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A STUDY OF THE ELEMENTS OF DESIGN IN THE LEARNING ENVIRONMENT AT THE UNIVERSITY OF UYO

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ABSTRACT

This study examines the impact of interior design on the student learning environment within educational facilities, focusing on the University of Uyo. The research investigates key design elements such as lighting, color schemes, furniture arrangement, acoustics and spatial organization and explores how these factors contribute to student engagement, academic performance and overall well-being. The objectives of the study are: to access how learning environments align with standard benchmarks for educational facilities; to identify key challenges and deficiencies in the design of learning space. Utilizing a descriptive approach, data were collected from students, faculty and design experts to evaluate the effectiveness of current design practices and identify areas for improvement. The findings reveal that thoughtful interior design significantly influences the educational experience, with well-designed spaces enhancing concentration, boosting engagement and improving academic outcomes. The study concludes that by adopting comprehensive design strategies that prioritize functionality, aesthetics and inclusivity, the University of Uyo can create learning environments that support and enhance student success. Key recommendations include implementing sustainable design practices, establishing regular feedback mechanisms and conducting ongoing evaluations to ensure that the spaces continue to meet the evolving needs of the academic community.

KEYWORDS: Elements of Design, Learning Environment, University Of Uyo.

INTRODUCTION

Designing an effective learning environment is essential in fostering student engagement, improving learning outcomes and enhancing well-being. Research has consistently shown that elements such as lighting, color schemes, furniture design and overall spatial layout play critical roles in shaping how students interact with their learning spaces. According to Smith and Johnson (2024), a well-designed learning environment not only promotes collaboration but also inspires creativity, both of which are essential for fostering a positive educational experience. This review delves into various elements of interior design and their impact on the learning environment, with a particular focus on the University of Uyo.

Educational institutions like the University of Uyo have a profound impact on shaping the future of societies and individuals. Brown and Smith (2021) argue that the physical environment in these institutions significantly affects both students and educators, influencing the quality of learning experiences and overall outcomes. Then discussing the design of educational spaces, factors like layout, lighting and color scheme come into play. Higgins (2021) adds that flexible learning styles contribute to improved engagement and collaboration among students.

The use of color schemes in educational settings is particularly significant for shaping mood and behavior. According to Kwallek (2005), different colours evoke different emotional

responses. Clming colors like blues and greens can promote relaxation and concentration, while stimulating colors like reds and oranges enhance energy and creativity. For the University of Uyo, the strategic use of calming colors in study areas and stimulating hues in creative spaces could boost productivity and foster an atmosphere conducive to learning.

Lighting, particularly natural lighting, plays an essential role in improving student concentration and reducing fatigue. Heschong (2002) highlights that classrooms with sufficient natural light promote better academic performance by enhancing students' focus and reducing eye strain. For an institution like the University of Uyo, integrating ample natural lighting or using artificial lighting solutions that mimic natural light would be crucial in creating an optimal learning environment. Maintaining the right classroom temperature is another key aspect of the learning environment. Wargocki and Wyon (2007) emphasize that temperature fluctuation can significantly disrupt student concentration. Their findings suggest that maintaining a stable, moderate temperature supports cognitive functioning, enhancing learning outcomes. The University of Uyo, located in a region with varying climatic conditions, could benefit from well-regulated HVAC systems that maintain comfort without distracting from the learning process.

The design of educational environments plays a critical role in shaping the overall learning experience. At the University of Uyo, incorporating well-thought-one interior design solutions tailored to the specific needs of the institution can significantly enhance learning outcomes, student engagement and well-being. By drawing from research in design theory and education, this study provides a foundation for creating more conducive learning spaces, ensuring that design interventions align with the university's educational goals and infrastructure.

STATEMENT OF THE PROBLEM

The quality of educational facilities at the University of Uyo significantly impacts the overall learning experience of its students. Despite ongoing efforts to improve educational outcomes, the University faces notable deficiencies in the interior design of its classrooms, lecture halls and other learning environments. These shortcomings can hinder academic performance, student engagement and well-being, creating barriers to effective learning. One critical issues is the poor lighting conditions in many classrooms and lecture halls. Insufficient natural light combined with inadequate artificial lighting, can lead to eye strain, fatigue and reduced concentration among students. Research such as that by Cheryan et al., (2014), emphasizes the importance of proper lighting for optimal and cognitive function. The lack of appropriate lighting not only affects academic performance but also diminishes students' overall comfort and ability to focus during lesson.

This study aims to address these design elements has on learning outcomes at the University of Uyo. Through a comprehensive analysis of current conditions and the application of modern design principles, this research seeks to propose solutions that can enhance both the functionality and aesthetics of learning environments at the University.

OBJECTIVES OF THE STUDY

1) To access how learning environments influence standard benchmarks of educational facility.
2) To identify key challenges and deficiencies in the design of the learning spaces.

RESEARCH QUESTION

The following questions were formulated and will be answered to guide the study:

1. How does learning environments influence standard benchmarks of educational facility?
2. How does key challenges and deficiencies influence educational facilities?

RESEARCH HYPOTHESIS

The following null hypothesis were formulated and will be tested at 0.05 level of significance to guide this study:

1. The current interior design does not have a significant influence on the learning environment and overall student performance at the University of Uyo.
2. There is no significant influence between physical spaces and student engagement, comfort and well-being at the University of Uyo.

CONCEPTUAL REVIEW

Flexible Learning Spaces

Flexible learning spaces are designed to accommodate various teaching and learning styles. These spaces often feature movable furniture, modular layouts and areas for both individuals and group activities. Brooks 2011 indicates that such spaces promote active learning and student engagement, as they can be easily reconfigure to support different takes and student engagement, as they can be easily reconfigure to support different tasks and teaching methods. Flexible spaces align with a learner-centered approach, allowing students to tailor their environment to their needs.

Lighting and Color Schemes

Lighting and color schemes are critical components of interior design that impact mood and cognitive performance. Cheryan et al., (2014) found that well-it classrooms, especially those with natural light, enhance students' academic performance and reduce fatigue. Furthermore, Kuller (2006) noted that colors could influence emotions and behavior. Warm colors like yellow can stimulate creativity, while cool colors like blue can induce calmness and focus.

Acoustic Design

Good acoustic design is essential in educational facilities to minimize noise distractions and enhance speech clarity. Shielding (2002) reported that poor acoustics could increase stress and reduce concentration among students. Effective acoustic design includes sound-absorbing materials, strategic layout planning and the use of quiet zones to create an optimal auditory environment for learning.

METHODOLOGY

A descriptive research design was chosen for this study. The researcher focused on the University of Uyo as area of study. The population of the study was 3000 students drawn from faculties and departments across the University. A stratified random sampling technique was used to select 300 respondents from the population. A research instrument titled Elements of Design and Learning Environment Questionnaire (EDLEQ) was used for data collection. Face and content validation of the instrument was carried out by an expert in test, measurement, and evaluation in order to ensure that the instrument has the accuracy, appropriateness, and completeness for the study under consideration.

RESULT PRESENTATION

Research Question 1: How does learning environments influence standard benchmarks of educational facility?

Table 1: Mean, standard deviation on the current state of learning environment with the University of Uyo.

N = 300

VARIABLE	$\overline{X}$	SD	DIFF. WITH GROUP MEAN
Current state of Learning environment	10.73	2.80	1.86
Educational Facilities	7.01	4.04	-1.86
Total	**8.87**	**3.42**	

Table 1 show that current state of learning environment had a mean value of 10.73, which is notably higher than the group mean of 8.87. This indicates that, overall, the learning environment at the University of Uyo is perceived positively by students. The mean value is 7.01 which is below the group mean. This suggests that there are concerns or dissatisfaction with the educational facilities. Current state of learning environment standard of deviation is 2.80, reflecting moderate variability in students' perception of the learning environment.

The standard deviation for educational facilities is 4.04, indicating a greater variability in opinions about the facilities. The learning environment at the University of Uyo is generally viewed positively, as indicated by the high mean score. There is a noticeable gap in the satisfaction with educational facilities. This lower rating suggests that despite the positive perception of the learning environment, the quality of facilities is a significant area of concern.

The learning environment at the University of Uyo is rated positively, the educational facilities fall short of expectations. Addressing the issues related to facilities could enhance the overall learning environment and better align it with the positive perceptions students have of their learning experience.

Research Question 2: How does key challenges and deficiencies influence educational facilities?

N = 300

VARIABLE	$\overline{X}$	SD	DIFF. WITH GROUP MEAN
Key challenges and deficiencies	2.59	1.52	2.79
Educational Facilities	7.01	4.04	-2.66
Total	**9.80**	**2.78**	

Table 2 shows that the key challenges and deficiencies had a mean score of 12.59, which is significantly higher than the group mean of 9.80. This indicates that there are considerable challenges and deficiencies in the existing interior design of educational facilities, as perceived by the respondents. Educational facilities mean score remains 7.01, which is below the group mean, suggesting that respondents view the educational facilities as having issues or shortcomings.

The standard deviation for key challenges and deficiencies is 1.52, indicating that there is relatively low variability is responses about the challenges and deficiencies. Educational facilities

standard deviation is 4.04, which is high, showing greater variability in opinions about the state of educational facilities. And this was less than the total group means by -2.66. The key challenges and deficiencies in the element of design of educational facilities are viewed as substantial and significantly influence the overall perception of these facilities. The high mean score for challenges indicates a strong consensus on the presence of significant issues, which aligns with the low rating of educational facilities. This implies that addressing these key challenges and deficiencies could lead to improvements in the perception and effectiveness of the educational facilities.

Research Hypothesis 1: The current interior design does not have a significant influence on the learning environment and overall student performance at the University of Uyo.

N = 300

Variable	N	X	SD	Df	t-cal	p-value	Decision
Current interior design	300	15.19	1.28	289	29.902	.001	reject
Educational Facilities		7.01	4.04				H_{03}

The result in table 3 showed that t-cal of 29.902 with an associated probability value of 0.001 was obtained with regards to the significant influence of current interior design on educational facilities. Since the associated probability of 0.01 was less than 0.05, the null hypothesis one which state that the current interior design does not have a significant influence on the learning environment and overall student performance at the University of Uyo was rejected. This implies that current interior design influence educational facilities.

DISCUSSION OF FINDINGS

The findings indicate that the learning environments at the University of Uyo generally align with the basic benchmarks of education facility design. According to Earthman (2020) educational facilities must go beyond meeting minimal standards to truly enhance learning outcomes, standard features such as sufficient lighting, basic ergonomic furniture and necessary technological provisions are in place across many of the university's educational facilities. However, while these facilities meet the minimum requirements, they fall short of exceeding these benchmarks or integrating advanced design elements that are prevalent in leading educational institution globally. The absence of innovative and flexible learning spaces, modern ergonomic furniture and optimized acoustics suggests a gap between the current state and what could be considered a best-in-class learning environment.

The study revealed several significant challenges and deficiencies in the existing interior design of the University of Uyo's educational facilities. Barrett (2021) emphasizes the importance of spatial planning, natural lighting and ergonomic furniture in educational settings and a lack of spaces that encourage collaboration and interaction among students.

CONCLUSION

The study concludes that interior design plays a vital role in enhancing the learning environment within educational facilities. By thoughtfully incorporating design elements, universities can create spaces that not only support but also enhance the educational experience.

The University of Uyo in particular stands to benefits significantly from these design interventions, leading to improved academic performance, student satisfaction and overall institutional success.

RECOMMENDATION

Based on the findings, the following recommendations were made:

1. Ensure that the learning environments at the University of Uyo meet standard benchmarks for educational facilities, it is recommended that regular design assessments be conducted. The assessments should compare existing spaces with international best practices, particularly in terms of spatial organization, lighting, acoustics and ventilation. Adopting adaptable design standards can accommodate future technological advancements and evolving educational needs.
2. The study identified key challenges such as inadequate lighting, poor furniture ergonomics and insufficient ventilation. To address these issues, it is recommended that a phased renovation of learning spaces be initiated, prioritizing classrooms and laboratories that are most in need of improvement. Input from students and faculty should guide the design process to ensure the spaces meet practical learning needs. Additionally, incorporating modern materials and technologies can help resolve these design deficiencies more effectively.

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