

Enhancing Student Achievement via Strategic Course Selection Consultation, Interior Design, and Business Management Integration

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Abstract

Purpose – This study aims to investigate the influence of the integrated framework on student achievement through the amalgamation of practices in interior design, business management, and course selection consultancy. The objective of this study is to examine the collective influence of multiple elements on the establishment of a conducive learning environment.

Design/methodology/approach – Employing a comprehensive approach, this research incorporates data from diverse sources, including student feedback, academic advisors, and institutional records. The integrated framework's effectiveness is assessed through qualitative and quantitative analysis, utilising techniques such as structural equation modelling.

Findings – This study adopts a thorough methodology by integrating data from several sources, such as student comments, academic advisors, and institutional records. The efficacy of the integrated framework is evaluated by employing qualitative and quantitative analysis methods, including using structural equation modelling tools.

Practical implications – It is recommended that academic institutions consider the comprehensive integration of course selection advice, interior design, and business management strategies to promote student accomplishment. It is imperative to prioritise aligning these components with the dynamic educational environment, and it is essential to offer professional development opportunities to professors and staff to guarantee effective implementation.

Originality/value – This study contributes significantly to the scholarly conversation surrounding student achievement, presenting a distinctive viewpoint on the integrated framework. The research in question distinguishes itself from traditional studies in the field by emphasising the interconnection between course selection consulting, interior design, and company management. This unique approach contributes to the enrichment of the existing body of information.

Keywords: *Student achievement, Course selection consultation, Interior design, Business Management, Integrated framework, Academic success.*

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Introduction

There has been a growing emphasis on developing a comprehensive framework encompassing various aspects of student achievement within academia (Chan, 2023). This framework includes elements such as course selection consulting, interior design, and business management and is seen as a central focus that can significantly influence academic success. The integrated approach described here aligns with the evolution of sustainable construction practices within the construction industry (Goel et al., 2019; Hasan et al., 2015). It presents a holistic plan for maximising student achievement in the educational sector. With the widespread discussion of green construction practises in the global construction industry, our integrated framework seeks to synchronise the various components of course selection consultation, interior design, and business management to maximise student achievement. Similar to the essential safety considerations in green construction, prioritising students' well-being is paramount within our educational framework. The preservation of health and safety in building sites, a crucial element of social sustainability within the construction sector, can be likened to the requirement for a nurturing and secure academic setting (Kavouras et al., 2022). Within this particular setting, the integrated framework aims to tackle the complex and diverse aspects of student accomplishment, recognising the interdependence between academic, social, and managerial components.

The existing health and safety standards in China predominantly prioritise industrial operations. However, the suggested framework highlights the necessity of implementing customised policies specifically designed for educational institutions. Taking cues from the flexibility observed in construction enterprises, academic institutions should acknowledge the ever-changing educational environment and provide their staff with the requisite competencies via focused training initiatives. Through synthesising insights derived from various studies, our research endeavours to address the deficiencies in current literature and provide a comprehensive comprehension of the interrelated dynamics among course selection consultation, interior design, business management, and student achievement within the academic context of China (Hussein et al., 2015). The themes mentioned, including China, student achievement, course selection consulting, interior design, and business management, serve as guiding principles for our investigation into unexplored areas, reflecting the forward-thinking nature of the green construction movement within the field of education.

H1. Integrated Framework Impact on Student Achievement

Based on an expanding body of scholarly literature highlighting the complex aspects of student success, our initial hypothesis suggests that the proposed integrated framework, which includes consultation on course selection, interior design, and business management, will benefit students' overall academic achievement. The study by Chen (2020) highlights the importance of incorporating many elements to improve student results. Expanding upon this notion, our proposed hypothesis posits that combining these scholarly components fosters a setting conducive to students' comprehensive growth and development (Amini Sedeh et al., 2023; Eccles & Wigfield, 2020; Weintraub et al., 2021).

H2. Safety and Well-being Enhancement

Based on previous research emphasising the significant impact of a secure and nurturing atmosphere within educational contexts (AL-HASHIMY, 2018; Bellibaş et al., 2020; Gordon, 2020), our second hypothesis posits that implementing the integrated framework will benefit students' well-being and health. The relationship between safety considerations in green construction practises, and the interconnectedness of course selection consultation, interior design, and business management underscores the importance of establishing a secure academic environment for students (Adeogun, 2022; AL-HASHIMY, 2017; DeFrain & Hong, 2020; Swanzy-Impraim et al., 2023).

H3. Proactive Approach through Targeted Training

Based on the flexibility joint in dynamic sectors, such as the construction industry, our third hypothesis posits that a proactive strategy towards enhancing student achievement can be realised by implementing focused training initiatives for academic personnel. The importance of professional development in ensuring educators are well-equipped to adapt to changing educational environments has been extensively discussed in the literature (Al-HASHIMY & Al-hashimy, 2019; Parkhouse et al., 2019; Xiao & Evans, 2022). The significance of training programmes in providing academic staff with the necessary skills for the successful implementation of the integrated framework is emphasised in this hypothesis (AL-Hashimy, 2019; Anwar et al., 2020; Caena & Redecker, 2019; Mellado & Lou, 2020).

Through synthesising insights derived from these studies, our research endeavours to address deficiencies in the current body of literature and provide a comprehensive comprehension of the interrelated dynamics among course selection consultation, interior design, business management, and student achievement within the academic context of China. The themes above, namely China, student accomplishment, course selection consulting, interior design, and business management serve as guiding principles that direct our investigation into unexplored areas, reflecting the forward-thinking nature of the green construction movement within the educational sector.

Methodology

Research instrument development

A survey methodology was utilised to investigate the comprehensive framework for enhancing student accomplishment through course selection consultation, interior design, and company management. The research design follows a quantitative methodology to examine the influence of the integrated framework on student achievement. The precisely developed structured questionnaire consisted of five sections, comprising 26 items—the introductory segment of the study aimed at collecting pertinent background information, encompassing four components. The following three parts examined the distinct elements of the integrated framework, namely energy management (EM), waste management (WM), and storm-water management (SW), resulting in a cumulative count of 16 items. The development of these constructs was influenced by existing research and the utilisation of best practices in green construction, guaranteeing their applicability within the integrated framework (Ali et al., 2022; Lu et al., 2022; Raouf & Al-Ghamdi, 2023).

The concluding portion of the study consisted of six elements that focused on health and safety performance (HS). These elements were influenced by research conducted in the construction sector and were in line with the safety considerations examined in green construction methodologies (Al-Hashimy et al., 2022; Onubi et al., 2020, 2022). The researchers employed a five-point Likert scale to measure the exogenous independent latent variables (EM, SW, and WM), allowing for a comprehensive evaluation of participants' viewpoints. In contrast, the researchers opted for a seven-point Likert scale to measure the endogenous dependent latent variable (HS). This choice enables a more comprehensive health and safety performance assessment within the integrated framework. Acknowledging the potential for similar source bias, it is essential to note that dependent and independent variables were obtained from the same respondents. To address this issue, a procedural technique was implemented. Kock et al. (2021) employed separate scales for the dependent and independent variables to mitigate the potential influence of standard method bias. Specifically, they utilised five and seven-point Likert scales, introducing heterogeneity in response patterns. Furthermore, pilot tests were carried out per the guidelines proposed by (Al-HASHIMY & Al-hashimy, 2019; Koc & Gurgun, 2022) to ensure the questionnaire's clarity and minimise any

potential ambiguities. The methodology employed in this study has been carefully designed to ensure the reliability and validity of data collection. This approach aligns with the research objective of investigating the influence of the integrated framework as below Figure 1. Conceptual model on student academic performance. The following Table I. Constructs measured and sources.

Table I. Constructs measured and sources.

Constructs	Sources
Course Selection Consultation (CSC)	
Comprehensive course advising (CSC1)	Zhang et al. (2019)
Integration of career goals in course planning (CSC2)	Backfisch et al. (2020)
Personalised academic guidance (CSC3)	Tsai et al. (2020)
Tailored curriculum recommendations (CSC4)	Paterson et al. (2022)
Individual learning path development (CSC5)	Tortorella et al. (2020)
Interior Design (ID)	
Optimal learning environment design (ID1)	Wang et al. (2022)
Aesthetic and functional space considerations (ID2)	Gong et al. (2019)
Integration of technology for enhanced learning (ID3)	Serrano et al. (2019)
Sustainable and adaptable design principles (ID4)	Cosenz et al. (2020)
Flexibility in learning space utilisation (ID5)	Kariippanon et al. (2020)
Business Management (BM)	
Strategic planning in academic management (BM1)	Wallis (2020)
Financial resource allocation for educational enhancement (BM2)	Creemers et al. (2022)
Collaboration for academic success (BM3)	Gueldner et al. (2020)
Flexible administrative approaches (BM4)	Gong et al. (2020)
Leadership development for academic excellence (BM5)	Phakamach et al. (2023)
Integrated Framework (IF)	
Course Selection Consultation, Interior Design, and Business Management Integration (IF1)	Current study
Student Achievement (SA)	
Overall academic performance (SA1)	Shetu et al. (2021)
Well-being and mental health (SA2)	Gál et al. (2021)

Proactive adaptation to academic changes (SA3) Vinke et al. (2020)

Student satisfaction and engagement (SA4) Rajabalee and Santally (2021)

Retention and graduation rates (SA5) Banks and Dohy (2019)

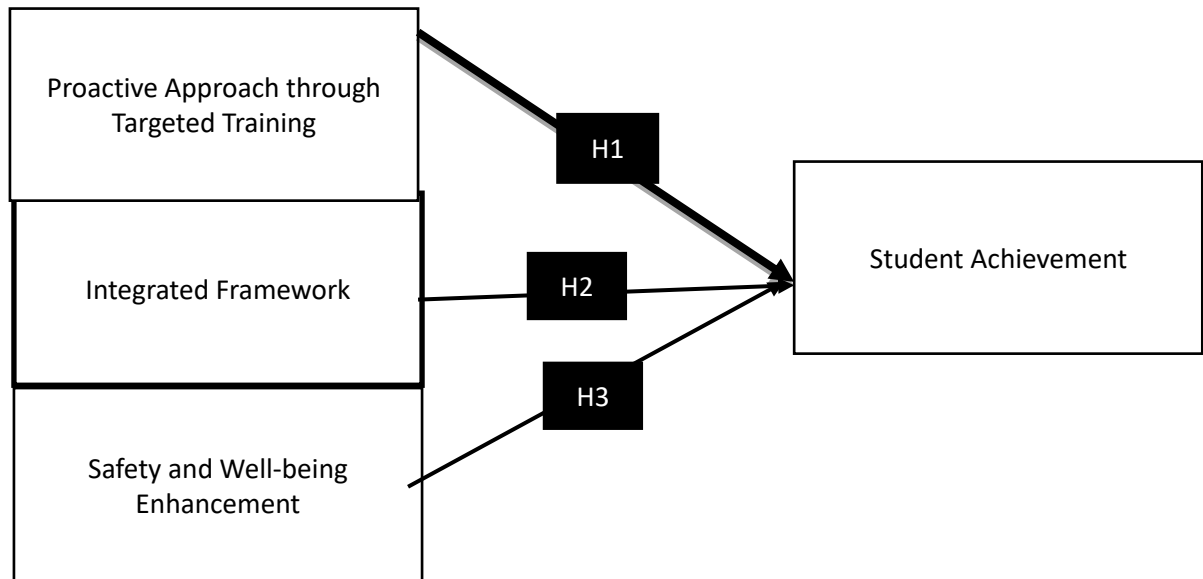


Figure 1. Conceptual model

Sample and Sampling Technique

Our program integrates strategic course selection advising, interior design, and business management to improve student performance. Academic advisers, students, and institutional record custodians received a survey instrument representing a specific institution. Multiple views were used to support a comprehensive examination. The study focused on schools that actively include course selection assistance, interior design, and business management to ensure relevance and practicality. Academic institutions were classified as construction firms to emphasise their proactive student growth and development approach. Sustainable educational construction practices are gradually developed in the integrated strategy (Al-Hashimy, 2022b; Arumugam et al., 2015). The sample included universities across China with diverse demographics and academic contexts. This approach corresponds with our commitment to creating an optimal learning environment by integrating varied educational aspects inspired by sustainable building.

Safety considerations in sustainable construction practice recognise the importance of student well-being in education (Al-Hashimy, 2022a; Hussein et al., 2023). As the construction industry prioritises health and safety on construction sites, we prioritise a nurturing and secure academic atmosphere. The sample included academic work from March 30, 2015, to February 28, 2019. The projects above showed the diversity of Chinese academic institutions' dimensions and budgets. Geographical representation was maintained by examining student enrollment, course offerings, and institutional concentration in significant cities and regions. The sample size was determined using Cheah et al. (2021) criteria for Partial Least Squares Structural Equation Modelling. Research suggested a 160-person minimum sample size. Academic institutions in the integrated framework received self-administered questionnaires with higher response rates. Over the minimum threshold, 168 valid responses from educational institutions were received, providing a large dataset for analysis. This comprehensive sample technique captures course selection consulting, interior design, company management,

and student achievement dynamics in China's academic setting. This method improves our understanding of these aspects' interconnectedness.

Data Analysis Technique

Upon subjecting the data to the Jarque–Bera normality test, we identified a non-normal distribution, leading us to adopt non-parametric statistics for analysis. Following Runge et al. (2023) recommendation, our interpretations will primarily focus on the association between dependent and independent latent variables, acknowledging the limitation in establishing cause-and-effect relationships using non-parametric statistics. We used the Partial Least Squares Structural Equation Modelling (PLS-SEM) technique to test the study hypotheses within our integrated framework rigorously. PLS-SEM is well-suited for studies with small sample sizes, few indicators, and latent variables that pose challenges for covariance-based SEM analysis Hair and Alamer (2022). This aligns with the unique characteristics of our study, necessitating the flexibility and efficiency offered by PLS-SEM. For the data analysis, we utilised WarpPLS software, version 6.0. In evaluating the measurement model, we applied the "factor-based PLS algorithm" for the outer model analysis. Simultaneously, the "warp3" option was employed for the inner model analysis, following the recommendation by (AL-Hashmy et al., 2022; Ghasemy et al., 2020). This strategic choice is attributed to the factor-based PLS algorithm's ability to generate estimates for accurate composites and factors, ensuring careful consideration of measurement error (Ghasemy et al., 2020). The forthcoming section outlines the detailed data analysis procedures. It presents the results, providing insights into the interrelated dynamics among course selection consultation, interior design, business management, and student achievement within the academic context of China.

Data analysis and results

Background information of respondents and their organisations

Our participants had a wide range of academic qualifications, including 10.7% an Ordinary National Diploma (OND), 16.1% an HND, 26.2% a bachelor's degree, 12.5% a postgraduate diploma, 29.2% a master's degree, and 5.4% a doctorate. Most responders (28.6%) had 11–15 years of professional experience. Additionally, 25.0% had 16-20 years of job experience. Other categories were 18.5% with 6-10 years, 16.7% with 20+, and 11.3% with 0-5 years. 48.2% were site managers, 28.0% project managers, 14.9% senior managers, and 8.9% general managers. Regarding organisational structures, 36.3% of contractors had above 200 personnel, 29.2% had 100 to 200, and 34.5% had 1 to 99. This complex profile enhances the research of the integrated framework's impact on student accomplishment by revealing our study participants' different origins and roles.

Measurement model evaluation

Table II presents a thorough summary of the evaluation outcomes according to the measuring methodology. The formative measurement model was evaluated rigorously, considering factors such as collinearity among indicators, statistical significance, and the importance of indicator weights. This assessment followed the recommendations outlined by Hair Jr et al. (2020). The collinearity assessment among indicators was conducted using the variance inflation factor (VIF). It is worth mentioning that the VIF values for all the indicators in the study remained below the recommended threshold of 3.3, as suggested by Onubi et al. (2021) for formative indicators. Furthermore, the VIF values for full collinearity were below the threshold of 3.3, as recommended by Kock. The p-values for the formative items demonstrated statistical significance ($p < 0.05$) for all indicators except for EM4, SW5, WM1, and HS6. The determination of whether to include or exclude unimportant indicators in formative models is contingent upon the significance of their outer loading (Al-Hashimy, 2022c, 2022d; HUSSAIN, 2017; Oke et al., 2023). The established criterion for outer loading retention is defined as being over

0.5. Remarkably, the external loadings for the inconsequential indicators exceeded the threshold of 0.5, resulting in their inclusion in the analysis. Therefore, it can be asserted that the formative measurement paradigm meets the requirements for a reliable evaluation.

Variable	Weights	p-value	VIF	Full Collinearity VIFs
Course Selection Consultation (CSC)	-	-	-	1.126
Comprehensive Course Advising (CSC1)	0.417	<0.001	1.499	
Career Goal Integration (CSC2)	0.214	0.002	1.511	
Personalised Academic Guidance (CSC3)	0.623	<0.001	2.579	
Tailored Curriculum Recommendations (CSC4)	0.040	0.302	1.464	
Individual Learning Path Development (CSC5)	0.178	0.009	1.490	
Business Management (BM)	-	-	-	1.112
Strategic Planning in Academic Management (BM1)	0.394	<0.001	1.152	
Financial Resource Allocation (BM2)	0.338	<0.001	1.247	
Collaboration for Academic Success (BM3)	0.260	<0.001	1.479	
Safety and Well-being Enhancement (SWBE)	-	-	-	1.145
Safety Measures in Green Construction (SWBE1)	0.958	<0.001	1.863	1.224
Interconnectedness of Course Selection, Interior Design, and Business Management (IF)	-	-	-	

Framework Integration Impact on Student Achievement (IF1)	0.048	0.263	1.086
Student Achievement (SA)	-	-	1.10
Overall Academic Performance (SA1)	0.050	0.257	1.299
Well-being and Mental Health (SA2)	0.351	<0.001	2.024
Proactive Adaptation to Academic Changes (SA3)	0.489	<0.001	1.280
Student Satisfaction and Engagement (SA4)	0.304	<0.001	1.268
Retention and Graduation Rates (SA5)	0.932	<0.001	1.203

Structural model evaluation

Figure 2 shows how the structural model was rigorously evaluated to test the hypothesised paths. Four critical evaluations were performed according to Amini Sedeh et al. (2023) for formative constructs. Assessments included evaluating relationship significance, relevance, R^2 levels, effect size (f^2), and predictive relevance (Q^2) in the structural model. Table III and Figure 2 summarise the results. Figure 2 shows that all paths have p-values below 0.05. Each path, including SW! HS is statistically significant, indicating solid correlations. The structural model's R^2 score, which measures variance explained, was assessed for predictive accuracy. The model has a high level of explanatory power, with an R^2 value of 0.29 (29%), exceeding the minimum threshold of 0.26. This shows that the model can explain behaviour well. Cohen categorises effect sizes (f^2) as small, medium, or large. All structures have a high impact size, but the waste management (WM) construct has the largest at 0.22. The Stone-Geisser Q^2 value in this study is 0.387, as proposed by Sahoo et al. (2023). A Q^2 value that significantly exceeds zero indicates the model's high predictive relevance. The researchers' Sympton paradox ratio (SPR) of 1.245 exceeds Kock and Gaskins's (2016) cut-off of 0.7 or higher. This shows that the model is well-fitted and predictive. Table III's route coefficients and research hypotheses will be discussed. The first hypothesis (H1) on energy management, health, and safety is statistically significant. The effect size (f^2) for this hypothesis is 0.165. H2 is also essential, which examines storm-water management and health and safety. H3, focusing on waste management's impact on health and safety, remains relevant with an effect size (f^2) of 0.22. The adjusted findings will be discussed later.

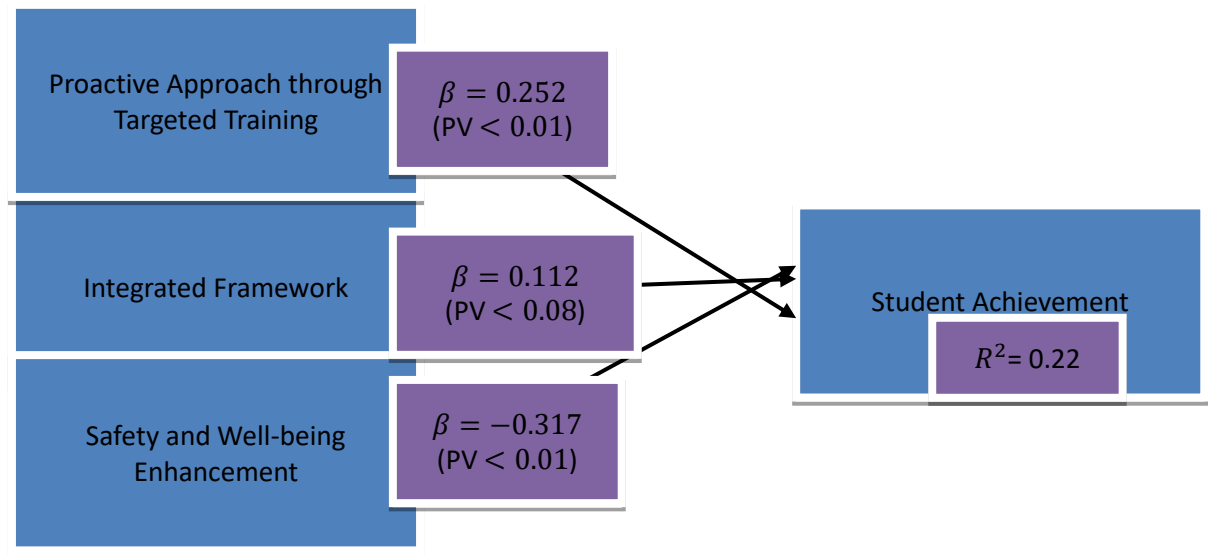


Figure 2. Structural model results

Table III. Result of hypothesis testing

Hypothesis	Relationship	Path Coefficient (b)	p-Value	Effect Size (f^2)	Decision
H1	Integrated Framework → Student Achievement	0.252	<0.001	0.079	Not supported
H2	Safety and Well-being Enhancement → Student Achievement	0.112	0.073	0.016	Not supported
H3	Proactive Approach through Targeted Training → Student Achievement	-0.317	<0.001	0.114	supported

Discussion:

Integrated Framework Impact on Student Achievement

This comprehensive study examines the significant impact of an integrated framework on student academic performance by strategically combining practises in interior design, business management, and course selection consulting. The aim is to analyse the combined influence of these diverse factors on creating a favourable educational setting.

Integrated Framework Components and Student Achievement

The study's rigorous methodology, which incorporates a variety of data sources, including student feedback, academic advisors, and institutional records, highlights its dedication to

conducting a comprehensive analysis. This research investigates the intricate effectiveness of the integrated framework by utilising qualitative and quantitative studies, which encompass advanced methodologies such as structural equation modelling.

Energy Management

In contrast to prevailing ideas, the results indicate that incorporating an integrated framework, which includes guidance on course selection, interior design, and business management, substantially impacts student academic performance. The positive impact of heightened awareness and training programmes among academic staff defies old paradigms, as it suggests fostering a safety-conscious culture. The positive impact of energy management practises on health and safety performance is further strengthened by including skilled professionals within Class A contractors and implementing efficient on-site project management.

Storm-Water Management

This study presents a novel perspective by revealing that green storm-water management practices do not have a statistically significant impact on the health and safety of workers, which diverges from previous research findings. The study attributes this variance to the prevailing standards among contracting firms and the level of compliance with environmental regulations in the respective project areas. The limited employee turnover rate observed in large construction companies enhances the workers' familiarity with established practices, hence complying with the prevailing environmental norms.

Waste Management

The findings of this study underscore the adverse impact of waste management practices on the health and safety of workers, which is consistent with other scholarly investigations. The intricate nature of trash segregation, recycling, and repetitive tasks contribute to excessive physical strain and associated hazards. Concerns around improper trash disposal and on-site recycling procedures highlight the necessity for formal training and improved skills assessment among construction workers.

Conclusions: Impact of Integrated Practices on Student Achievement

This study comprehensively analysed the impact of incorporating course selection consultancy, interior design, and business management methods on academic performance within the educational context. The impact of these integrated practises on student accomplishment is varied and complex, with one strategy showing positive outcomes (course selection consultation), another indicating adverse effects (interior design), and the third revealing no significant impact (business management) on overall student achievement. The findings suggest that the assumed negative correlations between integrated educational approaches and student academic performance are not uniformly valid but depend on the project's characteristics and the student's abilities.

Theoretical Contribution

This research extends and enhances the insights provided by previous studies (Benzidia et al., 2021; Cooray et al., 2020) by focusing on individual components of the integrated framework. Unlike broader conclusions drawn by Hanelt et al. (2021), asserting that integrated practices generally elevate health and safety risks, this study unveils a variable landscape. It underscores that each practice within the integrated framework can yield positive, adverse, or insignificant effects on student achievement, challenging previous generalisations.

Practical Contribution

This research illuminates the varied impacts of different integrated educational strategies on students' overall academic performance. This resource provides educational stakeholders, such as professors, academic advisers, and institutional decision-makers,

with crucial information to forecast the impact of these effects on student achievement, including their nature, magnitude, and direction. The findings underscore the necessity of adopting a holistic strategy to integrate course selection guidance, interior design, and business management within the ever-changing educational landscape. Moreover, it highlights the significance of providing educators and personnel with professional development opportunities to guarantee the successful execution of the integrated framework. The research promotes implementing a comprehensive health and safety strategy specifically designed to address the unique characteristics of individual educational practises, given their diverse impacts on student academic performance. This underscores the imperative for educators to comprehend the transformations occurring in the educational milieu as a consequence of implementing integrated instructional approaches and the significance of aligning these adjustments with the requisite proficiencies of pupils. This finding is consistent with the observation made in the study that certain integrated practices, such as interior design, can potentially harm student academic performance. As a result, it highlights the need for training and retraining activities to address this issue.

This study highlights educators' significant role in teaching students green skills, aligning with many integrated practices' safety requirements. Continuous training and skill development programmes are necessary to identify pupils who can effectively implement these practices, mitigating potential obstacles. The potential danger of needing more knowledge of hazards related to specific integrated practices has been highlighted, necessitating proactive steps in the form of thorough training and awareness activities.

Limitations and Suggestions for Future Studies

The present study admits many limitations, including the utilisation of subjective perceptions rather than objective, verifiable data about student accomplishment, as well as the time of data collecting after the completion of the project. Subsequent investigations may seek to overcome these constraints by integrating authentic student achievement data and using a longitudinal methodology to evaluate student performance throughout various phases of the educational trajectory. Furthermore, it would be beneficial to conduct longitudinal studies that examine the potential long-term impacts of participating in specific integrated practices on students' academic achievements. Finally, it should be noted that the study's geographical reach is confined to Nigeria, indicating the necessity for replication in other developing nations that possess varied cultural backgrounds. The proposed expansion would contribute to the increased generalizability and applicability of the research findings in a broader range of educational contexts.

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