, students gain more than technical knowledge they develop problem-solving abilities, financial literacy, leadership skills, and a proactive mindset that can serve them in any field. While challenges such as funding, societal attitudes, and curriculum constraints exist, addressing these barriers through collaborative efforts from schools, policymakers, and communities can foster an educational environment where entrepreneurial thinking is the norm. Ultimately, entrepreneurship education not only prepares students for diverse career paths but also nurtures future innovators, responsible leaders, and change-makers capable of driving economic growth and social impact. This holistic approach to learning, emphasizing both personal and community-oriented success, has the power to redefine education and create a foundation for sustainable development worldwide.

Recommendations

Based on the findings, the researchers recommended that:

- i. Schools should incorporate entrepreneurship education into the existing curriculum, focusing on practical skills such as business planning, financial literacy, marketing, and innovation.
- ii. Collaborating with local entrepreneurs and business leaders to create mentorship programs can provide students with valuable insights and real-world experiences.
- iii. Schools should promote entrepreneurship clubs, workshops, and competitions to foster creativity and innovation.
- iv. Schools should facilitate access to resources such as business development centers, startup incubators, and funding opportunities for student-led projects.
- v. Schools should celebrate entrepreneurial achievements, share success stories, and normalize the idea of learning from failure to inspire students to take initiative.

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Conflicts of interest

There is no conflicts of interest.

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