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Seeding Innovation Culture in Online Flexible Distance Learning Higher Education Institutions

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Abstract

This study endeavours to assess the intricate relationships between organizational culture perceived behavioral control attitude, and the intention to embrace an innovation culture within the context of online distance learning (ODL) higher education institutions in Malaysia. The significance of these findings lies in their potential to empower ODL institutions in enhancing employee performance through the cultivation of an innovation culture, an imperative for their long-term viability and sustainability. The research framework, constituting two exogenous variables (organizational culture and perceived behavioral control), incorporates attitude as a mediator and intention as an endogenous variable. Primary data was meticulously collected through a survey questionnaire adapted from prior studies and disseminated via email. Non-probability purposive sampling was employed due to the absence of an available sample frame. The study meticulously analyzed 316 pristine questionnaires out of the 333 received, representing a commendable 86.5% response rate. The empirical results affirm all proposed hypotheses, establishing the considerable impact of organizational culture and perceived behavioral control on intention, with attitude serving as a pivotal mediator. This study underscores the crucial role of attitude in mediating between exogenous and endogenous variables. The proposed model demonstrates a high degree of predictive relevance, as validated by statistical analyses using PLS_predict and the Cross-Validated Predictive Ability Test (CVPAT). Every direct and indirect relationship hypothesis receives robust support. In sum, this study not only contributes valuable insights into the factors influencing the intention to adopt an innovation culture in ODL higher education institutions but also provides a robust model for understanding and predicting these intricate relationships.

Keywords: Organizational Culture, Perceived Behavioral Control, Attitude, Intention, Innovation Culture

Introduction

In the global landscape of higher education, there is a growing imperative to cultivate an innovation culture within Online Flexible Distance Learning Institutions. This involves strategically seeding the intention to adopt innovative practices and fostering a dynamic environment that transcends geographical boundaries (Faqih, 2020). As these institutions embrace the digital realm, exploring and implementing novel approaches becomes pivotal (Budur et al., 2021). Understanding the global context allows for the exchange of best practices, ensuring that adopting an innovation culture enhances online learning experiences and contributes to the evolution of higher education worldwide (Baig et al., 2022). In the Malaysian education landscape, instilling the intention to adopt an innovation culture in Online Flexible Distance Education is crucial. By fostering a desire for innovation, these institutions can shape a dynamic learning environment that transcends geographical boundaries (Pramono et al., 2021). This step is essential in aligning online education with Malaysia's unique needs and challenges (Fuad et al., 2022). With a focus on an innovative culture, online learning platforms can become more responsive, integrating technology to enhance the learning experience (Khan et al., 2021). As a central hub for higher education, Malaysia can play a leading role in adapting an innovative culture to meet the expectations and needs of students in the digital era (Mustapha et al., 2021). The adoption of an innovation culture in Malaysian Online Flexible Distance Education encounters several challenges. Institutional resistance and a traditional mindset can impede the intention to innovate (Murad et al., 2020). Limited resources, both in terms of technology and funding, pose obstacles to the implementation of cutting-edge practices (Annamalai et al., 2021). Additionally, faculty members may require substantial training to embrace innovative teaching methodologies effectively. Balancing cultural nuances and diverse learner needs in the online realm adds complexity (Sirat et al., 2020). Overcoming these hurdles demands strategic planning, comprehensive professional development, and a commitment to cultivating an environment where the intention to adopt an innovation culture can flourish amidst the unique landscape of Malaysian online education (Cheah et al., 2023). The study on the intention to adopt an innovation culture in Malaysian Online Flexible Distance Education holds significant importance. Understanding this intention is pivotal for transforming traditional education systems into dynamic, technology-driven platforms. It addresses the urgent need to align Malaysian higher education with global advancements, ensuring competitiveness. Embracing innovation cultivates a responsive learning environment, enhancing the quality of online education. The findings can guide policymakers and institutions in implementing effective strategies, overcoming challenges, and fostering a culture of innovation. Ultimately, this study contributes to Malaysia's educational evolution, preparing students for a digitally connected future and establishing the nation as a leader in innovative online learning practices. This study aims to evaluate the direct and indirect relationship between organizational culture, perceived behavioral control, and intention to adopt innovation culture among employees in online flexible distance learning higher education institutions with attitude as a mediator.

Literature Review

Underpinning Theory

The Theory of Planned Behavior (TPB), crafted by Icek Ajzen (1991), stands as a cornerstone in social psychology, explicating human behavior through three pivotal constructs: attitude, subjective norm, and perceived behavioral control. Within the realm of the study

investigating the relationship between organizational culture, perceived behavioral control, attitude, and the intention to adopt an Innovation Culture in Online Flexible Distance Learning Higher Education Institutions (OFDLHEIs), the TPB emerges as an influential and robust theoretical framework. At its core, the TPB asserts that an individual's intention to engage in a behavior hinges on three key factors: attitude, subjective norm, and perceived behavioral control. In the context of OFDLHEIs, attitude encapsulates an educator's nuanced evaluation—positive or negative—of embracing an innovation culture, intricately shaped by perceptions of potential benefits or challenges. Perceived behavioral control in TPB aligns with the faculty and staff's perception of the ease or difficulty in adopting an innovation culture, incorporating the pivotal influence of organizational support, available resources, and leadership dynamics in fostering or impeding innovative practices. Furthermore, the TPB recognizes organizational culture as a pervasive force, actively contributing to the formulation of attitudes and perceived behavioral control. The shared values, norms, and practices within the educational institution profoundly mold individual beliefs regarding the practicality and desirability of embracing an innovation culture.

Relationship between Organizational Culture, Attitude, and the Intention

The relationship between organizational culture, attitude, and the intention to adopt an innovation culture in Online Flexible Distance Learning Higher Education Institutions (OFDLHEIs) is a complex and integral aspect of educational development (Saliba, 2023). Organizational culture plays a pivotal role as it shapes the collective mindset, values, and norms within institutions (Budur et al., 2023). A culture that encourages openness, experimentation, and adaptability is more likely to foster innovation. Attitudes of individuals within these institutions are key determinants of their willingness to embrace innovation (Bushra & Devi, 2023). Positive attitudes towards change, coupled with a culture that supports risk-taking and experimentation, contribute to the intention to adopt an innovation culture (Hmoud et al., 2023). Conversely, resistance or scepticism within the organizational culture can hinder such intentions. The intention to adopt an innovation culture is influenced by the interplay between organizational culture and individual attitudes (Bijianaram et al., 2023). Leaders play a crucial role in shaping and transmitting the organizational culture, influencing the attitudes of faculty and staff. Effective communication, support systems, and recognition of innovative efforts contribute to a positive attitude and foster the intention to adopt innovative practices (Odat et al., 2023). Understanding this intricate relationship is essential for OFDLHEIs seeking to enhance their educational practices. Institutions must assess their existing culture, address any barriers to innovation, and promote attitudes that embrace change (Singh et al., 2021). A harmonious alignment of organizational culture, positive attitudes, and the intention to adopt innovation paves the way for transformative advancements in online flexible distance learning in higher education (Jamali et al., 2022). Hence, the following hypotheses were proposed for this study:

H1: There is a relationship between organizational culture and attitude in the intention to adopt an innovation culture among employees in online flexible distance learning higher education institutions.

H2: There is a relationship between organizational culture and the intention to adopt an innovation culture among employees in online flexible distance learning higher education institutions.

H3: There is a mediating effect of attitude on the relationship between organizational culture and the intention to adopt an innovation culture among employees in online flexible distance learning higher education institutions.

Relationship between Organizational Culture, Attitude, and the Intention

The interplay between perceived behavioural control, attitude, and the intention to adopt an innovation culture in Online Flexible Distance Learning Higher Education Institutions (OFDLHEIs) is a critical facet of educational transformation (Twum et al., 2022). Perceived behavioural control refers to an individual's perception of their ability to perform a behavior successfully, and it plays a crucial role in shaping the intention to adopt innovation (Saleh et al., 2022). When faculty and staff members perceive that they have the necessary skills, resources, and support to engage in innovative practices, their perceived behavioral control is high (Singh et al., 2021). This, in turn, positively influences their attitude towards innovation adoption. A positive attitude, characterized by openness, enthusiasm, and a belief in the benefits of innovation, contributes significantly to the intention to adopt an innovation culture. Leadership within OFDLHEIs plays a central role in influencing perceived behavioral control and fostering positive attitudes (Dubey & Sahu, 2022). Creating a supportive environment, offering training programs, and providing resources enhance the perceived control individuals have over adopting innovative practices, shaping their attitudes in favor of innovation (Khong et al., 2023). Understanding and addressing perceived behavioral control, attitude, and intention to adopt an innovation culture are essential for effective change management within OFDLHEIs (Rudhumbu, 2021). Institutions that recognize and actively cultivate these factors are better positioned to navigate the challenges of integrating innovation into flexible online distance learning, ultimately enriching the educational experience for both educators and learners (Al-Mamary et al., 2023). Therefore, the following hypotheses were proposed for this study:

H4: There is a relationship between perceived behavioral control and attitude in the intention to adopt an innovation culture among employees in online flexible distance learning higher education institutions.

H5: There is a relationship between perceived behavioral control and the intention to adopt an innovation culture among employees in online flexible distance learning higher education institutions.

H6: There is a relationship attitude and the intention to adopt an innovation culture among employees in online flexible distance learning higher education institutions.

H7: There is a mediating effect of attitude on the relationship between perceived behavioral control and the intention to adopt an innovation culture among employees in online flexible distance learning higher education institutions.

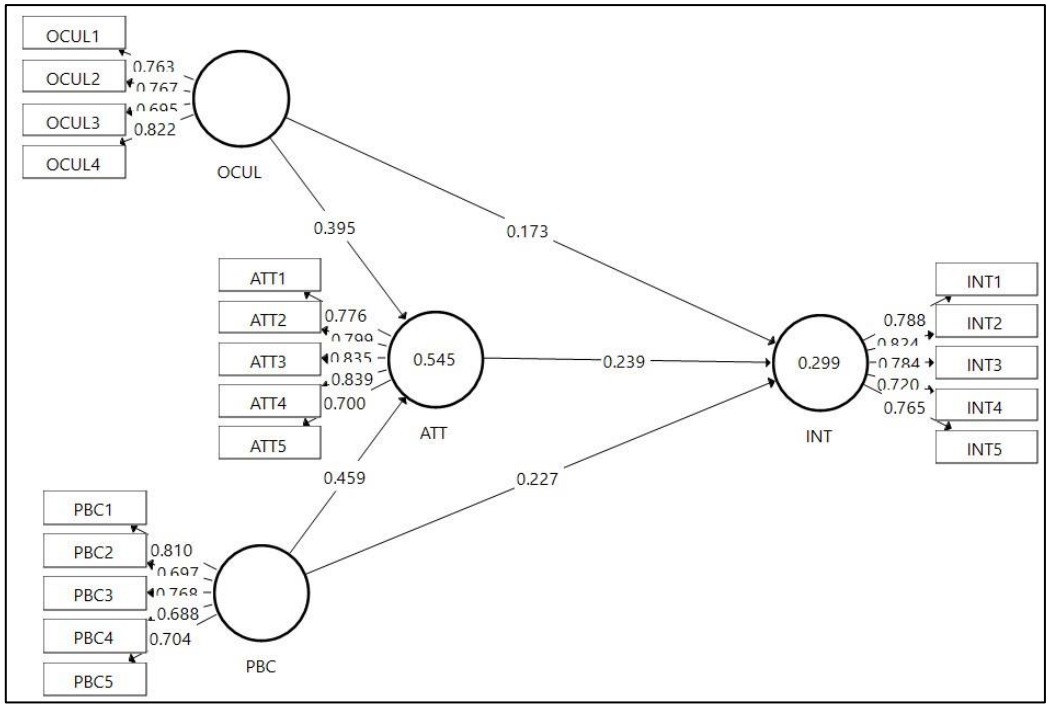

Figure 1: Research Model

Note: OCUL=Organizational Culture PBC=Perceived behavioural Control ATT=Attitude INT=Intention

Methodology

The present study focused on employees in Malaysian online distance-learning higher education. Employing a survey instrument for primary data collection, measurement items were meticulously derived from prior studies for reliability and validity. Utilizing purposive sampling due to the lack of a sample frame, survey questionnaires were distributed via email. With a total of 19 observed variables, exogenous and endogenous variable measurement items were incorporated. The organizational culture construct, derived from Van den Berg and Wilderm (2004), comprised four measurement items. Based on Ajzen & Kruglanski (2019), the attitude and intention constructs had five measurement items. Perceived behavioral control, by Li et al. (2020), consisted of five measurement items. Employing a five-point Likert scale, responses ranged from strongly disagree to strongly agree. Out of 385 distributed questionnaires, a robust 86.5% response rate was achieved, allowing for analysis using structural equation modeling (SEM). Following data screening and outlier elimination, 316 clean questionnaires were ready for analysis. The study utilized partial least squares structural equation modeling (PLS-SEM) to explore relationships in the proposed model, aligning with (Hair et al., 2022). PLS-SEM, recommended for both explanatory and predictive goals, is suitable for causal-predictive model analysis (Wold, 1982). This methodology, particularly beneficial for developing and refining theories (Ritcher et al., 2016), can estimate reflective, formative, and complex structural models (Hair et al., 2022; Hair et al., 2019; Wold, 1982). Researchers from diverse social science fields, including human resource management, higher education, information systems, and marketing, have employed PLS-SEM for empirical analysis (Ringle et al., 2020; Ghasemy et al., 2020; Chin et al., 2020; Liu et al., 2021). The evaluation results in this study were estimated and modeled using SmartPLS4, as endorsed by (Ringle et al., 2022).

Data Analysis

Respondents Profile

The data indicates that within the group, males make up 59% (188 individuals), and females constitute 41% (128 individuals). This suggests a slight gender imbalance, with males being more predominant. In terms of age distribution, the data is divided into five groups. Individuals under 30 years old comprise the smallest portion, representing only 6% (18 individuals). The largest age group falls within the range of 31 to 40 years old, accounting for 42% (132 individuals). The subsequent age groups show a gradual decline, with 36% (113 individuals) falling between 41 to 50 years old, 13% (41 individuals) between 51 to 60 years old, and the remaining 4% (12 individuals) being over 60 years old. The data further classifies individuals into two categories: academicians and non-academicians. Academicians constitute the majority, making up 69% (217 individuals) of the group, while non-academicians account for the remaining 31% (99 individuals). The distribution of years of service is presented in various brackets. The majority of individuals, 30% (94 individuals), have served for 11 to 15 years. This is followed closely by individuals with 16 to 20 years of service, making up 22% (68 individuals). Individuals who have served for 6 to 10 years represent 27% (85 individuals). The remaining brackets show a decreasing trend, with fewer individuals serving for longer periods. In terms of educational qualifications, the dataset provides information on five categories: certificate, diploma, bachelor's degree, master's degree, and doctorate. The highest percentage of individuals holds a doctorate, comprising 31% (98 individuals), followed by individuals with a master's degree at 26% (81 individuals). Bachelor's degrees account for 20% (63 individuals), while diplomas and certificates represent 13% (41 individuals) and 10% (33 individuals), respectively.

Common Method Bias

Kock (2015) proposed that the identification of common method bias becomes apparent when the variance inflation factor (VIF) surpasses 3.3. Common method bias arises when variations in respondents' responses are ascribed to the measurement instrument rather than the actual predispositions the instrument seeks to unveil. To assess the presence of collinearity and common method bias, a thorough collinearity test was conducted. The results of the factor-level analysis, outlined in Table 1, revealed that all variance inflation factors (VIF) remained below the designated threshold of 3.3. This confirmation indicates the absence of any issues related to common method bias within the model.

Table 1
Full Collinearity

	MINT	MOC	MATT	MPBC
MINT		1.368	1.356	1.35
MOC	1.601		1.393	1.622
MATT	2.116	1.857		1.736
MPBC	1.759	1.806	1.45	

Measurement Model

In this study, the evaluation of both first-order and second-order measurements followed the measurement assessment technique proposed by Hair et al. (2017). The primary emphasis was on identifying items with loadings below the 0.7 threshold. Construct reliability and validity analysis revealed that all constructs exhibited Average Variance Extracted (AVE)

values exceeding 0.5, ranging from 0.540 to 0.627 (Table 2), establishing convergent validity (Hair et al., 2017). Moreover, composite reliability for all constructs surpassed 0.7, ranging from 0.847 to 0.893, and Cronbach's alpha values exceeded 0.7, ranging from 0.761 to 0.850 (Table 2). To ensure discriminant validity, cross-loadings were initially assessed to guarantee the effective representation and measurement of each construct by its corresponding items (Table 3). Subsequently, the Heterotrait-Monotrait (HTMT) ratio, recommended for evaluating discriminant validity in Variance-Based Structural Equation Modeling (VB-SEM) (Henseler et al., 2015), was employed. The HTMT ratios for the constructs, along with the original sample, are presented in Table 4. These values were below the 0.85 threshold, and the bias-corrected and accelerated bootstrap confidence intervals remained below 1, confirming adherence to discriminant validity. This comprehensive analysis fortifies confidence in the distinctiveness of the constructs and their effectiveness in measuring various facets of the investigated phenomenon.

Table 2
Construct Reliability & Validity

	CA	CR	AVE
ATT	0.850 (0.815, 0.880)	0.893 (0.871, 0.912)	0.627 (0.576, 0.675)
INT	0.836 (0.800, 0.865)	0.884 (0.861, 0.903)	0.604 (0.554, 0.649)
OCUL	0.761 (0.705, 0.804)	0.847 (0.813, 0.872)	0.582 (0.522, 0.631)
PBC	0.780 (0.739, 0.825)	0.854 (0.827, 0.878)	0.540 (0.490, 0.589)

Note: CI 95% bootstrap confidence interval

Table 3
Cross Loadings

	ATT	INT	OCUL	PBC
ATT1	**0.776**	0.319	0.482	0.450
ATT2	**0.799**	0.376	0.421	0.530
ATT3	**0.835**	0.508	0.598	0.587
ATT4	**0.839**	0.400	0.469	0.554
ATT5	**0.700**	0.318	0.463	0.440
INT1	0.429	**0.788**	0.392	0.417
INT2	0.400	**0.824**	0.354	0.389
INT3	0.323	**0.784**	0.320	0.305
INT4	0.360	**0.720**	0.293	0.309
INT5	0.395	**0.765**	0.308	0.379
OCUL1	0.441	0.331	**0.763**	0.293
OCUL2	0.381	0.255	**0.767**	0.300
OCUL3	0.476	0.357	**0.695**	0.488
OCUL4	0.561	0.357	**0.822**	0.389
PBC1	0.524	0.334	0.358	**0.810**
PBC2	0.410	0.333	0.326	**0.697**
PBC3	0.439	0.320	0.354	**0.768**
PBC4	0.512	0.410	0.355	**0.688**
PBC5	0.494	0.309	0.401	**0.704**

Table 4
Hetrotrait-Monotrait (HTMT) Ratio

	ATT	INT	OCUL
INT	0.572 (0.451, 0.667)		
OCUL	0.750 (0.651, 0.835)	0.529 (0.400, 0.646)	
PBC	0.786 (0.703, 0.856)	0.567 (0.452, 0.670)	0.621 (0.510, 0.721)

Note: CI 95% bootstrap confidence interval

Path Model

This study assessed the structural model by simultaneously examining pathway coefficients (β) and coefficients of determination (R^2) using the methodology outlined by Hair et al. (2017). The approach utilized the Partial Least Squares (PLS) technique with 5000 subsamples to determine the significance level of path coefficients. The findings of hypothesis tests, which include confidence intervals, path coefficients (beta), corresponding t-statistics, and p-values, are presented in Table 5. This comprehensive analysis offers valuable insights into the significance and resilience of the relationships among the variables integrated into the structural model. Hypothesis 1 (H1) posited a direct relationship between organizational culture (OCUL) and attitude (ATT). The results strongly support this hypothesis, with a significant positive beta coefficient of 0.395, a T-statistic of 7.640, and a p-value of 0.000. This implies a robust association between organizational culture and the respondents' attitudes. Therefore, H1 is supported. Moving to Hypothesis 2 (H2), which proposed a direct relationship between organizational culture (OCUL) and intention (INT), the findings are consistent with this expectation. The positive beta coefficient of 0.173, T-statistics of 2.718, and a p-value of 0.007 all underscore the statistically significant connection between organizational culture and intention. Hence, H2 is supported. Hypothesis 3 (H3) extended the analysis by considering the mediating relationship between organizational culture (OCUL), attitude (ATT), and intention (INT). The results confirm this mediating association, with a beta coefficient of 0.094, T-statistics of 3.240, and a p-value of 0.001, providing compelling evidence for this multi-step relationship. Given that, H3 is supported. Hypothesis 4 (H4) examined its direct influence on attitude (ATT). The results strongly support this hypothesis, revealing a substantial positive beta coefficient of 0.459, T-statistics of 9.843, and a p-value of 0.000, indicating a robust association between perceived behavioral control and attitude. Therefore, H4 is supported. Hypothesis 5 (H5) extended the analysis to the relationship between perceived behavioral control (PBC) and intention (INT). The results support this hypothesis, with a positive beta coefficient of 0.227, T-statistics of 3.369, and a p-value of 0.001, suggesting a significant influence of perceived behavioral control on intention. Hence, H5 is supported. Considering the direct relationship between attitude (ATT) and intention (INT), as proposed in Hypothesis 6 (H6), the findings affirm this hypothesis. The positive beta coefficient of 0.239, T-statistics of 3.207, and a p-value of 0.001 provide substantial evidence for the positive association between attitude and intention. Therefore, H6 is supported. Lastly, Hypothesis 7 (H7) delved into the mediating relationships among perceived behavioral control (PBC), attitude (ATT), and intention (INT). The results confirm this mediating association, with a beta coefficient of 0.110, T-statistics of 2.876, and a p-value of 0.004, underscoring the statistical significance of this multi-step relationship. Given that, H7 is supported. The empirical evidence strongly supports all hypotheses, validating the relationships posited within the model. These robust findings enhance our understanding of

the intricate interplay among organizational culture, perceived behavioral control, attitude, and intention within the context under investigation.

Effect sizes in this study were assessed using Cohen's criteria (1992) and categorized as small (0.020 to 0.150), medium (0.150 to 0.350), or large (0.350 or greater). The observed effect sizes in this study ranged from small (0.026) to large (0.352) (Table 5). The intrinsic value inflation rate (VIF) values in Table 5 were all below the more lenient threshold of 5, with the highest value being 2.196. This level of collinearity permits meaningful comparisons The endogenous construct demonstrated a noteworthy degree of explicated variance, with an R^2 value of 0.299 (Figure 1). Regarding the mediator, the model elucidated approximately 54.5% of the variability in the framework, as evidenced by an R^2 value of 0.545. An out-of-sample predictive analysis was conducted using the PLSpredict technique, following the methodology outlined by Shmueli et al. (2016, 2019) to evaluate the model's capacity for drawing conclusions and providing managerial recommendations. The Q2 forecasts in Table 6 reveal that PLS-SEM predictions surpass standard naive mean predictions, with values exceeding 0. Additionally, the Root Mean Square Error (RMSE) values associated with PLS-SEM predictions exhibit lower values than those from the Linear Model (LM) prediction benchmark in eight out of ten instances, emphasizing the predictive capability of the proposed model (see Table 6). These findings highlight the effectiveness of the structural model in generating accurate forecasts and providing valuable insights for managerial decision-making. The incorporation of the Cross-Validated Predictive Ability Test (CVPAT) by Hair et al. (2022) and its utilization alongside PLSpredicts for evaluation by Liengaard et al. (2021) contributes to the ongoing assessment of PLS-SEM model predictions. CVPAT, employing out-of-sample predictions, compares average loss values to two benchmarks: indicator averages (IA) and linear model (LM), with lower PLS-SEM loss values indicating superior predictive ability. The results in Table 7 validate the superiority of PLS-SEM, supported by lower average loss values, signifying robust predictive performance.

Importance Performance Analysis (IPMA), proposed by Ringle and Sarstedt (2016) and Hair et al. (2018), was utilized to evaluate the significance and effectiveness of latent variables in elucidating acceptance. The outcomes in Table 6 reveal that perceived behavioural control has the most substantial influence (0.337) on overall employees' intention, followed by organizational culture (0.267), social (0.260), and attitude (0.239). These figures indicate the relative importance of each latent variable within the intention context. Concerning performance, organizational culture achieved the highest score (66.584) on a scale of 0 to 100, indicating relatively robust performance, while perceived behavioural control garnered the lowest score (66.026), signifying a lower level of accomplishment. Despite its pivotal role in employee intention, perceived behavioural control displayed the weakest performance. In light of these findings, online flexible distance learning higher education institutions should prioritize efforts to enhance the perceived behavioural control among their employees, as elevating this aspect can consequently boost overall employees' intention to adopt an innovation culture.

Table 5
Hypotheses Testing Results, f^2 & Inner VIF

Hypotheses	Beta	T Statistics	P Values	f^2	Inner VIF	2.50%	97.50%	Decisions
H1: OCUL -> ATT	0.395	7.640	0.000	0.260	1.316	0.289	0.492	*Supported*
H2: OCUL -> INT	0.173	2.718	0.007	0.026	1.658	0.044	0.298	*Supported*
H3: OCUL -> ATT -> INT	0.094	3.240	0.001			0.041	0.154	*Supported*
H4: PBC -> ATT	0.459	9.843	0.000	0.352	1.316	0.359	0.542	*Supported*
H5: PBC -> INT	0.227	3.369	0.001	0.041	1.779	0.090	0.354	*Supported*
H6: ATT -> INT	0.239	3.207	0.001	0.037	2.196	0.091	0.377	*Supported*
H7: PBC -> ATT -> INT	0.110	2.876	0.004			0.041	0.188	*Supported*

Table 6
PLSpredicts

	PLS-RMSE	LM-RMSE	PLS-LM	Q^2_predict
ATT1	0.709	0.710	-0.001	0.279
ATT3	0.603	0.595	0.008	0.457
ATT4	0.714	0.722	-0.008	0.345
ATT5	0.656	0.662	-0.006	0.263
ATT2	0.710	0.714	-0.004	0.298
INT1	0.633	0.631	0.002	0.207
INT5	0.630	0.643	-0.013	0.153
INT3	0.679	0.682	-0.003	0.117
INT2	0.636	0.643	-0.007	0.177
INT4	0.702	0.712	-0.010	0.112

Table 7
Cross Validated Predictive Ability Test (CVPAT)

	Average loss difference	t value	p-value
ATT	-0.076	3.241	0.000
INT	-0.138	5.232	0.000
Overall	-0.102	5.147	0.000

Table 8
Importance-Performance Map Analysis (IPMA)

	Total Effect	Performance
ATT	0.239**	66.306
OCUL	0.267**	66.584
PBC	0.337**	66.026

Note: ** p<0.05 ATT=Attitude OCUL=Organizational Culture
PBC=Perceived Behavioural Control

Discussion & Conclusion

In propelling Online Flexible Distance Learning Higher Education Institutions (OFDLHEIs) towards an innovation-centric paradigm, a strategic focus on three pivotal components organizational culture, perceived behavioral control, and attitude emerges as central. The quest to enhance the intention to adopt an innovation culture is fundamentally rooted in the synergies and interdependencies among these elements. Organizational culture serves as the

bedrock, where leadership advocacy becomes the guiding force. Leaders, through active communication and recognition, mold a positive culture that inherently values innovation. Inclusive decision-making processes, as a facet of organizational culture, imbue employees with a sense of ownership and collective responsibility, fostering an environment where innovation is not just encouraged but is integral to the institution's identity. Perceived behavioral control and its empowerment strategies constitute the next strategic layer. Training programs tailored to develop skills pertinent to innovation, alongside resource allocation, bolster employees' perceived control over adopting innovative practices. Empowering them with knowledge and necessary resources not only breaks down barriers but also fortifies their belief in their ability to influence the adoption process. The role of attitude emerges as a crucial mediator in this transformative journey. Transparent communication channels, mentorship programs, and support networks contribute to cultivating positive attitudes among employees. Regular updates on innovation initiatives, coupled with mentorship opportunities, create an environment conducive to a positive attitude, positioning innovation as a collaborative and enriching endeavor. A sequential approach to change management complements the strategic fabric, ensuring that the introduction of innovation is phased, allowing employees to acclimate gradually. Feedback mechanisms, integral to the process, provide insights at each stage, minimizing resistance, reinforcing perceived behavioral control, and fostering positive attitudes towards innovation. Recognition and rewards, the final layer, are strategically aligned with the pillars of organizational culture, perceived behavioral control, and attitude. Recognition programs and career advancement opportunities are crafted to resonate with the positive cultural ethos, providing tangible incentives and reinforcing the link between innovation and professional growth. In synthesizing these strategies, OFDLHEIs can create a transformative environment that not only propels the intention to adopt an innovation culture but also ensures the efficacy and sustainability of these initiatives. The holistic approach, strategically woven around organizational culture, perceived behavioral control, and attitude, positions these institutions as pioneers in the evolving landscape of online flexible distance learning, ready to lead the charge in shaping the future of higher education.

Theoretical Implications

The theoretical implications of the aforementioned study on seeding the intention to adopt an innovation culture in Online Flexible Distance Learning Higher Education Institutions (OFDLHEIs) are profound, offering valuable insights and contributions to existing organizational and educational theories. The study, anchored in the Theory of Planned Behavior (TPB), underscores the applicability and robustness of this theoretical framework in understanding the complex dynamics of innovation adoption within the unique context of online education. Firstly, the study enriches the TPB by extending its application to the realm of OFDLHEIs, a context characterized by virtual interactions, remote collaboration, and diverse stakeholder engagement. The findings affirm the TPB's utility in explaining the intention to adopt innovation culture, shedding light on how attitudes, subjective norms, and perceived behavioral control collectively influence educators' and staff members' readiness to embrace innovative practices. Additionally, the study contributes to the organizational culture literature by highlighting the pivotal role of organizational culture as a pervasive force shaping attitudes and perceived behavioral control. It accentuates how shared values, norms, and practices within educational institutions influence individual beliefs about the feasibility and desirability of adopting an innovation culture, aligning with the broader discourse on the

impact of organizational culture on organizational behavior. Furthermore, the study introduces the mediator variable of attitude, enhancing the TPB's explanatory power by elucidating the psychological processes through which organizational culture and perceived behavioral control impact the intention to adopt an innovation culture. This nuanced understanding of the mediating role of attitude deepens our comprehension of the cognitive and affective mechanisms at play in the decision-making processes related to innovation adoption. In essence, the study not only reaffirms the relevance of established theories but also extends their boundaries, providing a more nuanced understanding of innovation adoption within the specific context of OFDLHEIs. The theoretical implications, therefore, transcend the immediate study and offer a valuable foundation for future research exploring the intricacies of innovation dynamics in the evolving landscape of online education.

Practical Implications

The practical implications of the study on seeding the intention to adopt an innovation culture in Online Flexible Distance Learning Higher Education Institutions (OFDLHEIs) are significant, offering actionable insights for educational leaders, administrators, and policymakers. First and foremost, the findings underscore the imperative for leadership in OFDLHEIs to actively advocate for and instill a positive organizational culture that champions innovation. This involves leaders communicating the importance of innovation, recognizing and rewarding innovative efforts, and fostering a collaborative and inclusive decision-making environment.

Practically, the study emphasizes the need for targeted training programs aimed at enhancing the skills of educators and staff in alignment with innovation requirements. By providing resources and support, institutions can empower their workforce, mitigating perceived behavioral control barriers and facilitating a smoother transition toward an innovation-centric culture. Furthermore, the identification of attitude as a crucial mediator underscores the significance of fostering a positive mindset toward innovation. Institutions can practically implement transparent communication channels, mentorship programs, and support networks to cultivate a positive attitude among employees, creating an environment conducive to innovation. In terms of organizational practices, the study encourages a phased approach to innovation implementation, allowing for gradual adjustments and iterative feedback loops. Recognition programs and career advancement opportunities can be strategically integrated to tangibly reinforce the link between innovation adoption and professional growth, motivating employees to actively engage in the process. The practical implications emphasize the need for a holistic and strategic approach, integrating leadership initiatives, targeted training, supportive organizational practices, and a positive cultural ethos to effectively seed and nurture an innovation culture in OFDLHEIs.

Limitations of the Study

While the study on seeding the intention to adopt an innovation culture in Online Flexible Distance Learning Higher Education Institutions provides valuable insights, certain limitations should be acknowledged. Firstly, the study relies on self-reported data, which may introduce response bias. Additionally, the cross-sectional nature of the research design limits the establishment of causal relationships. The study predominantly focuses on educators and staff, potentially overlooking the perspectives of other stakeholders. Furthermore, the generalizability of findings may be constrained as it pertains specifically to the context of OFDLHEIs in Malaysia. Despite these limitations, the study offers a foundational understanding of factors influencing innovation adoption in online education.

Suggestions for Future Studies

Future studies in the realm of seeding innovation culture in Online Flexible Distance Learning Higher Education Institutions could benefit from several avenues of exploration. Firstly, longitudinal research designs would enhance understanding by tracking the evolution of innovation culture over time. Additionally, a more expansive sample, including diverse stakeholders, could offer a comprehensive perspective. Comparative studies across different cultural and educational contexts would provide valuable insights into the generalizability of findings. Exploring the impact of specific interventions and strategies on innovation adoption could guide actionable recommendations. Lastly, investigating the influence of external factors, such as technological advancements, on innovation culture in online education, would contribute to a holistic understanding.

Conclusion

The study on seeding the intention to adopt an innovation culture in Online Flexible Distance Learning Higher Education Institutions underscores the paramount importance of organizational culture, perceived behavioral control, and attitude in shaping educators' and staff members' readiness for innovation adoption. Grounded in the Theory of Planned Behavior, the findings highlight the intricate dynamics influencing the intention to embrace innovation, emphasizing the mediating role of attitude. The study offers practical insights for OFDLHEIs by stressing the significance of leadership advocacy, targeted training, and a positive cultural ethos. While acknowledging its limitations, this research lays a foundational understanding for fostering innovation culture in the dynamic landscape of online education.

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