PERCEIVED EFFECT OF EDUCATIONAL PSYCHOLOGY ON CURRICULUM DESIGN IN VOCATIONAL EDUCATION IN NIGERIA

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Abstract

This study explores the perceived effect of educational psychology on curriculum design in vocational education in Nigeria. The integration of educational psychology into vocational education is crucial for enhancing the learning experience, improving instructional strategies, and fostering student motivation. The research adopts a descriptive survey design, gathering data from vocational education instructors, curriculum designers, and students from selected vocational institutions in the southwestern region of Nigeria. Findings indicate that both instructors and curriculum designers recognize the importance of educational psychology in shaping effective curricula. In particular, the study reveals that vocational education curricula designed with psychological principles are more likely to enhance student engagement, foster intrinsic motivation, and improve learning outcomes. However, challenges such as inadequate resources, limited professional development opportunities for instructors, and the lack of alignment between curricula and local industry needs were identified as significant barriers to fully integrating educational psychology into vocational education in Nigeria. The study recommends greater investment in teacher training, curriculum reforms that align with industry requirements, and the provision of adequate resources for hands-on learning. The findings underscore the importance of educational psychology in creating a more effective and engaging vocational education system in Nigeria, contributing to improved career outcomes for students.

Keywords: Educational psychology, curriculum design, vocational education

Introduction

Integrating educational psychology into vocational education curriculum design is crucial for improving learning outcomes in Nigeria. Vocational education provides students with practical skills for employment, addressing youth unemployment and contributing to economic growth. However, its effectiveness depends on well-structured curricula that align with students' learning needs and industry demands.

Educational psychology examines how individuals learn, develop, and behave in educational settings. Its application in vocational education enhances instructional strategies, assessment methods, and curriculum content to meet students' cognitive, emotional, and social needs. A psychology-informed curriculum fosters active learning, critical thinking, and problem-solving skills essential for workforce readiness.

Nigeria's vocational education system faces challenges such as overcrowded classrooms, inadequate resources, and diverse student backgrounds. Applying psychological principles—such as motivation, learning styles, and cognitive development—can improve curriculum design, making learning more engaging and effective. Despite its importance, the role of educational psychology in vocational

education remains underexplored, leading to gaps in learner-centered teaching approaches.

Educational psychology examines how individuals learn and develop within educational settings, considering cognitive, emotional, and social factors. Integrating educational psychology into vocational education curricula enhances learning by incorporating psychological theories to develop cognitive and psychomotor skills essential for workforce success. Curriculum design involves selecting content, organizing materials, and determining instructional methods and assessments. Educational psychology informs these processes by providing insights into information processing, effective instructional strategies, and motivational factors influencing student performance. Understanding these concepts is crucial for optimizing vocational education curricula to improve learning outcomes.

In Nigeria, vocational education aims to equip students with industry-relevant skills in fields such as agriculture, engineering, IT, and hospitality. However, program effectiveness depends on curriculum design that caters to students' cognitive, emotional, and social needs. Educational psychology helps tailor curricula to diverse learner characteristics, fostering motivation, creativity, and problem-solving skills. Applying psychological principles in vocational education ensures curricula address individual differences and developmental stages. Awareness of attention, memory, motivation, and cognitive load helps educators create engaging, inclusive, and effective instructional strategies. Furthermore, integrating psychological theories like constructivism and social learning theory encourages active participation and experiential learning, essential in vocational training. This approach enhances student engagement and prepares graduates for real-world challenges, ultimately improving vocational education's impact on employment and economic development.

This study examines how psychological theories can enhance vocational training outcomes by informing teaching methods, assessments, and curriculum structure. Bridging this gap can lead to better-prepared graduates with the skills necessary for success in Nigeria's evolving job market.

Objectives of the Study

The primary aim of this study is to investigate the perceived effect of educational psychology on curriculum design in vocational education in Nigeria. Specifically, the study seeks to:

1. Examine the role of educational psychology in shaping curriculum design in Nigerian vocational education.
2. Assess how psychological principles influence the development of instructional strategies and teaching methods in vocational education.
3. Identify the impact of understanding learners' cognitive, emotional, and developmental needs on curriculum effectiveness.
4. Investigate how the integration of educational psychology can improve student engagement, motivation, and learning outcomes in vocational education.

Research Questions

This study will address the following research questions:

1. How do educational psychology principles influence the design of vocational education curricula in Nigeria?
2. What are the perceived benefits of integrating psychological theories into the instructional strategies used in vocational education?
3. How can understanding learners' cognitive and emotional needs improve vocational education curriculum development?
4. What challenges do curriculum designers face when applying educational psychology in vocational education?

Methodology

Research Design

This study adopts a descriptive survey research design, which is appropriate for gathering information about the perceptions of vocational education curriculum designers, instructors, and students regarding

the influence of educational psychology on curriculum design. Descriptive survey research is useful for obtaining an in-depth understanding of respondents' attitudes, opinions, and perceptions. The study employs a cross-sectional survey, collecting data at a specific point in time to assess the current practices and perceptions regarding the integration of educational psychology into vocational education curriculum design.

Population of the Study

The target population for this study consists of vocational education instructors, curriculum designers, and students from vocational institutions in Nigeria. Specifically, the study focuses on vocational education institutions such as polytechnics, technical colleges, and skill acquisition centers located in the southwestern region of Nigeria. This region was chosen due to its concentration of vocational education institutions and its economic significance in the country.

The total population includes:

Vocational education instructors: Teachers who are involved in the delivery of vocational education programs, especially in fields such as engineering, information technology, hospitality, and other technical and vocational courses.

Curriculum designers: Individuals involved in the development and evaluation of vocational education curricula, including education administrators, policy makers, and academics.

Students: Learners enrolled in vocational education programs, who are the end-users of the curricula.

Sample Size and Sampling Technique

The study adopts a purposive sampling technique to select vocational institutions and respondents within the southwestern region of Nigeria. Purposive sampling allows for the selection of specific groups or individuals who are knowledgeable or experienced in the area of study. This is particularly important in this study, as the research aims to gather data from those directly involved in vocational education, such as instructors, curriculum designers, and students.

A sample size of 300 respondents was selected for the study, comprising:100 instructors from various vocational education institutions.100 curriculum designers involved in the development and evaluation of vocational education curricula.100 students currently enrolled in vocational education programs.

The respondents were selected from five vocational institutions, ensuring a broad representation from different types of institutions offering vocational education in the southwestern region of Nigeria.

Data Collection Instruments

The study employed the following data collection instruments:

Questionnaire for Vocational Education Instructors: This questionnaire was designed to gather information on instructors' perceptions of the role of educational psychology in vocational education curriculum design. The questionnaire will cover aspects such as instructional strategies, learner diversity, and the integration of psychological principles into teaching methods. The items will be designed using a Likert scale to measure the degree of agreement or disagreement with various statements. Questionnaire for Curriculum Designers: This questionnaire gathered data on the knowledge and application of educational psychology in the curriculum design process. It includes questions about how psychological theories inform curriculum content, teaching strategies, and assessments in vocational education programs. Questionnaire for Students: This questionnaire explores students' experiences with the curriculum and their perceptions of how educational psychology influences their learning. It focused on areas such as motivation, engagement, and the perceived relevance of the curriculum to real-world tasks.

Each questionnaire was divided into sections based on the themes of the study: the role of educational psychology, curriculum design, instructional strategies, and learning outcomes.

Validity and Reliability of the Instruments

To ensure the validity of the research instruments, the questionnaires were subjected to a content validity test. This process involves seeking feedback from experts in educational psychology and

vocational education to ensure that the items on the questionnaires adequately represent the concepts being measured. Feedback from these experts will be used to revise and refine the instruments as necessary.

The reliability of the instruments were tested using the Cronbach Alpha coefficient. A pilot study was conducted with a small sample of respondents outside the main study area to assess the internal consistency of the instruments. The Cronbach Alpha coefficient was calculated to determine whether the items on the questionnaires are consistent in measuring the same construct. A reliability coefficient of 0.70 or higher was considered acceptable.

Methods of Data Analysis

The data collected from the questionnaires were analyzed using both descriptive and inferential statistics. Descriptive statistics was used to summarize the responses and provide an overview of the perceptions of instructors, curriculum designers, and students regarding the integration of educational psychology into vocational education curricula. Measures such as frequencies, percentages, mean scores, and standard deviations will be used to analyze the data.

To test the hypotheses and explore the relationships between variables, inferential statistics of Pearson correlation was used. Pearson correlation was used to examine the strength and direction of the relationship between continuous variables, such as the level of psychological knowledge and the effectiveness of curriculum design.

The data analysis was conducted using Statistical Package for Social Sciences (SPSS**)** software, version 25.0.

Results

Table 1.1 Summary Table of Descriptive Statistics

Variable	Mean	Standard Deviation
Perceived Importance of Educational Psychology in Curriculum Design	4.2	0.85
Impact of Motivation on Student Engagement	4.0	0.92
Application of Cognitive Development Theories in Curriculum Design	3.7	0.95
Integration of Hands-on Learning and Experiential Methods	4.3	0.78
Barriers to Effective Curriculum Design	3.5	1.02
Teacher Awareness and Training in Educational Psychology	3.6	1.05
Curriculum Relevance to Local Job Market	3.8	0.88

Interpretation of Results:

Perceived Importance of Educational Psychology in Curriculum Design (Mean = 4.2): The high mean score indicates that the majority of respondents strongly believe that educational psychology plays a significant role in curriculum design. This suggests that a psychology-based approach is seen as essential for creating effective and relevant vocational education curricula.

Impact of Motivation on Student Engagement (Mean = 4.0): Respondents agree that motivation is a key factor in student engagement. The perceived importance of motivation aligns with educational psychology's emphasis on fostering intrinsic motivation in learners to improve engagement and performance.

Application of Cognitive Development Theories in Curriculum Design (Mean = 3.7): The moderate mean suggests that while there is some recognition of the application of cognitive development theories in curriculum design, it may not be consistently applied across all vocational education programs. More emphasis on cognitive theories could enhance curriculum effectiveness.

Integration of Hands-on Learning and Experiential Methods (Mean = 4.3): The high score indicates that respondents strongly agree on the value of incorporating hands-on learning and experiential methods. This is consistent with educational psychology's emphasis on active learning, which has been shown to improve student retention and skill acquisition in vocational settings.

Barriers to Effective Curriculum Design (Mean = 3.5): The moderate mean score indicates that respondents perceive barriers such as limited resources, lack of proper training for educators, and insufficient industry collaboration as significant challenges in implementing psychology-based curriculum design. These barriers need to be addressed for more effective curriculum implementation.

Teacher Awareness and Training in Educational Psychology (Mean = 3.6): The moderate score here suggests that while there is some awareness among teachers, there is a gap in training in educational psychology. Enhancing professional development for instructors in psychological principles can help improve the application of these concepts in the classroom.

Curriculum Relevance to Local Job Market (Mean = 3.8): Respondents generally agree that the curriculum is not always closely aligned with the local job market. This highlights the need for curriculum reforms to better meet the demands of employers and the needs of students, ensuring greater employability upon graduation.

Table 1.2 Summary Table of Correlation Statistics

Variables	Perceived Importance of Educational Psychology	Impact of Motivation on Student Engagement	Application of Cognitive Development Theories	Integration of Hands-on Learning	Barriers to Effective Curriculum Design	Teacher Awareness in Educational Psychology	Curriculum Relevance to Local Job Market
Perceived Importance of Educational Psychology	1.00	0.65**	0.58**	0.72**	-0.49**	0.69**	0.55**
Impact of Motivation on Student Engagement	0.65**	1.00	0.60**	0.71**	-0.44**	0.74**	0.61**
Application of Cognitive Development Theories	0.58**	0.60**	1.00	0.68**	-0.53**	0.62**	0.57**
Integration of Hands-on Learning	0.72**	0.71**	0.68**	1.00	-0.38**	0.67**	0.69**
Barriers to Effective Curriculum Design	-0.49**	-0.44**	-0.53**	-0.38**	1.00	-0.46**	-0.52**
Teacher Awareness in Educational Psychology	0.69**	0.74**	0.62**	0.67**	-0.46**	1.00	0.66**
Curriculum Relevance to Local Job Market	0.55**	.61**	0.57**	0.69**	-0.52**	0.66**	1.00

Interpretation of Correlation Coefficients:

Perceived Importance of Educational Psychology and Impact of Motivation on Student Engagement ($r = 0.65$, $p < 0.01$): A strong positive correlation was found between the perceived importance of

educational psychology and the impact of motivation on student engagement. This suggests that respondents who view educational psychology as important also believe that motivation plays a significant role in engaging students in vocational education. This relationship highlights how psychological principles that focus on motivation can enhance students' learning experiences.

Perceived Importance of Educational Psychology and Application of Cognitive Development Theories ($r = 0.58$, $p < 0.01$): There is a moderate positive correlation between the importance placed on educational psychology and the application of cognitive development theories in curriculum design. This suggests that those who perceive educational psychology as important are more likely to incorporate cognitive theories (e.g., Piaget's developmental stages) into their curriculum design, enhancing the cognitive development of students.

Perceived Importance of Educational Psychology and Integration of Hands-on Learning ($r = 0.72$, $p < 0.01$): A strong positive correlation was found between the perceived importance of educational psychology and the integration of hands-on learning methods. Respondents who believed educational psychology was essential for curriculum design also recognized the value of experiential and practical learning. This finding aligns with the emphasis in educational psychology on active learning as an effective method for skill acquisition.

Perceived Importance of Educational Psychology and Barriers to Effective Curriculum Design ($r = -0.49$, $p < 0.01$): A moderate negative correlation suggests that the more important respondents perceive educational psychology to be, the fewer barriers they identify to effective curriculum design. This could indicate that a strong understanding of educational psychology helps overcome obstacles related to curriculum implementation, such as resource limitations or lack of teacher training.

Perceived Importance of Educational Psychology and Teacher Awareness in Educational Psychology ($r = 0.69$, $p < 0.01$): A strong positive correlation indicates that those who perceive educational psychology as crucial for curriculum design also report higher levels of teacher awareness and understanding of educational psychology. This relationship underscores the need for training and professional development in psychological principles to improve the design and delivery of vocational education curricula.

Perceived Importance of Educational Psychology and Curriculum Relevance to Local Job Market ($r = 0.55$, $p < 0.01$): A moderate positive correlation suggests that respondents who believe educational psychology is important also believe that vocational curricula are more likely to be relevant to the local job market. This indicates that a curriculum designed with psychological principles in mind may be better aligned with industry needs and student career aspirations.

Impact of Motivation on Student Engagement and Application of Cognitive Development Theories ($r = 0.60$, $p < 0.01$): There is a moderate positive correlation between the impact of motivation on student engagement and the application of cognitive development theories. This suggests that curricula that consider cognitive development also take motivation into account, further enhancing student engagement and learning outcomes.

Impact of Motivation on Student Engagement and Integration of Hands-on Learning ($r = 0.71$, $p < 0.01$): A strong positive correlation was found between the impact of motivation and the integration of hands-on learning. This shows that motivating students through active and practical learning methods can significantly enhance student engagement in vocational education.

Impact of Motivation on Student Engagement and Barriers to Effective Curriculum Design ($r = -0.44$, $p < 0.01$): A moderate negative correlation indicates that motivation is perceived to be more impactful in environments with fewer barriers to curriculum design. This highlights the need to address challenges such as inadequate resources or limited teacher training in order to fully leverage motivational strategies in vocational education.

Impact of Motivation on Student Engagement and Teacher Awareness in Educational Psychology ($r = 0.74$, $p < 0.01$): A strong positive correlation suggests that higher levels of teacher awareness of educational psychology are associated with a greater impact of motivation on student engagement. This emphasizes the importance of teacher training in psychological principles to enhance motivational strategies in teaching.

Impact of Motivation on Student Engagement and Curriculum Relevance to Local Job Market ($r = 0.61$, $p < 0.01$): A moderate positive correlation indicates that motivation is more effectively fostered when the curriculum is aligned with the local job market. This further supports the need for vocational curricula to be designed in collaboration with industry stakeholders to ensure students remain engaged and motivated.

Application of Cognitive Development Theories and Integration of Hands-on Learning ($r = 0.68$, $p < 0.01$): A strong positive correlation was found between the application of cognitive development theories and the integration of hands-on learning. This suggests that applying cognitive theories, such as those developed by Piaget, supports the use of experiential learning methods in vocational education, enhancing student development.

Application of Cognitive Development Theories and Barriers to Effective Curriculum Design ($r = -0.53$, $p < 0.01$): A moderate negative correlation indicates that when cognitive development theories are applied in curriculum design, fewer barriers are perceived. This may suggest that psychologically informed curricula help overcome challenges such as student disengagement or resource constraints.

Application of Cognitive Development Theories and Teacher Awareness in Educational Psychology ($r = 0.62$, $p < 0.01$): A moderate positive correlation suggests that a greater awareness of cognitive development theories among teachers is associated with more effective integration of these theories into curriculum design.

Application of Cognitive Development Theories and Curriculum Relevance to Local Job Market ($r = 0.57$, $p < 0.01$): A moderate positive correlation indicates that when cognitive theories are applied, curricula are more likely to be relevant to the local job market, ensuring that the skills being taught align with industry requirements.

Discussion of Findings

The Perceived Role of Educational Psychology in Curriculum Design

One of the key findings of the study was the strong perception among vocational education instructors and curriculum designers that educational psychology plays a significant role in the design of vocational education curricula. Most respondents reported that understanding learners' cognitive, emotional, and developmental needs is essential when designing a curriculum that promotes effective learning in vocational settings.

The integration of psychological principles into curriculum design was seen as necessary for creating content that matches students' developmental stages and learning abilities. For instance, the use of hands-on learning experiences and the adoption of experiential learning methods were highlighted as practices aligned with Piaget's cognitive development theory, which stresses the importance of concrete learning experiences for students at the concrete operational stage (Piaget, 1972). This is particularly relevant in vocational education, where students must acquire practical skills that they can apply in real-world settings.

Moreover, the findings indicated that instructors who applied psychological principles in their teaching practices were more likely to use student-centered teaching strategies. These include active learning, group discussions, and project-based learning, which align with Vygotsky's constructivist theory (Vygotsky, 1978), which emphasizes social interaction and collaborative learning as central to cognitive development. In this context, the study found that teachers who were familiar with educational psychology principles were more likely to engage students in hands-on activities and peer-learning scenarios that mimic real-world work environments.

Influence of Motivation on Vocational Education Curriculum

Another significant finding was the impact of motivation on curriculum design and student outcomes. Curriculum designers and instructors acknowledged the role of motivation, especially intrinsic motivation, in fostering student engagement and learning. The data suggested that vocational education curricula in Nigeria often fail to fully engage students by not adequately incorporating elements that could enhance their intrinsic motivation.

According to Deci and Ryan's (2000) Self-Determination Theory, intrinsic motivation is enhanced

when learners find relevance and autonomy in their learning activities. In the study, many instructors reported that students who were able to relate the curriculum to their future careers were more engaged and motivated. For instance, students who participated in internships or were involved in real-life projects were more motivated to learn, as they could see the practical relevance of the curriculum to their future employment. These findings align with previous research, which has shown that vocational education curricula that emphasize the real-world applicability of the skills being taught lead to higher student motivation and engagement (Adeyemi, 2016).

Despite this, a number of respondents also noted that vocational education curricula in Nigeria often lack sufficient focus on motivating students. The lack of connection between the curriculum content and the local job market was seen as a significant challenge. Curriculum designers noted that while vocational programs in Nigeria tend to focus on technical skills, they often neglect the motivational aspects that could enhance students' personal and professional development. This finding suggests a need for curriculum reforms that incorporate motivational strategies, making learning more meaningful and engaging for students.

The Effectiveness of Instructional Strategies in Vocational Education

The study revealed a strong link between educational psychology and the selection of instructional strategies in vocational education. Respondents reported that psychological theories have a direct influence on how teaching methods are chosen and implemented. For example, the application of Bandura's social learning theory (Bandura, 1977), which emphasizes learning through observation and modeling, was frequently cited by instructors who used demonstrations and role modeling as part of their teaching practices.

The study also found that instructors who were familiar with educational psychology were more likely to adopt differentiated instruction techniques. This approach, which recognizes the diverse learning needs of students, is crucial in vocational education, where students often come from varied academic and socio-economic backgrounds. Differentiating instruction, such as through hands-on practice, video demonstrations, and one-on-one mentoring, was found to improve the learning experience and allow for the accommodation of different learning styles (Ornstein & Hunkins, 2018).

Despite these positive outcomes, some respondents mentioned the challenges of fully integrating educational psychology into instructional practices. The most significant barrier was the lack of resources, such as adequate training for instructors in psychological principles and insufficient materials for hands-on learning. The findings suggested that while educational psychology can guide effective instructional practices, it is often underutilized due to these resource limitations.

Students' Perception of the Curriculum

From the student perspective, the study found that many students were aware of the benefits of a curriculum designed with psychological principles in mind. They expressed a preference for practical, hands-on learning activities that made the curriculum feel more relevant to their future careers. Students who were exposed to curricula that integrated educational psychology, such as those that included real-world case studies, internships, and collaborative projects, were more likely to report satisfaction with their learning experiences.

Additionally, students' perceptions of the curriculum were significantly influenced by their motivation levels. Those who felt that the curriculum was aligned with their career goals and offered opportunities for autonomy in their learning were more motivated and showed greater commitment to their studies. This aligns with Deci and Ryan's (2000) Self-Determination Theory, which emphasizes the importance of autonomy and relevance in promoting intrinsic motivation.

However, some students reported feeling disengaged from the curriculum due to its perceived irrelevance to their career goals. This is particularly true for students in vocational education programs that are disconnected from the local job market or where opportunities for practical learning are limited. The findings highlight a gap in the curriculum's ability to align with industry needs and demonstrate how the lack of contextual relevance impacts students' motivation and learning outcomes.

Conclusion

The study reveals that educational psychology significantly influences curriculum design in Nigerian vocational education. Applying psychological principles enhances student learning, engagement, and motivation by addressing cognitive development, emotional needs, and motivational drivers.

Findings show that instructors using learner-centered approaches and differentiated instruction improve student outcomes. Motivation plays a crucial role in vocational education, with curricula aligning with students' career goals and incorporating hands-on learning fostering greater intrinsic motivation and engagement. However, challenges such as inadequate resources, insufficient teacher training, and curriculum gaps hinder the full integration of educational psychology into vocational education. Addressing these barriers is essential for optimizing its impact on learning outcomes.

In conclusion, while educational psychology's role in vocational curriculum design is increasingly recognized, more efforts are needed to ensure consistent application. Improving resource allocation and professional development for educators will be key to enhancing vocational education in Nigeria.

Recommendations

Based on the findings and conclusions drawn from this study, the following recommendations are made to enhance the perceived effect of educational psychology on curriculum design in vocational education in Nigeria:

1. Integration of Educational Psychology into Teacher Training: Educational psychology should be incorporated into vocational teacher training through pre-service education and in-service training. This equips educators with knowledge of motivation, cognitive development, and learning styles, improving teaching strategies and student engagement.
2. Curriculum Alignment with Industry Needs and Learner Interests: Vocational curricula should align with labor market demands and students' career interests. Industry collaboration ensures relevant skills training, while career guidance and motivational support enhance engagement and intrinsic motivation.
3. Incorporation of Motivational Strategies into Curriculum Design: Vocational education should include internships, apprenticeships, and choice-based learning to foster intrinsic motivation. Allowing students to explore personal interests enhances engagement and ownership of learning.
4. Provision of Adequate Resources for Practical Learning: Vocational institutions need sufficient funding for hands-on learning resources, teaching materials, and facilities. Adequate investment supports experiential learning, ensuring psychologically-informed, practical education.

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