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The Role of Public Policy in Shaping High-Impact E-Learning Practices and Their Effect on the Quality of Education

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ABSTRACT:
This study investigates the role of public policy in shaping high-impact e-learning practices (HIPs) and their influence on the quality of education from the perspective of faculty members. Building on a structural model, the research tests five hypotheses related to key HIPs, including community-based learning, common intellectual experiences, faculty guidance, first-year experiences, and university research initiatives.
The findings reveal that only two of the proposed high-impact practices—common intellectual experiences and university research—exhibit a statistically significant positive relationship with perceived educational quality. In contrast, no significant association was found with community-based learning, faculty guidance, or first-year experience. Specifically, the hypothesis related to university research (H5) demonstrated the strongest support ($t = 12.156$, $p = 0.000$), indicating a robust impact on quality outcomes. Common intellectual experiences (H2) also showed a significant effect ($t = 3.876$, $p = 0.000$), underscoring their value in enhancing educational outcomes.
The results suggest that public policies aimed at strengthening institutional research agendas and fostering integrative intellectual environments are more likely to drive improvements in educational quality, as perceived by faculty. Conversely, certain widely promoted HIPs may not yield measurable gains unless they are better aligned with institutional strategies or faculty engagement models.
This research underscores the necessity of evidence-based policy-making that prioritizes pedagogical practices with demonstrable impact, particularly within e-learning environments shaped by digital transformation and post-pandemic reforms.

Keywords: Public Policy, High-Impact Practices (HIPs), E-Learning, Educational Quality, Faculty Perspective, University Research, Common Intellectual Experiences, Digital Education, Higher Education Policy, Teaching Effectiveness

1. Introduction

The rapid transformation of the global labor market, driven by the technological revolution (Rubery, 2024), has intensified the demand for graduates equipped with

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essential competencies and adaptable skillsets (MacKay, 2024). This shift has compelled higher education institutions to rethink their traditional pedagogical approaches and align their programs with the dynamic requirements of the modern workforce. Consequently, there has been a growing emphasis on integrating High-Impact Educational Practices (HIPs) into university curricula, not merely as instructional tools, but as strategic instruments for improving educational quality and graduate preparedness (Ambrose, 2024).
Many previous studies have emphasized that the success of implementing these practices largely depends on institutional support and faculty development programs, especially in digital learning environments.

The literature indicates that faculty development programs play a crucial role in equipping faculty members with the necessary skills and technologies to adapt High-Impact Practices to digital contexts. According to (VanWyngaarden, 2024), continuous training programs focused on interactive digital methods are essential for the success of these practices. This involves training faculty to effectively use digital tools to create interactive learning environments that enhance student engagement and improve learning outcomes.

Moreover, studies like (Omoigberale, 2025) demonstrate that institutional support through clear incentives for faculty who engage in the implementation of HIPs can significantly influence the success of these initiatives. These incentives include academic rewards such as recognition, promotions, or financial incentives, which strengthen faculty commitment and encourage their active involvement in the development and implementation of these practices.

In digital learning environments, there is a need for additional attention on how practices such as Community-Based Learning or Common Intellectual Experiences can be effectively adapted to ensure their success in the absence of face-to-face interaction. Studies like (Zamiri, 2024)have shown that High-Impact Practices in digital settings require different pedagogical and technological strategies, such as enhancing digital communication between students and faculty and utilizing online collaborative learning techniques.
In this evolving context, faculty members have emerged as pivotal actors in the successful adoption and implementation of HIPs. While students are the ultimate beneficiaries of such practices, it is the faculty who interpret policy directives, design learning environments, and engage directly in shaping competencies through teaching. Their perspectives offer valuable insights into the efficacy and practicality of HIPs within institutional frameworks shaped by national policy agendas.
In Saudi Arabia, the national vision for higher education, particularly under **Vision 2030**, has underscored the strategic importance of academic excellence and global competitiveness (Khoirunnisa, 2024). Responding to this vision, institutions like Northern Border University (NBU) have established specialized units—such as the HIPs Unit—tasked with embedding core competencies into educational programs and promoting high-impact practices across academic departments. While several of these HIPs, such as First-Year Experience (FYE) (Kuh, 2017) (Kuh, 2008), Community-Based Learning (CBL),

Common Intellectual Experiences (CIEs), and Undergraduate Research (UR) are well-established in educational literature (Trogden, 2023), NBU has also introduced a locally tailored component: the Faculty Member Guide (FMG), which provides structured frameworks for faculty to embed institutional core competencies within their teaching strategies.

Given the central role of faculty in operationalizing these reforms, this study investigates the perceptions of academic staff regarding the effectiveness of public policy in supporting high-impact e-learning practices. It further explores which HIPs are seen by faculty as most influential in enhancing educational quality and student competence. Through this lens, the research seeks to provide empirical insights that can inform policy formulation and implementation strategies at institutional and national levels.

In alignment with global trends and national strategic goals, particularly those articulated in Saudi Arabia's Vision 2030, higher education institutions are undergoing significant transformation to meet the demands of a competitive, knowledge-based economy. The vision emphasizes raising the quality of education, improving learning outcomes, and fostering a generation of graduates equipped with both academic knowledge and market-relevant competencies (Khoirunnisa, 2024). Within this broader agenda, faculty members are positioned as catalysts of change, responsible for translating policy directives into pedagogical action and ensuring the alignment of teaching practices with institutional competencies.

At the core of this transformation is the integration of High-Impact Educational Practices (HIPs) as instruments to cultivate critical skills such as digital literacy, communication, teamwork, and self-management. Institutions like Northern Border University (NBU) have institutionalized this vision by establishing dedicated units—such as the HIPs Unit—tasked with defining, implementing, and monitoring core competencies across curricula. Faculty engagement is central to this process, as the realization of such a vision depends not only on the formulation of policy but on the capacity and willingness of academic staff to internalize and deliver these practices effectively.

This vision-driven approach reframes the role of faculty from passive transmitters of content to active designers of transformative learning environments, supported by policy and empowered by institutional mechanisms. It further reflects a commitment to achieving internationally recognized standards of academic quality, accreditation, and educational impact, in line with evolving global benchmarks (MacKay, 2024).

2. Theoretical Background

The evolution of the global labor market has placed increasing responsibility on higher education institutions to produce graduates equipped with diverse, adaptable competencies (Ployhart, 2018). This imperative has prompted academic leaders and faculty to reconsider conventional instructional strategies in favor of pedagogies that demonstrably enhance student outcomes. Among these, High-Impact Educational Practices (HIPs) have emerged as evidence-based approaches that support persistence, improve graduation rates, and help close achievement gaps (Kuh, 2017). At Northern Border University (NBU), the HIPs Unit has implemented four core practices—First-Year Experience (FYE), Community-Based Learning (CBL), Common Intellectual Experiences

(CIEs), and Undergraduate Research (UR)—in alignment with Saudi Vision 2030 and international quality benchmarks

2.1 First-Year Experience (FYE)

First-Year Experience programs are now a staple in many university systems as a structured method to facilitate students' transition into academic life (Staples, 2022). These initiatives typically involve small-group mentoring led by faculty, emphasizing early engagement, academic orientation, and community building. Through enhanced faculty access, peer collaboration, and structured guidance, students are encouraged to build foundational academic and social skills. These programs frequently incorporate collaborative learning, critical thinking exercises, and formative feedback, which collectively foster deeper intellectual engagement (Almutiry, 2022). Previous research, such as that by (Samosamo, 2024), highlights the importance of tailoring First-Year Experience programs to the specific academic and cultural needs of students. In many cases, the success of FYE programs depends on how well they integrate into the broader academic environment, particularly in multicultural or diverse settings. If the programs are not adequately adapted to local cultural contexts or the specific academic challenges that students face, their effectiveness can be compromised.

For Northern Border University (NBU), it may be essential to assess whether these programs are designed to address the particular cultural dynamics and academic expectations of the student body. If the FYE initiatives are based on models that have not been adequately contextualized to local needs, such as Saudi Arabia's Vision 2030 or the specific socio-cultural aspects of the region, this could be a key factor contributing to their lack of significant impact.This is an important area that can be focused on in future studies.

NBU's HIPs Unit has adapted these models by creating student learning communities that receive faculty support from the outset. These communities not only support academic success but also promote a strong sense of belonging and connection with the university environment.

2.2 Change Community-Based Learning (CBL)

Community-Based Learning is widely acknowledged for its role in enriching the learning experience through engagement beyond the classroom (Tripon, 2024). These learning communities bring students together around shared goals, enabling collaborative problem-solving and peer exchange (Zamiri, 2024). The HIPs framework at NBU adopts this practice to facilitate interdisciplinary integration, promote inclusive educational environments, and strengthen communication between faculty and students. The goal is to cultivate shared ownership of learning and align student engagement with institutional learning outcomes.

2.3 Common Intellectual Experiences (CIEs)

Common Intellectual Experiences, derived from the core curriculum model, serve as collective academic engagements that expose students across disciplines to shared questions and themes (Li, 2024). These activities foster intellectual coherence and provide a platform for collaborative dialogue and critical thinking (Kuh G. D., 2008). Institutions

often implement such practices through common readings, joint seminars, and interdisciplinary coursework .
At NBU, CIEs have been integrated into the competency-based curriculum to provide shared learning milestones for students. The practice encourages participation in co-curricular activities, collaborative discussions, and community-based projects, all of which contribute to students' civic and academic development (Tawiah, 2024) .

2.4 Undergraduate Research (UR)

Undergraduate Research is regarded as one of the most transformative educational strategies in higher education, offering students hands-on experience in knowledge creation and scholarly inquiry (Thomas, 2025). This practice equips students with domain-specific knowledge, critical thinking abilities, and research literacy, preparing them for advanced academic pursuits and research-driven careers. It also cultivates a sense of academic identity and self-efficacy, particularly when conducted under faculty mentorship (Moon, 2025).
At NBU, undergraduate research initiatives are structured around faculty-supervised projects that align with institutional competencies. Students are encouraged to contribute meaningfully to ongoing research agendas, enhancing both the quality of learning and the university's research culture.

2.5 Quality in the Educational Process

Northern Border University (NBU) has introduced a unique local practice known as the Faculty Member Guide (FMG) to support the implementation of High-Impact Educational Practices (HIPs). Unlike traditional HIPs found in the literature, FMG provides structured guidance to faculty on integrating seven institutional core competencies—such as critical thinking, digital culture, and teamwork—into their teaching. This guide functions as both a pedagogical and procedural tool, aiming to enhance consistency, faculty engagement, and competency-based education in alignment with Saudi Vision 2030. It underscores the university's belief that educational transformation must be faculty-led and systemically supported (Kallock, 2024).
Faculty perceptions poses a limitation in the study, particularly because it may not fully capture the students' experiences or the actual learning outcomes resulting from High-Impact Educational Practices (HIPs).
Previous studies, such as those by (Commander, 2022), emphasize the importance of collecting data from multiple sources to gain a more comprehensive understanding of the impact of educational practices. Faculty perceptions alone may not adequately reflect the full scope of student engagement or the effectiveness of HIPs, as students are the primary beneficiaries of these practices. Therefore, incorporating student feedback, either through surveys, focus groups, or qualitative interviews, would provide a more balanced perspective on the actual outcomes and challenges experienced during the implementation of HIPs. Therefore, the researchers recommend conducting future studies that rely on students' perceptions as well as academic records.

2.6 Quality in the Educational Process

The quality of education remains a cornerstone for evaluating institutional performance. It encompasses curriculum relevance, pedagogical effectiveness, student engagement, and

satisfaction (Alhussam, 2024).The adoption of HIPs is seen as a strategic approach to ensuring that educational processes not only meet quality standards but also promote deeper learning outcomes. True educational quality extends beyond content delivery to include interactive, inclusive, and performance-based learning environments .
HIPs such as undergraduate research and collaborative learning allow students to actively construct knowledge through real-world applications, reinforcing the meaningfulness and impact of the learning experience (Hodge, 2024). This research considers educational quality as the primary dependent variable, focusing on how HIPs, from the perspective of faculty, can be leveraged to enhance the overall effectiveness and relevance of academic programs.
Many change projects go beyond organisational boundaries, for example when they concern sustainable value chain processes across companies, business process outsourcing (e.g. in the area of facility management) or other relationships between joint projects with partners. This is also the case for many secondary processes of hospitals (e.g. operation maintenance, laundry, cleaning or catering services) which are usually (partly) provided by hospital owned subsidiaries or external service providers (Schröter 2017).
In these inter-organisational contexts, change is more difficult to handle (Grossmann et al., 2013). Touboulic and Walker (2015) point out that cooperation between partners is essential. A collaborative style in the business relationship between core business and service provider is associated with better opportunities for increased quality, continuous improvement processes and adequate reactions on innovation demands (Jensen, 2022; Lok & Baldry, 2016; Atkins & Brooks, 2009). Jensen (2019, 2022) additionally emphasizes - for the case of facility management institutions - the importance of stakeholder and relationship management for enabling facility management institutions to contribute to core businesses' sustainability actions.
There are some studies in the area of Integrated Care, especially in the National Health Service of the United Kingdom or healthcare networks in general where change processes transcend organisational borders. Some studies just repeat factors already mentioned for change processes in single organisations (e.g. Cresswell et al., 2020; Nuño-Solinís, 2017). Other studies, however, are spotlighting the inter-organisational aspects of change: For example, Bhat et al. (2022) underline the importance of formal and informal arrangements that enable trust and collective relationships to develop between organisations. Auschra (2018) pinpoints to obstacles for change at the inter-organisational level, for example, insufficient leadership and coordination, differences in goals and approaches in the collaboration, incompatible organisational structures, imbalances of power, conflicts and a lack of contact persons with well-defined roles.

3. Study Hypotheses

The following sub hypotheses are developed in order to achieve the primary goal of this study at Northern Border University:

Main hypotheses: High-impact educational practices have a positive impact on the quality of the educational process.
Based on the five practices, the hypothesis will be divided into the following five sub-hypotheses:
H1: First-year experiences (FYE) have a positive impact on the quality of the educational process at NBU.
H2: community learning Practice (CBL) has a positive impact on the quality of the educational process at NBU.
H3: Faculty member guide (FGHips) has a positive impact on the quality of the educational process at NBU.
H4: undergraduate researches (UR) have a positive impact on the quality of the educational process at NBU.
H5: Common Intellectual Experiences (CIEs) have a positive impact on the quality of the educational process at NBU.

4. Methodology

The study adopted a descriptive research design to explore foundational knowledge related to sustainable practices and sustainable development, particularly as they pertain to the study's core variables and problem statement. A quantitative approach was utilized, with data collected through a structured questionnaire developed founded on a thorough go over of important sources. To analyze the gathered information and assess the relationships among the study constructs, the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique was employed.
Study Population and Sample

This study employed PLS-SEM due to its suitability for small sample sizes and its alignment with the study's analytical needs. The survey was specifically designed for professors at Northern Border University. examining the relationship between five high-impact educational practices and the quality of the educational process. The model design, with five paths leading to one dependent variable, ensured 78% statistical power for detecting moderate effect sizes at a 5% error margin.

5. Data collection

To collect the necessary data, a structured questionnaire survey was administered, as it was considered the most appropriate tool for capturing the perceptions of faculty members regarding high-impact educational practices at Northern Border University (NBU). The survey was launched on March 1st, 2024, and remained open for a duration of two months. In order to ensure content validity, the questionnaire items underwent expert review and a pilot test was conducted. Feedback from experts was incorporated to refine and enhance the clarity and relevance of the items. All constructs in the instrument

were measured using multi-item scales based on a 5-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

A total of 86 valid responses were received out of 98 distributed questionnaires, resulting in a response rate of approximately 87.7%.

6. Data analysis and Findings

The study began with descriptive statistics to explore the dataset and check for missing values, outliers, and distribution normality. No missing or duplicate entries were found, and data appeared clean despite some deviation from normality. As PLS-SEM is robust to non-normal data, no transformations were applied. A bootstrapping procedure with 5,000 resamples was conducted using Smart PLS to assess data stability. The analysis proceeded with evaluation of the measurement and structural models, following established guidelines.

Assessing the Measurement Model's Reliability:

It describes a methodical process for verifying the measurement model by assessing its validity and reliability in the manner described below:

Evaluating the Reliability of Measurement Model:

Three rounds were carried out in this study for evaluating the measurement model's reliability to get acceptable Cronbach alpha, Composite Reliability, and AVE measurement values. Weak indications should be eliminated when running the PLS algorithm again.

CBL7, CIEs5 ,UR1,UR2 FGHips1 and FY1 met the required factor loading threshold of 0.707, as presented in Table 1 and illustrated in Figure 1..

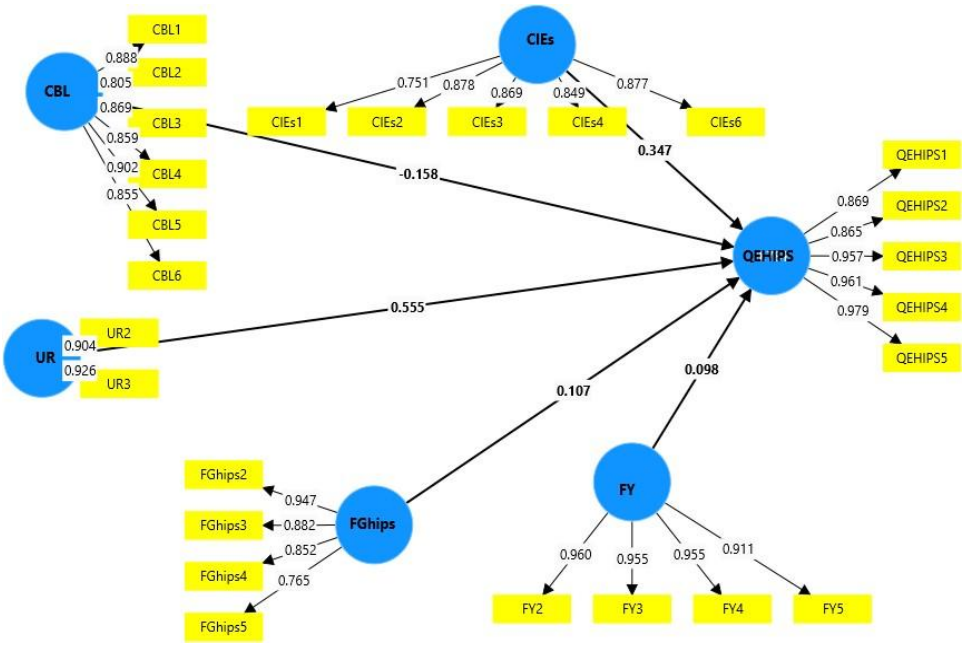

Figure 1: Structural Representation of the Measurement Model
Adapted from Smart PLS 4.0 Output

Table 1: Measurement model reliability and validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CBL	0.938	0.998	0.946	0.746
CIEs	0.902	0.926	0.926	0.716
FGhips	0.891	0.939	0.921	0.746
FY	0.961	1.016	0.971	0.894
QEHIPS	0.959	0.960	0.968	0.860
UR	0.806	0.815	0.911	0.837

Source: Smart PLS 4.0

Every variable has Composite Reliability values, Cronbach's Alpha is above 0.7, indicator loadings are over 0.70 thresholds, and all AVE values of the variables and indicators are above the necessary value of 0.5, according to the data in Table 1 and Figure 1. Convergent validity, composite reliability, and indicator reliability of the measurement model are then accepted. After the iteration procedure is finished, the final measurement model should be examined for cross loading values produced by the third iteration and discriminant validity using the Fornell-Larcker Criterion.

Assessing the Measurement Model's Validity

A variable's indicators should be able to be differentiated from those of another variable in order to maintain discriminant validity:

Table 2: Fornell-Larcker Criterion test results

	CBL	CIEs	FGhips	FY	QEHIPS	UR
CBL	0.864					
CIEs	0.630	0.846				
FGhips	0.548	0.786	0.864			
FY	0.879	0.326	0.302	0.945		
QEHIPS	0.455	0.799	0.726	0.226	0.928	
UR	0.449	0.783	0.725	0.218	0.856	0.915

Source :PLS-SEM 4

For every variable on the diagonal and in the highlighted cells, Table 2 shows the square root of the AVE value, along with the correlations between the variables. The correlation between a chosen variable and every other variable is less than each variable's square root of the AVE value. As a result, the measurement model's discriminant validity is verified.

Evaluation of the Structural model

By defining which variables are connected to one another and the type of relationship between them, the Structural Model uses structural theory. Regression coefficients are a way to express these correlations. Based on the data gathered from the target population, the outcomes of this model fit enable us to compare theory with reality.

Evaluating the model connections' importance and pertinence

The proposed associations were tested using the Path Coefficients test, the bootstrapping process in this investigation produced 5000 samples, which were then utilized to calculate

t-values with a two-tailed test at a significance level of 5%. The Path Coefficients and corresponding t-values are shown in Table 3 and Figure 2 below.

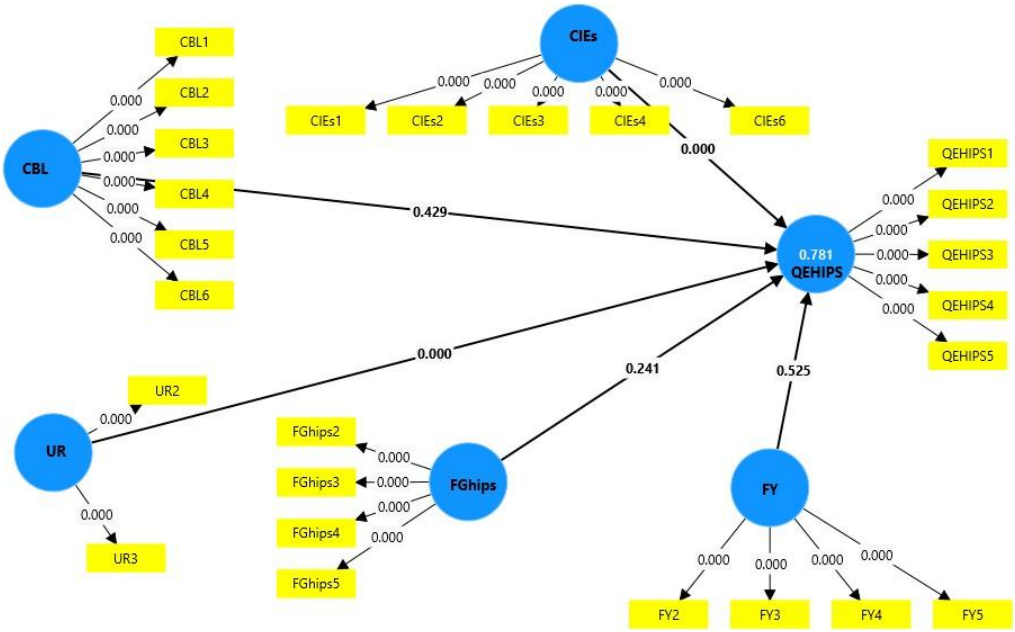

Figure 2: The research model's PLS Bootstrapping (t-values)
Source :*SEM_PLS 4.0*

Table 3: Testing Hypotheses

Pathway	Hypothesis	Direct Effect				
		Confidence Period 95%		t	P_ Value	Hypothesis Supported
		2.5%	97.5%			
CBL -> QEHIPS	H1	-0.505	0.293	0.791	0.429	Not Supported
CIEs -> QEHIPS	H2	0.127	0.474	3.876	0.000	Supported
FGhips -> QEHIPS	H3	-0.048	0.321	1.172	0.241	Not Supported
FY -> QEHIPS	H4	-0.256	0.355	0.636	0.525	Not Supported
UR -> QEHIPS	H5	0.481	0.660	12.156	0.000	Supported

Source :*SEM_PLS 4.0*

According to Table 3 and Figure 2, every Path Coefficient in the study's sample is important, with the exception of the paths for H1, H3, and H4. The Bootstrapping

findings verified this, with each path's t-statistics being more than 1.96 at the 5% significance level. Table 3 and Fig. 2 demonstrate a favorable correlation between the quality of educational through hips and only two of high impact educational practices. The anticipated association between the quality of education through hips and the hypo while H5, results revealed that the proposed relationship between the quality of educational through hips and hypotheses of university research H5 was supported (t-Statistics = 12.156, p=0.000) because t-statistic is greater than 1.96 and P-Value is less than 0.05.thesis of community-based learning was not supported (t-Statistics = 0.791, p=0.429) since the t-statistic is less than 1.96 and the P-value is more than 0.05. Furthermore, we found a strong association between the quality of education through hips and the hypothesis of common intellectual experiences; H2 was supported (t-Statistics = 3.876, p=0.000) because the t-statistic was greater than 1.96 and the P-value was less than.05. Furthermore, when Hypothesis H3 was tested, this study discovered that there is no significant relationship between the quality of education through hips and the faculty guide for hips practices (t-Statistics = 1.172, p = 0.241) since the t-statistic is equal. It suggests that the practice of using a faculty guide for hips has no significant relationship with the quality of instruction delivered through hips. As a result, Hypothesis H3 is unsupported. This hypothesis, like the preceding one, was not supported. Furthermore, this study discovered that there is no significant relationship between educational quality through hips and first-year experience (t-statistic = 0.636, p 0.525) since the t-statistic is equal to 0.636. It demonstrates that first-year experience has no meaningful association with educational quality through hips. As a result, hypothesis H4 is not supported, but H5, data demonstrated that the predicted association between the quality of education through hips and hypotheses of university study H5 was supported (t-Statistics = 12.156, p=0.000). The t-statistic exceeds 1.96, while the P-value is below 0.05.

EffectSizeF2

The effect size (F2) can be used to analyze the magnitude and influence of external latent variables on endogenous latent variables. According to the impact size value, tiny, medium, and large effect sizes would be represented by values greater than 0.02, 0.15, and 0.35, respectively. The effect size F2 of each dependent variable on the independent variable is displayed in the next table:

Table 4: Size of Effect F2

Dependent variable → Independent variable	The quality of educational through hips
CBL -> QEHIPS	0.011
CIEs -> QEHIPS	0.106
FGhips -> QEHIPS	0.018
FY -> QEHIPS	0.006
UR -> QEHIPS	0.49

Source :*SEM_PLS 4.0*

With this, Common intellectual experiences, university research has a large effect size on the quality of educational through hips (f2=0.106, 0.489) respectively. With a f2=0.489

value, the university study had the biggest impact size. However, the rest of variables have a small effect size on the quality of educational through hips as shown in table 4.

7. Discussion

This study explored the impact of five High-Impact Educational Practices (HIPs)Community-Based Learning (H1), Common Intellectual Experiences (H2), Faculty Guidance (H3), First-Year Experiences (H4), and Undergraduate Research (H5)—on educational quality from faculty perspectives at Northern Border University (NBU). The results showed significant positive effects only for Common Intellectual Experiences and Undergraduate Research.

The researchers recommend that future research expand on how institutional alignment and faculty engagement can be used as mediators of the effectiveness of these practices.

As highlighted in studies by (Kipasika, 2024), institutional alignment—where educational practices are closely tied to the mission, culture, and strategic goals of the institution—plays a crucial role in the success of HIPs. In the context of Northern Border University (NBU), as well as other higher education institutions, the integration of HIPs into the broader institutional framework is vital. When these practices are aligned with the institution's objectives, such as fostering a competitive workforce under Vision 2030 in Saudi Arabia, they are more likely to be impactful. This alignment ensures that faculty members are not only encouraged to adopt these practices but also have the necessary institutional support, resources, and recognition to execute them effectively.

The non-significant finding for **Community-Based Learning (H1)** contrasts with much of the literature (Compare, 2024), (Baxter, 2024) notably emphasize service-learning as vital for student engagement and civic responsibility. A plausible explanation for the discrepancy is that community-based projects at NBU might lack depth, proper institutional integration, or faculty buy-in, especially in e-learning environments, thus diminishing their perceived educational value.

Research, such as that by (Do, 2024) has long supported the effectiveness of Community-Based Learning and First-Year Experience programs, particularly in fostering student engagement, retention, and academic success. These programs typically provide students with opportunities for real-world learning and early academic guidance, which are crucial for their transition into higher education. However, the context in which these practices are implemented can significantly affect their outcomes. In the case of Saudi Arabia, as highlighted in (Akour, 2022), the rapid digital transformation and shifting educational paradigms require that traditional models be adapted to fit the specific needs and challenges posed by the digital environment. For instance, Community-Based Learning (CBL), which traditionally relies on face-to-face engagement with local communities, may face challenges in a digital or hybrid learning environment. While CBL has proven successful in contexts where direct interaction and community engagement are central, its effectiveness in a digital or remote setting can be limited unless the practice is carefully adapted to leverage virtual community interactions or projects that still meet the pedagogical goals of civic responsibility and engagement.

(Rakuasa, 2024) emphasized that for CBL to be effective, it must be deeply integrated into the local cultural and community contexts, something that may require a shift in how it is conceptualized in the digital age.

Similarly, the First-Year Experience (FYE) programs, which are often built around in-person mentorship, academic support, and peer collaboration, may also face difficulties in a digital or hybrid environment, particularly if they are not tailored to the specific needs of students in Saudi Arabia.

The lack of significant impact found in this study may therefore suggest that, in the context of Saudi Arabia's ongoing digital transformation, these HIPs need to be reimagined to address both the technological and cultural shifts occurring in the educational landscape.

Common Intellectual Experiences (H2) aligned strongly with existing literature. Faculty perceptions at NBU resonated with Kuh's framework, affirming that coherent (Grant, 2018), shared academic experiences strengthen student engagement and foster interdisciplinary learning. This success likely reflects effective policy and cultural alignment, making it a highly impactful practice within the university's educational strategy.

The lack of significance in **Faculty Guidance (H3)** diverged from global evidence, which consistently highlights mentorship's role in academic success (VanWyngaarden, 2024). This divergence might stem from NBU's informal or minimal mentoring structures. Mentoring might exist but may not be intensive or structured enough to be perceived as high impact, underscoring the need for institutionalized, structured mentorship programs to leverage its full potential.

Similarly, **First-Year Experiences (H4)** were unexpectedly ineffective according to faculty perceptions, contradicting prevalent research advocating robust first-year programming (Marten, 2025). Potential reasons include limited implementation quality, minimal faculty involvement, cultural expectations, or insufficient adaptation of international models to local needs. Enhancing the structure, depth, and faculty engagement in first-year programs could be key to realizing their widely reported benefits.

Conversely, **Undergraduate Research (H5)** demonstrated the strongest significant positive impact, fully aligning with extensive prior research such as (Guo, 2025) , (Balleisen, 2024). Faculty at NBU likely observed tangible outcomes such as enhanced critical thinking, practical problem-solving, and deeper student engagement. This practice benefited from strong institutional support, aligning closely with Saudi Arabia's Vision 2030 strategic emphasis on research excellence, thus reinforcing its perceived educational value.

Overall, these findings highlight that the effectiveness of HIPs heavily depends on implementation quality, cultural relevance, and faculty engagement. Policymakers at NBU and similar institutions should focus on strategically enhancing HIPs that show clear benefits (common intellectual experiences, undergraduate research) while critically reviewing and adjusting the others (community-based learning, faculty guidance, first-year experiences) for greater alignment and effectiveness within local contexts.

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