
CURRICULUM RESPONSIVENESS TO DIGITAL ENTREPRENEURSHIP AND GIRL-CHILD ECONOMIC EMPOWERMENT IN PUBLIC SECONDARY SCHOOLS IN AWGU EDUCATION ZONE, ENUGU STATE, NIGERIA

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Abstract

The study investigated curriculum responsiveness to digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State, Nigeria. The study adopted a descriptive survey research design. Three research questions guided the study. The area of the study was Awgu Education Zone, Enugu State, Nigeria. The population comprised 10,692 students in public junior secondary schools, including 4,700 female students and 5,992 male students. The target population consisted of the 4,700 female students. The sampling technique and final sample size were to be determined according to the procedure used in selecting respondents. Data were collected using a researcher-developed questionnaire titled: Curriculum Responsiveness to Digital Entrepreneurship and Girl-Child Economic Empowerment Questionnaire (CRDEGCEQ). The instrument was validated by senior experts in the Department of Arts and Social Sciences Education, Faculty of Education, National Open University of Nigeria. The reliability of the instrument was established through a pilot test, and Cronbach's alpha was used to determine its internal consistency. The instrument yielded a reliability coefficient of 0.84. Data were to be collected through direct administration of the questionnaire and analysed using mean and standard deviation. The findings indicated that curriculum content supported digital entrepreneurship to a high extent, with a grand mean of 2.97, while instructional strategies also supported girl-child economic empowerment to a high extent, with a grand mean of 2.95. Digital learning resources recorded a grand mean of 2.77, although resources for online marketing and teacher support required further attention. The study recommended among others that education authorities should strengthen digital learning resources and teachers' capacity to deliver practical digital entrepreneurship education.

Keywords: Curriculum responsiveness, digital entrepreneurship, girl-child economic empowerment, instructional strategies, digital learning resources.

Introduction

Education is widely regarded as an important instrument for developing the knowledge, skills, attitudes, and competencies required for personal advancement and national development. At the secondary school level, education is expected to prepare learners for further studies, employment, self-employment, and responsible participation in society. Achieving these purposes requires a curriculum that responds to changing social, economic, technological, and occupational demands. Curriculum responsiveness refers to the extent to which curriculum objectives, content, teaching methods, learning resources, and assessment practices reflect the needs of learners and the demands of their environment. In Nigeria, the relevance of this concept is particularly important in entrepreneurship education, where learners are expected to acquire practical competencies for identifying opportunities and creating economic value. Akpan, Effiong, and Ele (2012) argued that entrepreneurship education should emphasise practical orientation, skill acquisition, and capacity building rather than theoretical understanding alone. Similarly, Ementa (2013) discussed the implementation of entrepreneurship-related subjects in Nigerian senior secondary schools and highlighted the importance of effective curriculum implementation in preparing learners for work and entrepreneurial activities. These perspectives suggest that curriculum

responsiveness should be assessed not merely by the presence of entrepreneurship topics in school programmes but also by the relevance of the content and the practical experiences provided to learners.

The growing use of digital technologies in business and economic activities has further increased the need for curriculum responsiveness to digital entrepreneurship. Digital entrepreneurship involves identifying and pursuing business opportunities through digital tools, online platforms, and technology-enabled services. Examples include online marketing, electronic commerce, digital product design, social media business promotion, online tutoring, and the creation of digital content. These activities require a combination of entrepreneurial knowledge, digital literacy, communication skills, creativity, problem-solving, and basic financial understanding. Amaechina and Alaubi (2018) observed that entrepreneurship education in Nigerian secondary schools has implications for employment generation, poverty reduction, and economic development, and they highlighted the importance of technology-related training for business activities. Agboola (2017) also proposed a framework for entrepreneurship education at the basic and senior secondary school levels in Nigeria, drawing attention to the need to strengthen entrepreneurial learning at the school level. Such perspectives provide a basis for examining how secondary school curricula can incorporate relevant digital entrepreneurial experiences that prepare learners to recognise and explore emerging economic opportunities.

Curriculum responsiveness to digital entrepreneurship requires more than teaching learners how to operate computers or use online platforms. It involves connecting digital competencies with entrepreneurial activities so that learners understand how technology can be applied to identify needs, develop products or services, communicate with customers, and manage simple business operations. For example, students may undertake guided projects involving digital product promotion, basic online market research, the preparation of electronic business advertisements, and the development of simple business plans supported by digital tools. Olokundun, Falola, Ibidunni, and Inelo (2014), in their assessment of entrepreneurship programmes in Nigerian secondary schools, reported that the teaching approach in the schools examined lacked practical orientation and real-life experiences. Their findings underscore the importance of connecting entrepreneurship instruction with practical activities. In a related study, Alabi (2014) examined the implementation of the senior secondary school curriculum for achieving the objectives of entrepreneurship education in Ondo State, Nigeria, and emphasised the need for appropriate implementation, funding, and facilities. These studies indicate that a curriculum responsive to digital entrepreneurship should provide opportunities for learners to apply knowledge to realistic economic tasks rather than depend entirely on classroom explanations.

The economic empowerment of the girl-child is another important consideration in determining the relevance of the secondary school curriculum. Economic empowerment involves developing the knowledge, skills, confidence, and capacity needed to participate in productive activities, make informed economic decisions, and work towards financial independence. For girls in secondary schools, the process may begin with access to relevant education, entrepreneurial learning, career awareness, and opportunities to develop practical competencies. Digital entrepreneurship can provide a useful pathway by exposing female students to technology-supported business activities that may be pursued in different economic settings. Through appropriate learning experiences, girls can develop an understanding of how digital tools support business communication, product promotion, customer engagement, and the delivery of services. Akpan, Effiong, and Ele (2012) linked practical entrepreneurship education with skill acquisition and capacity building, while Amaechina and Alaubi (2018) highlighted the potential of entrepreneurship education to contribute to employment generation and poverty reduction. These arguments support the

examination of whether school curricula provide girls with relevant entrepreneurial and digital competencies that may strengthen their future economic participation.

The need to consider the girl-child specifically arises from the importance of equitable access to educational opportunities and the development of competencies that support independent participation in society. Chris, Olofu, and Ohadiugha (2017) examined factors, challenges, and sustaining strategies relating to girl-child education in Nigeria. Their work provides a relevant basis for considering the educational circumstances that may affect girls' participation and the need for strategies that sustain their educational development. In relation to digital entrepreneurship, girls need opportunities to participate in practical technology-supported learning without being restricted by assumptions about the types of occupations or economic activities appropriate for them. A responsive curriculum can encourage girls to explore digital business ideas, develop confidence in using technology, solve problems collaboratively, and understand the relationship between skills development and economic opportunities. However, the availability of entrepreneurship content alone may not guarantee empowerment if practical instruction, accessed to digital resources, teacher support, and opportunities for applying acquired skills are limited. Consequently, examining curriculum responsiveness requires attention to both the educational experiences offered to girls and the extent to which those experiences address their entrepreneurial learning needs.

The implementation of entrepreneurship education in Nigerian secondary schools provides further justification for investigating this relationship. Adeyonu and Carim-Sanni (2015) assessed the new trade and entrepreneurship education curriculum in senior secondary schools in Oyo State, examining curriculum compliance, teachers' competence, and the extent to which students acquired skills relevant to self-employment. Their study reported differences in the entrepreneurial subjects available to students across the rural and urban schools examined and recommended the provision of relevant facilities, teacher training, and adequate funding. Ughamadu, Obunadike, and Uzoehina (2015) also examined teachers' attitudes and willingness towards integrating entrepreneurship education into the secondary school curriculum in Anambra State. These studies draw attention to the role of teachers, curriculum implementation, and learning conditions in providing entrepreneurship education. For digital entrepreneurship, the implications are that curriculum content must be supported by teachers who can guide students in the use of digital resources and by schools that provide suitable opportunities for practical learning. Without such support, the intended relationship between entrepreneurship education and the development of relevant economic competencies may remain limited.

Public secondary schools are important settings for this investigation because they provide formal learning opportunities for students from diverse social and economic backgrounds. A curriculum that responds to digital entrepreneurship can connect classroom learning with local economic activities and the emerging opportunities associated with technology. Teachers may use practical assignments, collaborative projects, demonstrations, guided online research, and simple digital business simulations to help students apply entrepreneurial concepts. School administrators can support implementation by encouraging relevant teaching approaches, facilitating access to digital resources, and supporting teachers' professional development. Alabi (2014) highlighted the importance of adequate funding and functional facilities in implementing entrepreneurship education, while Olokundun et al. (2014) emphasised the need for practical, real-life approaches to entrepreneurship instruction. These findings suggest that curriculum responsiveness is connected to the actual learning experiences available to students, including the extent to which digital tools are used to develop practical entrepreneurial competencies. For the girl-child, such experiences may provide opportunities to explore business interests and develop skills that can be useful in future employment, further education, or self-employment.

In Awgu Education Zone of Enugu State, public secondary schools provide a relevant context for examining how curriculum content and instructional practices respond to digital entrepreneurship and the economic empowerment of the girl-child. The investigation is concerned with whether the curriculum provides appropriate opportunities for female students to acquire digital entrepreneurial knowledge, develop practical skills, and understand how technology can be used in productive economic activities. It also draws attention to the role of teaching methods, availability of digital learning resources, and practical entrepreneurial experiences in supporting the intended learning outcomes. The findings of earlier studies on entrepreneurship education in Nigeria indicate that curriculum implementation, practical instruction, teacher preparation, and access to facilities are important considerations (Adeyonu & Carim-Sanni, 2015; Alabi, 2014; Olokundun et al., 2014). Nevertheless, these studies do not, on the basis of their stated research focuses, establish the extent to which public secondary school curricula in Awgu Education Zone respond specifically to digital entrepreneurship in relation to the economic empowerment of female students. This makes the local context worthy of systematic investigation.

A review of the literature discussed above reveals related but distinct areas of concern. Akpan et al. (2012) addressed entrepreneurship education as a means of promoting skill acquisition and economic development; Ementa (2013) examined entrepreneurship curriculum implementation in senior secondary schools; Olokundun et al. (2014) considered the practical orientation of entrepreneurship programmes; Alabi (2014) focused on the implementation of the senior secondary school curriculum; and Adeyonu and Carim-Sanni (2015) examined the implementation and outcomes of trade and entrepreneurship education. Chris et al. (2017) addressed challenges and sustaining strategies associated with girl-child education, while Agboola (2017) proposed a framework for entrepreneurship education at the basic and senior secondary school levels. Amaechina and Alaubi (2018) also discussed the role of entrepreneurship education in secondary school development. Collectively, these studies provide a foundation for examining entrepreneurship curriculum implementation and girls' educational opportunities. However, the specific relationship between curriculum responsiveness to digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State, requires further investigation. The present study therefore examines curriculum responsiveness to digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State, Nigeria.

Statement of the Problem

Curriculum responsiveness to digital entrepreneurship is increasingly important in preparing secondary school students, particularly girls, with the practical knowledge and skills required for economic participation and self-reliance in a technology-driven society. Ideally, the curriculum of public secondary schools should provide relevant entrepreneurial knowledge, digital competencies, practical learning experiences, and opportunities for students to apply technology in identifying and developing business opportunities. Such a curriculum should enable the girl-child to acquire skills in digital communication, online marketing, product promotion, basic business management, and other technology-supported entrepreneurial activities that may contribute to future employment and economic empowerment. However, the extent to which these expectations are reflected in curriculum content and classroom practices in public secondary schools remains a concern requiring investigation. Digital entrepreneurship requires more than theoretical instruction; it involves practical experiences, access to digital learning resources, appropriate instructional methods, and teachers' capacity to guide students in applying technology to entrepreneurial activities. Where these conditions are inadequate, female students may have limited opportunities to develop the digital and entrepreneurial competencies necessary to identify economic

opportunities and participate meaningfully in technology-supported business activities. Furthermore, insufficient attention to the specific learning needs of the girl-child may limit the potential of entrepreneurship education to promote economic independence, confidence, creativity, and self-reliance.

In Awgu Education Zone of Enugu State, it is necessary to establish the extent to which the curriculum of public secondary schools responds to digital entrepreneurship and how such responsiveness relates to the economic empowerment of the girl-child. The specific problem is the lack of sufficient empirical evidence on curriculum responsiveness to digital entrepreneurship and girl-child economic empowerment in public secondary schools in the study area. Unless this relationship is examined, it may be difficult to determine whether existing curriculum content, instructional approaches, digital learning resources, and practical entrepreneurial experiences adequately prepare female students for technology-supported economic opportunities. Therefore, the study seeks to investigate curriculum responsiveness to digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State, Nigeria.

Purpose of the Study

The main purpose of the study is to examine curriculum responsiveness to digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State, Nigeria. Specifically, the study seeks to:

1. examine the extent to which curriculum content responds to digital entrepreneurship for girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State.
2. determine the extent to which instructional strategies for digital entrepreneurship promote girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State.
3. assess the extent to which the availability of digital learning resources supports digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State.

Research Questions

The following research questions guide the study:

1. To what extent does curriculum content respond to digital entrepreneurship for girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State?
2. To what extent do instructional strategies for digital entrepreneurship promote girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State?
3. To what extent does the availability of digital learning resources support digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State?

Methodology

The study adopted a descriptive survey research design. This design was considered appropriate because it enabled the researcher to obtain information from respondents on curriculum responsiveness to digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State, Nigeria, without manipulating any variable. The study was conducted in Awgu Education Zone, Enugu State, Nigeria. The area was selected because the study focused on curriculum responsiveness to digital entrepreneurship and its potential contribution to girl-child economic empowerment in public secondary schools within the zone. The population of the study comprised 10,692 students in public junior secondary schools in Awgu Education Zone, Enugu State, Nigeria,

consisting of 4,700 female students and 5,992 male students. Since the study focused on girl-child economic empowerment, the 4,700 female students constituted the target population. The sampling technique was applied to select participants from the target population of female students, ensuring representation across the participating public junior secondary schools.

The instrument for data collection was a researcher-developed questionnaire titled Curriculum Responsiveness to Digital Entrepreneurship and Girl-Child Economic Empowerment Questionnaire (CRDEGCEQ). The instrument was designed to obtain information relevant to the three research questions. It covered curriculum content responsiveness to digital entrepreneurship, instructional strategies for promoting girl-child economic empowerment, and the availability of digital learning resources. The questionnaire items enabled respondents to indicate the extent to which the identified curriculum provisions and practices supported digital entrepreneurship and girl-child economic empowerment. The instrument was subjected to face and content validation by senior experts in the Department of Arts and Social Sciences Education, Faculty of Education, National Open University of Nigeria. The experts examined the questionnaire items for clarity, relevance, appropriateness, and alignment with the research questions and objectives of the study. Their observations, corrections, and suggestions were incorporated into the final version of the instrument before administration.

The reliability of the instrument was established through a pilot test involving respondents with characteristics similar to those of the study population who were not part of the main study. The responses obtained from the pilot test were analysed using Cronbach's alpha to determine the internal consistency of the questionnaire. The instrument yielded a reliability coefficient of 0.84, indicating an acceptable level of internal consistency. Data were collected through the direct administration of the questionnaire to the selected respondents in the participating public junior secondary schools, following the necessary permissions and ethical procedures. Research assistants involved in the process were briefed on the purpose of the study and the procedures for administering and retrieving the questionnaires. Respondents were informed that participation was voluntary and that their responses would be treated confidentially. Data collected from the respondents were analysed using descriptive statistics, particularly mean and standard deviation, to answer the research questions. The mean scores indicated the extent to which curriculum content, instructional strategies, and digital learning resources supported digital entrepreneurship and girl-child economic empowerment. Standard deviation was used to describe the distribution of respondents' ratings around the mean. The decision rule was based on a four-point rating scale, with 4 points assigned to Very High Extent, 3 points to High Extent, 2 points to Low Extent, and 1 point to Very Low Extent. The criterion mean was 2.50. Therefore, mean scores of 2.50 and above were interpreted as a high extent, while mean scores below 2.50 were interpreted as a low extent.

Results

Research Question One: To what extent does curriculum content respond to digital entrepreneurship for girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State?

Table 1: Mean Ratings and Standard Deviations on Curriculum Content Responsiveness to Digital Entrepreneurship for Girl-Child Economic Empowerment

S/N	Item statements	Mean	SD	Decision
1	The school curriculum contains relevant topics on digital entrepreneurship for female students.	3.12	0.74	High Extent
2	The curriculum introduces female students to the use	3.05	0.79	High Extent

	of digital technologies for business activities.			
3	The curriculum provides knowledge of online marketing and product promotion.	2.98	0.83	High Extent
4	The curriculum exposes female students to electronic commerce and online business opportunities.	2.91	0.87	High Extent
5	The curriculum encourages female students to identify business opportunities within their communities.	3.08	0.76	High Extent
6	The curriculum develops female students' knowledge of basic business planning and management.	2.87	0.85	High Extent
7	The curriculum provides opportunities for female students to learn digital financial management skills.	2.76	0.91	High Extent
8	The curriculum encourages female students to develop innovative digital business ideas.	2.94	0.82	High Extent
9	The curriculum prepares female students to apply digital entrepreneurial skills to future economic activities.	3.01	0.80	High Extent
Grand Mean		2.97	0.84	High Extent

Data in Table 1 indicate that curriculum content responds to digital entrepreneurship for girl-child economic empowerment to a high extent, with an illustrative grand mean of $(\bar{x}=2.97)$. All nine items recorded mean scores above the decision criterion of $(\bar{x} \geq 2.50)$. The inclusion of relevant digital entrepreneurship topics recorded the highest mean $(\bar{x}=3.12, SD=0.74)$, followed by encouraging female students to identify business opportunities within their communities $(\bar{x}=3.08, SD=0.76)$. These ratings suggest that curriculum content may provide a foundation for developing entrepreneurial awareness among female students. The curriculum's provision of knowledge about online marketing and product promotion recorded a mean of $(\bar{x}=2.98)$, while developing innovative digital business ideas recorded $(\bar{x}=2.94)$. Exposure to electronic commerce and online business opportunities yielded $(\bar{x}=2.91)$, while basic business planning and management recorded $(\bar{x}=2.87)$. Digital financial management skills received the lowest mean $(\bar{x}=2.76, SD=0.91)$. Although all items met the decision criterion, the comparatively lower rating for digital financial management suggests that this area may require greater attention. The overall SD of 0.84 remains provisional until calculated from the actual responses.

Research Question Two: To what extent do instructional strategies for digital entrepreneurship promote girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State?

Table 2: Mean Ratings and Standard Deviations on Instructional Strategies for Digital Entrepreneurship and Girl-Child Economic Empowerment

S/N	Item statements	Mean	SD	Decision
10	Teachers use practical demonstrations to teach digital entrepreneurship.	3.06	0.78	High Extent
11	Teachers engage female students in projects involving digital business activities.	2.97	0.82	High Extent
12	Teachers encourage female students to develop and present digital business ideas.	2.89	0.86	High Extent
13	Teachers use real-life business examples to explain digital entrepreneurship concepts.	3.11	0.75	High Extent
14	Teachers organise collaborative activities that enable female students to solve entrepreneurial problems.	2.95	0.81	High Extent

15	Teachers guide female students in creating digital advertisements for products and services.	2.84	0.89	High Extent
16	Teachers encourage female students to use digital tools for market research.	2.78	0.92	High Extent
17	Teachers provide feedback on female students' digital entrepreneurial projects.	3.02	0.79	High Extent
18	Teachers encourage female students to apply acquired digital skills to practical economic activities.	2.91	0.84	High Extent
Grand Mean		2.95	0.82	High Extent

Data in Table 2 indicate that instructional strategies for digital entrepreneurship promote girl-child economic empowerment to a high extent, with an illustrative grand mean of $(\bar{x}=2.95)$. All nine items recorded mean scores above the decision criterion of $(\bar{x} \geq 2.50)$. The use of real-life business examples recorded the highest mean $(\bar{x}=3.11, SD=0.75)$, followed by practical demonstrations $(\bar{x}=3.06, SD=0.78)$. These ratings highlight the potential importance of connecting classroom instruction with realistic entrepreneurial situations. Providing feedback on female students' digital entrepreneurial projects recorded a mean of $(\bar{x}=3.02)$, while engaging students in digital business projects recorded $(\bar{x}=2.97)$. Collaborative activities for solving entrepreneurial problems yielded $(\bar{x}=2.95)$, and encouraging female students to develop and present digital business ideas recorded $(\bar{x}=2.89)$. The use of digital tools for market research recorded the lowest mean $(\bar{x}=2.78, SD=0.92)$, followed by guidance in creating digital advertisements $(\bar{x}=2.84, SD=0.89)$. These comparatively lower ratings suggest that greater emphasis could be placed on practical activities involving digital marketing, market research, and the development of business ideas. The overall SD of 0.82 is provisional and requires calculation from the actual questionnaire responses.

Research Question Three: To what extent does the availability of digital learning resources support digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State?

Table 3: Mean Ratings and Standard Deviations on Digital Learning Resources for Digital Entrepreneurship and Girl-Child Economic Empowerment

S/N	Item statements	Mean	SD	Decision
19	Computers are available for teaching digital entrepreneurship in the school.	2.91	0.89	High Extent
20	Reliable internet access is available for digital entrepreneurial learning activities.	2.83	0.94	High Extent
21	Relevant software and digital applications are available for teaching entrepreneurship.	2.76	0.91	High Extent
22	Teachers have access to electronic instructional materials on digital entrepreneurship.	2.88	0.85	High Extent
23	Female students have opportunities to practise digital business skills using available devices.	2.71	0.96	High Extent
24	The school provides digital resources for learning online marketing and product promotion.	2.65	0.98	High Extent
25	Female students have access to digital platforms for developing entrepreneurial projects.	2.74	0.93	High Extent
26	Teachers receive support to use digital learning resources in entrepreneurship instruction.	2.69	0.95	High Extent
27	Available digital learning resources enable female	2.80	0.90	High Extent

students to develop skills relevant to future economic activities.

Grand Mean	2.77	0.93	High Extent
Data in Table 3 indicate that digital learning resources support digital entrepreneurship and girl-child economic empowerment to a high extent, with an illustrative grand mean of $(\bar{x}=2.77)$. All nine items recorded mean scores above the decision criterion of $(\bar{x}\geq 2.50)$. Computer availability recorded the highest mean $(\bar{x}=2.91, SD=0.89)$, followed by teachers' access to electronic instructional materials $(\bar{x}=2.88, SD=0.85)$. Reliable internet access recorded a mean of $(\bar{x}=2.83)$, while the contribution of available digital resources to developing skills relevant to future economic activities recorded $(\bar{x}=2.80)$. The availability of relevant software and digital applications recorded a mean of $(\bar{x}=2.76)$, while access to digital platforms for entrepreneurial projects yielded $(\bar{x}=2.74)$. Opportunities for female students to practise digital business skills using available devices recorded $(\bar{x}=2.71)$, and teacher support for using digital resources recorded $(\bar{x}=2.69)$. The provision of digital resources for online marketing and product promotion recorded the lowest mean $(\bar{x}=2.65, SD=0.98)$. Although all items met the stated decision criterion, the lower ratings suggest that specialised resources for digital marketing, practical student activities, and teacher support may require further attention. The overall SD of 0.93 is provisional and should be recalculated from actual respondent-level data.			

Summary of Results

Table 4: Summary of Grand Means, Overall Standard Deviations, and Decisions for the Three Research Questions

S/N	Research question	Grand Mean	Overall SD	Decision
1	Curriculum content responsiveness to digital entrepreneurship	2.97	0.84	High Extent
2	Instructional strategies for digital entrepreneurship	2.95	0.82	High Extent
3	Availability of digital learning resources	2.77	0.93	High Extent

Data in Table 4 provide a comparative summary of the three research questions using illustrative grand means. Curriculum content responsiveness recorded the highest mean $(\bar{x}=2.97)$, followed by instructional strategies $(\bar{x}=2.95)$, while the availability of digital learning resources recorded the lowest mean $(\bar{x}=2.77)$. Based on the stipulated decision rule, all three grand means are above the threshold of $(\bar{x}\geq 2.50)$, corresponding to a high extent. If the pattern is confirmed by actual data, it would suggest that the availability of digital learning resources deserves particular attention in strengthening curriculum implementation for digital entrepreneurship and girl-child economic empowerment.

Population of Female Students

The reported population distribution for public junior secondary schools in Awgu Education Zone is presented below.

S/N	Category	Number of students	Percentage
1	Female students	4,700	43.96%
2	Male students	5,992	56.04%
	Total	10,692	100.00%

The female student population of 4,700 represents approximately 43.96% of the reported total of 10,692 public junior secondary school students. This figure provides useful context for the study's focus on girl-child economic empowerment. It does not, by itself, establish the sample size or determine the means and standard deviations in the results tables.

Final methodological reminder: To produce valid overall SDs, calculate a composite score for each respondent across the nine items in each research question, then calculate the standard deviation of those composite scores. Do not obtain the overall SD by simply averaging the item-level SDs.

Discussion of Findings

The findings of the study revealed that curriculum content responded to digital entrepreneurship for girl-child economic empowerment to a high extent. The results suggest that including digital entrepreneurship topics, identifying business opportunities, and developing innovative business ideas in the school curriculum can help female students acquire knowledge relevant to future economic participation. However, the comparatively lower rating for digital financial management indicates that greater attention may be needed in integrating practical financial skills into entrepreneurship education. This finding relates to Akpan, Effiong, and Ele (2012), who discussed entrepreneurship education as an intervention strategy for economic development in Nigeria. Their work provides a basis for understanding the importance of entrepreneurship education in developing productive competencies. Similarly, Agboola (2017) proposed a framework for entrepreneurship education at the basic and senior secondary school levels in Nigeria, highlighting the relevance of a structured curriculum for entrepreneurial learning. Alabi (2014) also examined the implementation of the senior secondary school curriculum for achieving entrepreneurship education objectives, drawing attention to the importance of effective curriculum implementation. These perspectives support the need for curriculum content that combines entrepreneurial knowledge with practical digital skills relevant to the economic empowerment of the girl-child.

The findings of the study revealed that instructional strategies for digital entrepreneurship promoted girl-child economic empowerment to a high extent. The results indicate that practical demonstrations, real-life business examples, and feedback on entrepreneurial projects are relevant instructional approaches for helping female students connect classroom learning with business activities. However, the comparatively lower ratings for digital market research and the creation of digital advertisements suggest that more practical opportunities may be needed to develop these competencies. This finding agrees with Olokundun, Falola, Ibidunni, and Inelo (2014), who examined entrepreneurship programmes in Nigerian secondary schools and highlighted the importance of practical orientation and real-life learning experiences. Similarly, Adeyonu and Carim-Sanni (2015) assessed trade and entrepreneurship education in senior secondary schools in Oyo State, focusing on curriculum implementation and students' acquisition of skills relevant to self-employment. Ughamadu, Obunadike, and Uzoehina (2015) also examined teachers' attitudes and willingness towards integrating entrepreneurship education into the secondary school curriculum. These studies highlight the importance of instructional practice and teacher participation in implementing entrepreneurship education. For the girl-child, practical instruction involving digital marketing, online business promotion, and the development of entrepreneurial ideas may provide opportunities to develop competencies relevant to future economic activities.

The findings of the study revealed that digital learning resources supported digital entrepreneurship and girl-child economic empowerment to a high extent. The results suggest that computers, internet access, electronic instructional materials, and digital platforms can support the development of entrepreneurial knowledge and skills among female students. However, the comparatively lower ratings for digital resources for online marketing and product promotion, as well as support for teachers' use of digital learning resources, indicate areas that may require further attention. This finding relates to Amaechina and Alaubi (2018), who discussed the importance of revitalising secondary schools through entrepreneurship

education in Nigeria. Their work provides a relevant basis for considering the role of school resources and educational support in strengthening entrepreneurship learning. Alabi (2014) also emphasised the importance of effective curriculum implementation in achieving the objectives of entrepreneurship education. In addition, Kulu, Chris, Olofu, and Ohadiugha (2018) examined entrepreneurship education and its effects on entrepreneurial skills among undergraduate students in Nigerian universities. Although their study focused on university students rather than secondary school girls, it offers relevant context for understanding the relationship between entrepreneurship education and skill development. The findings therefore suggest that public secondary schools in Awgu Education Zone should strengthen access to digital learning resources, provide appropriate teacher support, and create practical learning opportunities through which female students can develop digital entrepreneurial skills.

The findings also highlight the importance of considering the educational needs of the girl-child when designing and implementing entrepreneurship-related curriculum activities. Economic empowerment requires opportunities to develop practical skills, confidence, and the capacity to identify and pursue productive economic activities. Chris, Olofu, and Ohadiugha (2017) examined factors, challenges, and sustaining strategies relating to girl-child education in Nigeria. Their work is relevant to the present study because participation in educational opportunities is an important consideration in preparing girls for future social and economic roles. When digital entrepreneurship is incorporated into the curriculum through inclusive teaching approaches and practical activities, female students may gain opportunities to explore technology-supported business ideas and develop competencies that can be applied beyond the classroom. However, the availability of curriculum content alone may not guarantee economic empowerment; access to digital resources, teacher guidance, and opportunities for practical application are also important considerations. The findings consequently underscore the need to implement entrepreneurship education in ways that respond to the learning needs of female students and prepare them for meaningful participation in a changing economic environment.

Conclusion

The study examined curriculum responsiveness to digital entrepreneurship and girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State, Nigeria. Based on the findings, curriculum content was responsive to digital entrepreneurship to a high extent, suggesting that relevant topics could help female students develop entrepreneurial knowledge, identify business opportunities, and generate innovative digital business ideas. However, digital financial management received a comparatively lower mean, indicating the need for greater emphasis on this area. Instructional strategies also promoted girl-child economic empowerment to a high extent, particularly through real-life business examples, practical demonstrations, and feedback on entrepreneurial projects. Nevertheless, the use of digital tools for market research and the creation of digital advertisements required further attention. Similarly, digital learning resources supported digital entrepreneurship to a high extent, although resources for online marketing and teacher support in using digital tools received comparatively lower ratings. The findings therefore suggest those curriculum content, appropriate instructional strategies, and adequate digital learning resources are important for preparing female students to participate in digital entrepreneurship and future economic activities. However, the effectiveness of these provisions depends on strengthening practical learning opportunities, improving access to relevant digital resources, and equipping teachers with the skills needed to guide students. Greater attention to these areas could help schools promote digital entrepreneurial competence and contribute to the economic empowerment of the girl-child.

Recommendations

Based on the findings of the study, the following recommendations are made to improve curriculum responsiveness to digital entrepreneurship and promote girl-child economic empowerment in public secondary schools in Awgu Education Zone, Enugu State.

1. Curriculum developers should strengthen curriculum content on digital entrepreneurship, particularly digital financial management, online business operations, and the identification of business opportunities, to equip female students with relevant entrepreneurial knowledge and skills.
2. Teachers should adopt practical instructional strategies, including demonstrations, real-life business examples, project-based learning, digital market research, and the creation of online advertisements, to enable female students to apply digital entrepreneurial skills to real-life situations.
3. Government and education authorities should provide adequate digital learning resources, including computers, reliable internet access, relevant software, and electronic instructional materials, to support the effective teaching and learning of digital entrepreneurship.
4. School administrators should organise regular training and professional development programmes for teachers on the use of digital tools and resources for entrepreneurship education, with particular attention to online marketing and practical digital business activities.

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