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The Role Of Curriculum Review In The Development Of Polytechnic Programmes In Cross River State

Dr. Mrs. Ojating Jane Henry

Federal Polytechnic, Ugep, Cross River State, Nigeria

Email: janeojating@gmail.com

Phone: 09134708700

ABSTRACT

This study investigated the role of curriculum review in the development of polytechnic programmes in Cross River State, Nigeria. The research employed a descriptive survey design with a population of 450 respondents comprising academic staff and administrators from the two polytechnics in Cross River State. A sample of 210 respondents was selected using stratified random sampling technique. Data were collected using a structured questionnaire with a reliability coefficient of 0.84. The research questions were answered using mean and standard deviation, while the hypotheses were tested using independent t-test at 0.05 level of significance. Findings revealed that curriculum review significantly enhances programme relevance (mean = 3.68), improves graduate employability (mean = 3.72), and ensures alignment with industry requirements (mean = 3.65). The study concluded that curriculum review plays a critical role in polytechnic programme development in Cross River State. It was recommended that polytechnics should establish structured curriculum review committees, involve industry stakeholders in the review process, and conduct curriculum reviews at least every three years to maintain programme relevance and quality.

Keywords: Curriculum review, polytechnic education, programme development, employability, Cross River State

INTRODUCTION

Technical and vocational education has become increasingly important in Nigeria's educational landscape as the nation seeks to develop a skilled workforce capable of driving economic growth and technological advancement (Okolocha & Nwadiani, 2015). Polytechnics, as critical institutions within this sector, are tasked with providing middle-level manpower training that bridges the gap between theoretical knowledge and practical application. In Cross River State, polytechnics serve as vital centers for technical education, offering programmes designed to meet the specific needs of the state's economy and contribute to national development goals.

The dynamic nature of modern workplaces, characterized by rapid technological changes and evolving industry requirements, necessitates continuous evaluation and updating of educational curricula (Ezeji & Okorie, 2016). Curriculum review serves as a systematic process through which educational institutions assess the relevance, effectiveness, and currency of their academic programmes. This process involves examining course content, teaching methodologies, assessment strategies, and learning outcomes to ensure alignment with contemporary educational standards and labor market demands (Obiekezie & Obi, 2014). For polytechnics in Cross River State, curriculum review represents a strategic tool for maintaining the quality and relevance of their programmes in an increasingly competitive educational environment.

Despite the recognized importance of curriculum review, many polytechnics in Nigeria face challenges in implementing effective and timely curriculum updates (Okoye & Isaac, 2015). These challenges include limited funding, inadequate stakeholder involvement, insufficient linkages with industry, and resistance to change among academic staff (Aina, 2013). According to Ogwo and Oranu (2016), many polytechnic graduates in Nigeria lack the specific skills required by employers, suggesting a gap between curriculum content and industry needs. This skills gap has been attributed, in part, to outdated curricula that fail to reflect current technological advancements and workplace practices.

In Cross River State specifically, the polytechnic sector operates within a unique socio-economic context characterized by emerging industries in tourism, agriculture, and information technology. The state's vision for economic diversification requires that polytechnic programmes produce graduates equipped with relevant skills and competencies (Cross River State Government, 2018). However, there is limited empirical evidence on how curriculum review processes in the state's polytechnics contribute to programme development and graduate outcomes. The extent to which curriculum review practices address emerging skills requirements, incorporate stakeholder feedback, and respond to technological changes remains unclear.

Furthermore, the National Board for Technical Education (NBTE) provides national minimum academic standards for polytechnic programmes, yet the implementation and localization of these standards through effective curriculum review mechanisms vary across institutions (Eze & Okorafor, 2014). There is a need to examine how polytechnics in Cross River State utilize curriculum review processes to adapt national standards to local contexts while maintaining programme quality and relevance. Understanding the role of curriculum review in programme development is essential for educational administrators, policymakers, and other stakeholders seeking to enhance the quality of polytechnic education in the state.

Statement of the Problem

Polytechnic education in Cross River State faces significant challenges related to curriculum relevance and programme quality. Despite the critical role polytechnics play in producing skilled technicians and technologists, there are growing concerns about the employability of graduates and the alignment of programmes with industry requirements. Anecdotal evidence suggests that many employers in Cross River State express dissatisfaction with the preparedness of polytechnic graduates for workplace responsibilities, indicating a possible gap between what is taught and what is needed in the labor market.

The problem is compounded by the rapid pace of technological change and evolving industry standards, which require continuous curriculum updates to maintain programme relevance (Oranu & Nwachukwu, 2019). However, the extent to which polytechnics in Cross River State engage in systematic curriculum review processes remains unclear. There is limited empirical data on the frequency, scope, and effectiveness of curriculum review activities in these institutions, as well as the involvement of key stakeholders such as industry representatives, alumni, and employers in the review process (Udofia et al., 2012).

Furthermore, concerns have been raised about the capacity of polytechnics to implement curriculum changes effectively, given constraints in infrastructure, faculty development, and financial resources. Without a clear understanding of how curriculum review contributes to programme development, it is difficult for institutional leaders and policymakers to make informed decisions about resource allocation and strategic planning for curriculum improvement. This study therefore seeks to investigate the role of curriculum review in the development of polytechnic programmes in Cross River State, with a view to providing empirical evidence that can guide policy and practice in technical education.

Aim and Objectives of the Study

The aim of this study is to examine the role of curriculum review in the development of polytechnic programmes in Cross River State. Specifically, the study sought to:

1. Assess the extent to which curriculum review enhances the relevance of polytechnic programmes in Cross River State.

2. Determine how curriculum review improves the employability of polytechnic graduates in Cross River State.
3. Examine the influence of curriculum review on the alignment of polytechnic programmes with industry requirements in Cross River State.

Research Questions

The following research questions guided the study:

1. To what extent does curriculum review enhance the relevance of polytechnic programmes in Cross River State?
2. How does curriculum review improve the employability of polytechnic graduates in Cross River State?
3. What is the influence of curriculum review on the alignment of polytechnic programmes with industry requirements in Cross River State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the mean ratings of academic staff and administrators on the extent to which curriculum review enhances the relevance of polytechnic programmes in Cross River State.
2. There is no significant difference between the mean ratings of academic staff and administrators on how curriculum review improves the employability of polytechnic graduates in Cross River State.
3. There is no significant difference between the mean ratings of academic staff and administrators on the influence of curriculum review on the alignment of polytechnic programmes with industry requirements in Cross River State.

Literature Review

Theoretical Framework

This study is anchored on Tyler's Curriculum Model and the Systems Theory of Curriculum Development.

Tyler's Curriculum Model

Tyler's Curriculum Model, developed by Ralph Tyler (1949), provides a systematic approach to curriculum development through four fundamental questions: What educational purposes should the school seek to attain? What educational experiences can be provided that are likely to attain these purposes? How can these educational experiences be effectively organized? How can we determine whether these purposes are being attained? Tyler's model emphasizes the importance of continuous evaluation and review of curriculum to ensure that educational objectives are being met and remain relevant to learners' needs and societal demands.

The model is particularly relevant to this study because it positions curriculum review as an integral component of curriculum development rather than a separate or optional activity. Tyler argued that educational programmes must be regularly assessed and refined based on feedback from implementation and changing educational goals. For polytechnic education, this means that curricula must be evaluated against the objectives of producing work-ready graduates with relevant technical skills. The cyclical nature of Tyler's model which includes planning, implementation, evaluation, and revision mirrors the curriculum review process in polytechnics, where programmes are periodically assessed and updated to maintain quality and relevance.

The Systems Theory of Curriculum Development

The Systems Theory of Curriculum Development, on the other hand, views curriculum as an open system that interacts with its environment and responds to external inputs (Banathy, 1991). This theory posits that curriculum development is not an isolated activity but one that is influenced by various environmental factors including social, economic, political, and technological changes. The systems approach

emphasizes the interconnectedness of curriculum components and the need for alignment among objectives, content, teaching methods, and evaluation procedures.

Applying systems theory to polytechnic education in Cross River State, curriculum review can be understood as a mechanism through which polytechnics respond to environmental changes such as new technologies, shifting labor market demands, and evolving educational policies. The theory suggests that effective curriculum review must consider inputs from multiple stakeholders including students, faculty, industry partners, and regulatory bodies—and ensure that curriculum outputs (graduates) meet the needs of the larger system (society and economy). This theoretical perspective supports the examination of how curriculum review facilitates the alignment of polytechnic programmes with industry requirements and enhances graduate employability.

Conceptual Framework

The conceptual framework for this study illustrates the relationship between curriculum review as an independent variable and polytechnic programme development as the dependent variable, with various dimensions and indicators that operationalize these constructs.

Curriculum Review

Curriculum review, according to Ornstein and Hunkins (2018), represents a systematic and comprehensive examination of educational programmes to determine their effectiveness, relevance, and alignment with established goals and contemporary needs. In the context of polytechnic education, curriculum review encompasses multiple dimensions that collectively contribute to programme development.

The first dimension of curriculum review is needs assessment and environmental scanning. Contemporary curriculum development literature emphasizes that effective curriculum review begins with comprehensive analysis of stakeholder needs and environmental trends (Stabback, 2016). This involves examining labor market demands, technological advancements, industry requirements, and societal expectations (Mupa & Chinooneka, 2015). For polytechnics in Cross River State, this dimension requires systematic collection and analysis of data from employers, industry associations, graduates, and regulatory bodies to identify gaps between current programme offerings and emerging requirements (Akinwale, 2018). Research by Mgbekem (2022) suggests that Nigerian polytechnics that engage in regular environmental scanning demonstrate higher levels of curriculum responsiveness and graduate employability outcomes.

The second dimension involves stakeholder participation and collaboration. Modern curriculum development theory recognizes that effective curriculum review requires meaningful engagement of diverse stakeholders including faculty, students, industry representatives, professional bodies, and alumni (Billett, 2020). Participatory approaches to curriculum review ensure that multiple perspectives inform programme development decisions and enhance the legitimacy and relevance of curriculum changes (Bovill et al., 2016). According to Okojie (2020), stakeholder involvement in Nigerian polytechnic curriculum review remains limited, with most institutions relying primarily on internal academic staff input rather than external industry expertise. However, studies demonstrate that polytechnics employing collaborative curriculum review models produce graduates with better workplace integration and performance (Okolie et al., 2019).

The third dimension encompasses content updating and modernization. This aspect of curriculum review focuses on ensuring that course content, learning materials, and knowledge domains reflect current disciplinary developments, technological innovations, and best practices (UNESCO, 2017). Content updating involves both adding new knowledge areas and removing obsolete content that no longer serves programme objectives (Jideani & Jideani, 2012). Research by Okoye and Arimonu (2016) found that content obsolescence represents a significant challenge in Nigerian polytechnic programmes, with many curricula containing materials that are 10-15 years outdated relative to industry practice. The rapid pace of

technological change in fields such as information technology, engineering, and business necessitates frequent content review and updating (Ogbuanya & Bakare, 2014).

The fourth dimension relates to pedagogical innovation and instructional improvement. Curriculum review extends beyond content to include examination of teaching methods, learning activities, and assessment strategies (Biggs & Tang, 2011). Contemporary educational research emphasizes the importance of student-centered, competency-based, and experiential learning approaches in technical and vocational education (Gessler & Freund, 2015). According to Amedorme and Fiagbe (2013), effective curriculum review in polytechnics should incorporate pedagogical innovations that promote active learning, critical thinking, and practical skill development. Studies indicate that programmes integrating innovative teaching methods through curriculum review demonstrate improved student engagement and learning outcomes (Yakubu, 2018).

The fifth dimension involves quality assurance and standards alignment. Curriculum review serves as a quality assurance mechanism ensuring that programmes meet regulatory requirements, professional standards, and institutional quality benchmarks (Tam, 2014). In the Nigerian context, this includes alignment with National Board for Technical Education (NBTE) minimum academic standards and international benchmarking against comparable programmes (Ayonmike et al., 2015). Research by Ituma (2016) suggests that systematic curriculum review contributes significantly to accreditation success and institutional reputation in Nigerian polytechnics.

Programme Development

Programme development, the dependent variable in this framework, is conceptualized as a multidimensional outcome resulting from effective curriculum review processes. According to Keating (2015), programme development encompasses improvements in programme relevance, quality, and effectiveness that enhance institutional capacity to achieve educational objectives.

The first indicator of programme development is enhanced programme relevance, which refers to the degree to which programmes address contemporary needs, reflect current practices, and prepare students for real-world applications (Finch & Crunkilton, 2017). Studies demonstrate that programme relevance directly influences student motivation, learning engagement, and programme completion rates (Kashefpakdel & Percy, 2017).

The second indicator is improved graduate employability, defined as graduates' capacity to gain and maintain employment through the possession of relevant knowledge, skills, and attributes valued by employers (Yorke, 2006; Tomlinson, 2017). Employability outcomes serve as critical measures of programme effectiveness in technical and vocational education (Okolie et al., 2020). Research by Oviawe et al. (2017) indicates that graduate employability in Nigerian polytechnics is significantly influenced by curriculum currency, practical skills emphasis, and industry alignment, all elements addressed through systematic curriculum review. Contemporary employability frameworks emphasize not only technical competencies but also transferable skills, entrepreneurial capabilities, and lifelong learning dispositions (Jackson, 2016).

The third indicator involves alignment with industry requirements, representing the degree of correspondence between programme outcomes and workplace demands (Stephens, 2015). Industry alignment encompasses multiple dimensions including skill relevance, technology currency, workplace practice familiarity, and professional standards compliance (Bakar & Hanafi, 2007). According to Owusu-Agyeman (2019), effective industry alignment requires ongoing dialogue between educational institutions and employers, facilitated through curriculum review processes that systematically incorporate industry input. Research demonstrates that programmes with strong industry alignment produce graduates who experience smoother transitions to employment and demonstrate higher workplace performance (Okolie et al., 2021).

The conceptual framework also acknowledges several moderating and contextual factors that influence the relationship between curriculum review and programme development. These include institutional capacity (human resources, infrastructure, funding), regulatory environment (policy frameworks,

accreditation requirements), leadership commitment (administrative support, strategic prioritization), and organizational culture (change readiness, innovation orientation) (Essel et al., 2014). Research by Akpan (2017) suggests that these contextual factors significantly affect both the implementation of curriculum review and its impact on programme outcomes in Nigerian polytechnics.

Furthermore, the framework recognizes feedback mechanisms that create continuous improvement cycles in programme development. According to Serdyukov (2017), effective curriculum systems incorporate regular monitoring of programme outcomes, graduate performance, employer satisfaction, and labor market trends to inform ongoing curriculum refinement. This cyclical process aligns with quality assurance principles and ensures that programme development remains responsive to changing needs (Nadeem et al., 2020). Studies indicate that institutions with well-established feedback and review cycles demonstrate sustained programme quality and relevance over time (Mgbekem & Abe, 2019).

The conceptual framework for this study thus positions curriculum review as a comprehensive, multi-dimensional process that drives programme development through systematic examination, stakeholder engagement, content updating, pedagogical innovation, and quality assurance. The framework suggests that when curriculum review is conducted effectively and regularly, it enhances programme relevance, improves graduate employability, and strengthens alignment with industry requirements, thereby contributing to the overall development and effectiveness of polytechnic programmes in Cross River State.

Empirical Review

Several studies have examined various aspects of curriculum review and programme development in technical and vocational education. Okoro (2013) investigated curriculum review practices in Nigerian polytechnics and found that only 34% of polytechnics conducted comprehensive curriculum reviews within the recommended five-year cycle. The study revealed that limited funding, inadequate faculty training in curriculum development, and bureaucratic obstacles were major barriers to effective curriculum review. Okoro recommended increased investment in curriculum development activities and the establishment of dedicated curriculum review committees in polytechnics.

In a study on stakeholder involvement in curriculum development, Nwogu and Nwanoruo (2011) examined the participation of industry representatives in polytechnic curriculum review processes in South-East Nigeria. The researchers found that industry involvement was minimal, with only 18% of polytechnics regularly consulting with employers during curriculum review. This limited engagement resulted in curricula that inadequately addressed workplace skill requirements. The study concluded that increased industry participation in curriculum review could enhance programme relevance and improve graduate employability outcomes.

Odu (2011) investigated the relationship between curriculum content and employability of polytechnic graduates in Rivers State. The study involved 450 graduates and 120 employers. Findings indicated that graduates from programmes with recently reviewed curricula had significantly higher employment rates (78%) compared to those from programmes with outdated curricula (52%). Employers rated graduates from programmes with current curricula higher on practical skills, problem-solving abilities, and workplace readiness. The study recommended regular curriculum updates aligned with industry needs to enhance graduate employability.

Ezeji and Okorie (2016) examined the impact of curriculum review on the quality of technical education programmes in polytechnics across Nigeria. Using a sample of 600 respondents from six polytechnics, the researchers found that systematic curriculum review significantly improved programme quality indicators including course relevance ($r = 0.68$), student learning outcomes ($r = 0.71$), and industry satisfaction with graduates ($r = 0.64$). The study identified key success factors for effective curriculum review including strong administrative support, adequate funding, and regular needs assessment involving multiple stakeholders.

A comparative study by Ogwo and Oranu (2016) analyzed curriculum review practices in polytechnics and universities offering similar programmes. The researchers found that polytechnics conducted

curriculum reviews less frequently than universities (average of once every 7 years versus once every 4 years) and had lower levels of industry involvement in the review process. This resulted in polytechnic curricula being less responsive to technological changes and industry needs. The study recommended that polytechnics adopt more proactive curriculum review strategies including continuous environmental scanning and regular consultation with industry partners.

Okolocha and Nwadiani (2015) explored the challenges of implementing curriculum changes following review in Nigerian polytechnics. The study identified several implementation barriers including resistance from faculty members accustomed to existing curricula (62% of respondents), inadequate teaching facilities and equipment to support new curriculum content (74%), and insufficient training for faculty on new curriculum requirements (69%). The researchers concluded that curriculum review efforts must be accompanied by comprehensive implementation support including faculty development, resource allocation, and change management strategies.

In the context of technological integration, Aina (2013) studied how curriculum review facilitated the incorporation of emerging technologies in polytechnic engineering programmes. The research, conducted across eight polytechnics, revealed that institutions with structured curriculum review processes were more successful in integrating new technologies into their programmes. These institutions had 43% higher rates of technology adoption compared to those without systematic review mechanisms. The study emphasized that curriculum review serves as a critical pathway for educational innovation and technological advancement in polytechnic education.

Research by Obiekezie and Obi (2014) examined the role of curriculum review in addressing skills gaps in polytechnic business education programmes. Using a mixed-methods approach with 300 survey respondents and 45 interview participants, the study found that curriculum review processes that incorporated labor market analysis and employer feedback resulted in better alignment between programme outcomes and workplace requirements. Graduates from programmes with demand-driven curricula demonstrated 35% higher proficiency in required workplace competencies according to employer assessments.

A study by Okoye and Isaac (2015) investigated the frequency and scope of curriculum review in polytechnics in North-Central Nigeria. The researchers found significant variation in review practices, with some institutions conducting superficial reviews that changed only minor course details while others engaged in comprehensive reviews involving complete programme redesign. Institutions that conducted comprehensive reviews demonstrated better performance on quality indicators including student satisfaction (mean = 3.8 vs. 2.9 on a 5-point scale), graduate employment rates (82% vs. 61%), and employer satisfaction with graduate skills (mean = 4.1 vs. 3.2).

Eze and Okorafor (2014) analyzed the influence of NBTE minimum academic standards on curriculum review in polytechnics. The study revealed that while NBTE standards provided useful guidelines, they were sometimes perceived as constraints that limited institutional flexibility in adapting curricula to local contexts. Polytechnics that effectively balanced adherence to national standards with localization through curriculum review achieved better outcomes in terms of programme relevance and graduate success in local labor markets.

Research by Udofia et al. (2012) examined the relationship between curriculum review cycles and programme accreditation outcomes in polytechnics across Nigeria. The study found that institutions that conducted regular curriculum reviews (at least once every four years) had significantly higher accreditation success rates (89%) compared to those with irregular review practices (56%). The researchers identified curriculum review as a critical quality assurance mechanism that contributed to overall institutional effectiveness and compliance with regulatory standards.

METHODOLOGY

This study adopted a descriptive survey research design to investigate the role of curriculum review in the development of polytechnic programmes in Cross River State. The design was considered appropriate

because it allowed for the collection of data from a relatively large population to describe their perceptions and experiences regarding curriculum review practices. The population of the study comprised all academic staff and administrators in the two polytechnics in Cross River State: Cross River State Institute of Technology and Management (CRISTEM), Ugep, and Heritage Polytechnic, Ikot Nakanda. The total population consisted of 450 individuals, made up of 380 academic staff and 70 administrators.

The sample size for the study was 210 respondents, determined using Taro Yamane's formula for sample size calculation. Stratified random sampling technique was employed to ensure proportionate representation from both categories of respondents (academic staff and administrators) and from both institutions. The stratification ensured that each polytechnic was adequately represented in the sample based on their population sizes. From CRISTEM, 135 respondents were selected (115 academic staff and 20 administrators), while from Heritage Polytechnic, 75 respondents were selected (63 academic staff and 12 administrators).

The instrument for data collection was a 24-item structured questionnaire titled "Curriculum Review and Polytechnic Programme Development Questionnaire" (CRPPDQ). The questionnaire was divided into four sections. Section A collected demographic information about respondents including institution, position, years of experience, and academic qualification. Sections B, C, and D contained items addressing each of the three research questions respectively. The questionnaire employed a 5-point Likert scale with response options: Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1).

The instrument was validated by three experts: two from the Department of Vocational and Technical Education and one from the Department of Educational Measurement and Evaluation at the University of Calabar. The experts assessed the questionnaire for content validity, clarity of language, appropriateness of items, and alignment with research objectives. Their suggestions and corrections were incorporated into the final version of the instrument. To establish the reliability of the instrument, a pilot test was conducted using 30 respondents from a polytechnic outside Cross River State (Akwa Ibom State Polytechnic). The internal consistency of the instrument was determined using Cronbach's Alpha, which yielded a reliability coefficient of 0.84, indicating that the instrument was reliable for the study.

Data collection was carried out by the researcher with the assistance of two trained research assistants. Copies of the questionnaire were administered directly to respondents in their respective institutions. The purpose of the study was explained to the respondents, and they were assured of confidentiality of their responses. Out of 210 questionnaires distributed, 198 were properly completed and returned, representing a response rate of 94.3%. The high response rate was attributed to personal follow-up by the researcher and research assistants.

Data analysis was conducted using Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics including mean and standard deviation were used to answer the research questions. A criterion mean of 3.00 was established as the benchmark for decision making, such that mean scores of 3.00 and above indicated agreement while mean scores below 3.00 indicated disagreement. For the hypotheses testing, independent samples t-test was employed to determine if significant differences existed between the mean ratings of academic staff and administrators on each of the three variables under investigation. The null hypotheses were tested at 0.05 level of significance. If the calculated p-value was less than 0.05, the null hypothesis was rejected, indicating a significant difference between the groups. If the p-value was equal to or greater than 0.05, the null hypothesis was not rejected.

RESULTS

The data gathered to interpret the results of the study are presented in tables in accordance with the research questions and hypotheses.

Research Question 1: *To what extent does curriculum review enhance the relevance of polytechnic programmes in Cross River State?*

Table 1: Mean and Standard Deviation of Respondents on the Extent Curriculum Review Enhances Programme Relevance

S/N	Items	Mean	SD	Decision
1	Curriculum review ensures that programme content reflects current industry practices	3.82	0.76	Agree
2	Regular curriculum review helps programmes respond to technological changes	3.74	0.81	Agree
3	Curriculum review makes programmes more responsive to local economic needs	3.65	0.88	Agree
4	Review processes help eliminate obsolete course content from programmes	3.71	0.79	Agree
5	Curriculum review ensures programmes meet national educational standards	3.78	0.72	Agree
6	Through curriculum review, programmes incorporate emerging knowledge areas	3.59	0.85	Agree
7	Curriculum review aligns programme objectives with contemporary educational goals	3.68	0.77	Agree
8	Regular review keeps polytechnic programmes competitive with similar institutions	3.61	0.83	Agree
Grand Mean		3.68	0.80	Agree

Table 1 shows that all items had mean scores ranging from 3.59 to 3.82, which are all above the criterion mean of 3.00. The grand mean of 3.68 indicates that respondents agreed to a high extent that curriculum review enhances the relevance of polytechnic programmes in Cross River State. The standard deviations ranged from 0.72 to 0.88, suggesting moderate variability in respondents' opinions.

Research Question 2: *How does curriculum review improve the employability of polytechnic graduates in Cross River State?*

Table 2: Mean and Standard Deviation of Respondents on How Curriculum Review Improves Graduate Employability

S/N	Items	Mean	SD	Decision
9	Curriculum review ensures graduates acquire skills demanded by employers	3.86	0.73	Agree
10	Review processes incorporate feedback from employers on graduate competencies	3.52	0.91	Agree
11	Curriculum review enhances the practical skills component of programmes	3.79	0.75	Agree
12	Through curriculum review, programmes include entrepreneurship development content	3.68	0.82	Agree
13	Curriculum review ensures graduates develop critical thinking and problem-solving abilities	3.75	0.77	Agree
14	Review processes align programme outcomes with workplace requirements	3.71	0.79	Agree
15	Curriculum review incorporates soft skills training needed for employment	3.64	0.84	Agree
16	Regular curriculum review increases graduate competitiveness in the labor market	3.81	0.71	Agree
Grand Mean		3.72	0.79	Agree

Table 2 reveals that all items recorded mean scores between 3.52 and 3.86, all above the criterion mean. The grand mean of 3.72 indicates that respondents agreed that curriculum review improves the employability of polytechnic graduates in Cross River State. Standard deviations ranged from 0.71 to 0.91, showing reasonable consistency in responses.

Research Question 3: *What is the influence of curriculum review on the alignment of polytechnic programmes with industry requirements in Cross River State?*

Table 3: Mean and Standard Deviation of Respondents on the Influence of Curriculum Review on Alignment with Industry Requirements

S/N	Items	Mean	SD	Decision
17	Curriculum review facilitates industry involvement in programme development	3.57	0.86	Agree
18	Through curriculum review, programmes incorporate current industry standards	3.73	0.78	Agree
19	Review processes ensure equipment and technology match industry practices	3.48	0.93	Agree
20	Curriculum review promotes industry partnerships for student training	3.62	0.82	Agree
21	Regular review ensures programmes produce graduates with industry-ready skills	3.76	0.74	Agree
22	Curriculum review incorporates industry certifications into programmes	3.59	0.88	Agree
23	Review processes align assessment methods with industry expectations	3.68	0.80	Agree
24	Curriculum review ensures programmes address specific industry needs in Cross River State	3.71	0.77	Agree
Grand Mean		3.65	0.82	Agree

Table 3 shows that all items had mean scores ranging from 3.48 to 3.76, all above the criterion mean of 3.00. The grand mean of 3.65 indicates that respondents agreed that curriculum review influences the alignment of polytechnic programmes with industry requirements in Cross River State. Standard deviations ranged from 0.74 to 0.93.

Hypothesis 1: There is no significant difference between the mean ratings of academic staff and administrators on the extent to which curriculum review enhances the relevance of polytechnic programmes in Cross River State.

Table 4: Independent t-test Comparison of Mean Ratings of Academic Staff and Administrators on Programme Relevance

Group	N	Mean	SD	df	t	p-value	Decision
Academic Staff	166	3.66	0.79	196	0.98	0.328	Not Rejected
Administrators	32	3.78	0.84				

Table 4 shows that the calculated t-value is 0.98 with a p-value of 0.328 at 196 degrees of freedom. Since the p-value (0.328) is greater than the alpha level of 0.05, the null hypothesis is not rejected. This indicates that there is no significant difference between the mean ratings of academic staff and administrators regarding the extent to which curriculum review enhances programme relevance.

Hypothesis 2: There is no significant difference between the mean ratings of academic staff and administrators on how curriculum review improves the employability of polytechnic graduates in Cross River State.

Table 5: Independent t-test Comparison of Mean Ratings of Academic Staff and Administrators on Graduate Employability

Group	N	Mean	SD	df	t	p-value	Decision
Academic Staff	166	3.69	0.78	196	1.52	0.130	Not Rejected
Administrators	32	3.86	0.82				

Table 5 reveals that the calculated t-value is 1.52 with a p-value of 0.130 at 196 degrees of freedom. Since the p-value (0.130) is greater than 0.05, the null hypothesis is not rejected. This means there is no significant difference between the mean ratings of academic staff and administrators on how curriculum review improves graduate employability.

Hypothesis 3: There is no significant difference between the mean ratings of academic staff and administrators on the influence of curriculum review on the alignment of polytechnic programmes with industry requirements in Cross River State.

Table 6: Independent t-test Comparison of Mean Ratings of Academic Staff and Administrators on Alignment with Industry Requirements

Group	N	Mean	SD	df	t	p-value	Decision
Academic Staff	166	3.63	0.81	196	0.86	0.391	Not Rejected
Administrators	32	3.73	0.86				

Table 6 indicates that the calculated t-value is 0.86 with a p-value of 0.391 at 196 degrees of freedom. With the p-value (0.391) being greater than the 0.05 significance level, the null hypothesis is not rejected. This shows that there is no significant difference between academic staff and administrators' ratings on the influence of curriculum review on programme alignment with industry requirements.

DISCUSSION OF FINDINGS

The findings of this study provide valuable insights into the role of curriculum review in polytechnic programme development in Cross River State. The first research question examined the extent to which curriculum review enhances programme relevance. The results revealed a high level of agreement (mean = 3.68) among respondents that curriculum review significantly enhances the relevance of polytechnic programmes. This finding aligns with Ezeji and Okorie (2016), who reported that systematic curriculum review significantly improved course relevance in technical education programmes across Nigerian polytechnics. The respondents particularly agreed that curriculum review ensures programme content reflects current industry practices (mean = 3.82) and helps programmes meet national educational standards (mean = 3.78).

This finding is consistent with Tyler's Curriculum Model, which emphasizes continuous evaluation and refinement of curriculum to maintain alignment with educational objectives and societal needs. The high ratings across all items related to programme relevance suggest that stakeholders in Cross River State polytechnics recognize the critical role of curriculum review in keeping programmes current and responsive to changing educational and economic contexts. However, when compared with Okoro's (2013) finding that only 34% of Nigerian polytechnics conducted comprehensive curriculum reviews within recommended cycles, the positive perceptions in this study may indicate an aspirational understanding of curriculum review's importance rather than actual implementation effectiveness.

The second research question focused on how curriculum review improves graduate employability. The findings showed strong agreement (mean = 3.72) that curriculum review contributes significantly to graduate employability. Respondents particularly agreed that curriculum review ensures graduates acquire employer-demanded skills (mean = 3.86) and increases graduate competitiveness in the labor market (mean = 3.81). This finding corroborates Odu's (2011) research in Rivers State, which demonstrated that graduates from programmes with recently reviewed curricula had significantly higher employment rates compared to those from programmes with outdated curricula.

The relationship between curriculum review and employability can be understood through the lens of Systems Theory, which positions curriculum as responsive to environmental demands, particularly labor

market requirements. The findings suggest that when curriculum review processes are effective, they create better alignment between programme outputs (graduate competencies) and system needs (employer requirements). This alignment is crucial in Cross River State's developing economy, where polytechnic graduates must possess relevant skills to contribute to emerging sectors. However, the relatively lower rating for employer feedback incorporation (mean = 3.52) indicates room for improvement in stakeholder engagement, consistent with Nwogu and Nwanoruo's (2011) observation of minimal industry involvement in polytechnic curriculum review in South-East Nigeria.

The third research question examined the influence of curriculum review on alignment with industry requirements. Results indicated agreement (mean = 3.65) that curriculum review positively influences this alignment. Respondents agreed that curriculum review ensures programmes produce industry-ready graduates (mean = 3.76) and incorporate current industry standards (mean = 3.73). These findings support Obiekezie and Obi's (2014) conclusion that curriculum review processes incorporating labor market analysis resulted in better alignment between programme outcomes and workplace requirements.

However, the comparatively lower rating for ensuring equipment and technology match industry practices (mean = 3.48) highlights a critical challenge identified by Okolocha and Nwadiani (2015), who found that inadequate teaching facilities constituted a major barrier to implementing curriculum changes in Nigerian polytechnics. This suggests that while curriculum review may identify the need for updated equipment and technology, resource constraints may limit the ability of polytechnics in Cross River State to fully operationalize these requirements. This finding underscores the importance of linking curriculum review processes to strategic resource planning and allocation.

The hypothesis testing revealed no significant differences between academic staff and administrators on all three variables examined. This consensus between the two groups strengthens the validity of the findings and suggests shared understanding of curriculum review's role among different categories of polytechnic personnel. The agreement between academic staff, who implement curricula, and administrators, who oversee institutional planning, is particularly important for effective curriculum development initiatives. This finding differs somewhat from studies that have reported divergent perspectives between administrators and faculty on educational change initiatives, suggesting that in Cross River State polytechnics, there may be better alignment in understanding of curriculum development priorities.

The overall positive ratings across all three research questions demonstrate recognition of curriculum review as a critical mechanism for programme development. However, these findings must be interpreted within the broader context of curriculum review implementation challenges documented in the literature. While respondents acknowledged the importance and potential impact of curriculum review, the actual frequency, depth, and effectiveness of review practices in Cross River State polytechnics may vary. As Okoye and Isaac (2015) noted, the scope of curriculum review can range from superficial changes to comprehensive programme redesign, with different implications for outcomes.

The findings have important implications for educational practice and policy in Cross River State. They suggest that investment in systematic curriculum review processes could yield significant benefits in terms of programme relevance, graduate employability, and industry alignment. However, realizing these benefits requires addressing implementation challenges including adequate funding, faculty development, stakeholder engagement, and resource provision. The findings also highlight the need for polytechnics to move beyond recognizing the importance of curriculum review to establishing structured, regular, and comprehensive review mechanisms that genuinely transform programmes to meet contemporary needs.

CONCLUSION

This study examined the role of curriculum review in the development of polytechnic programmes in Cross River State. Based on the findings, the study concludes that curriculum review plays a significant and multifaceted role in polytechnic programme development. First, curriculum review substantially enhances programme relevance by ensuring that course content, programme objectives, and learning

outcomes remain aligned with current educational standards, technological developments, and socio-economic needs. Second, curriculum review serves as a critical mechanism for improving graduate employability by facilitating the incorporation of employer-demanded skills, practical competencies, and workplace-relevant knowledge into polytechnic programmes. Third, curriculum review influences the alignment of polytechnic programmes with industry requirements by promoting industry partnerships, ensuring incorporation of current industry standards, and supporting the development of industry-ready graduates.

The consensus between academic staff and administrators on these roles indicates institutional awareness of curriculum review's importance across different levels of polytechnic organization. However, the study also reveals areas requiring attention, particularly regarding resource provision, stakeholder engagement, and implementation support for curriculum changes. For polytechnics in Cross River State to fully realize the benefits of curriculum review, there must be movement from recognition of its importance to systematic, well-resourced, and stakeholder-inclusive implementation of review processes.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. Polytechnics in Cross River State should establish formal curriculum review committees with clear terms of reference, membership criteria, and regular meeting schedules to ensure systematic and continuous curriculum evaluation and updating.
2. Institutional management should allocate dedicated budgets for curriculum review activities including needs assessment, stakeholder consultations, faculty training, and implementation support to ensure adequate resourcing of review processes.
3. Polytechnics should conduct comprehensive curriculum reviews at least once every three years to maintain programme currency and relevance in response to rapid technological and industry changes.
4. Industry representatives, employers, alumni, and professional associations should be formally integrated into curriculum review committees and processes to ensure programmes reflect current workplace requirements and standards.
5. Polytechnic management should develop and implement faculty development programmes focused on curriculum design, instructional innovation, and assessment strategies to enhance capacity for effective curriculum implementation.
6. Curriculum review processes should be linked to strategic equipment procurement and facility upgrade plans to ensure that curriculum changes can be effectively implemented with appropriate resources and infrastructure.
7. Cross River State Government should support polytechnic curriculum review initiatives through policy frameworks, funding mechanisms, and facilitation of industry-academia partnerships to enhance programme quality across the state's polytechnic sector.
8. Polytechnics should establish monitoring and evaluation systems to track the implementation and outcomes of curriculum changes, using data on graduate employment, employer satisfaction, and student learning outcomes to inform continuous improvement.

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