



Strategic Marketing through the Perspectives of Firm based Digital learning and Instruction-based Resilience in Vocational Instruction

S. Antony Sibi^{1*}, G.V. Venkatesh^{2*}

¹Dean-Academic; DMI - St. Eugene University, Zambia.

²Lecturer; Firm of Planning studies and Commerce; DMI - St. Eugene University, Zambia.

*Corresponding author(s):

DoI: <https://doi.org/10.5281/zenodo.21939571>

S. Antony Sibi, Dean-Academic, DMI - St. Eugene University, Zambia.

Email: antonsibivaz@gmail.com

G.V. Venkatesh, Lecturer, Firm of Planning studies and Commerce, DMI - St. Eugene University, Zambia.

Email: saaivenkatesh@gmail.com

Citation:

S. Antony Sibi and G.V. Venkatesh, (2026). Strategic Marketing through the Perspectives of Firm based Digital learning and Instruction-based Resilience in Vocational Instruction. International Journal of Multidisciplinary Research Transactions, 8(8), 91–107. <https://doi.org/10.5281/zenodo.21939571>

This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Accepted: 13 August 2026

Available online: 15 August 2026

Abstract

This study is an examination of digital learning by institute which mediates its requirement in strategic marketing in vocational instruction with mediating requirement of instruction-based resilience. It brings up the question of the requirement of digital learning in enhancing resilience for the attractiveness of institutions, market and integration in SDG 4. The method used in the study was quantitative study design with a population of administrators, faculty members and policy makers of vocational instruction institutions in this study, 390 people. The study shows that digital learning by institute can make a difference in the resilience of instruction and the marketing practice. Through the digital learning and market results, the connection may also be in meaningful, via instruction-based resilience, and means that resilience is stimulated by digital learning, which further enhances the marketing practices of the institutions. What is required are innovative practices and consequence digital learning to progress the visibility of programmes, the engagement of stakeholders and the attractiveness of institutions in the vocational instruction market.

Keywords: Strategic Marketing, Instruction-Based Resilience, Firm Based Digital Learning, Attractiveness, SDG 4.

1. Introduction

The information of the nexus across three disciplines: digital learning by institute (OL), strategic marketing (SM) and instruction-based resilience (EI) in the twenty starting century has been a strong determinant of attractiveness and enduring progression of the institutions, especially in the sphere of vocational instruction (VE) (Storonyanska et al., 2025). Competition for abilities labour has progressed in the globe, and it will be even tougher considering the rate of technological assimilation, firm needs agile and the advent of the information economy. Firms of VE are now vested with a leading position in the promotion of work orientation, entrepreneurship, and national productivity (Tian et al., 2023). The digital learning turnover of these institutions and the capacity to innovate instruction facility has a great consequence on these institutions' ability to practices their instruction-based facility in response to the demand of the labour market.

Page | 92

In instruction, conceptions of OL had been seen in the early planning conceptions associated to reinforce, attitude of the institution and agility observation (Şahin & Bilir, 2024). This then developed into an integrative theory that reflects the nexus across digital learning and SM while being attentive that “the firm angle must become aware of the agile markets in which it operates, which are marked by digital agility. Digital learning in VE not only nurture the institutional foresight, but also coordinate the marketing planning that communicates the institutional point, firm alliances based on nexus, and curriculum, teaching and digital learning resilience (Read & Olcott, 2025).

This chapter is well associated to the SDG 4. The support to the establishment of digital learning and digital learning (Artyukhova et al., 2025) is associated to the goals of SDG4.3 and SDG4.4. The current statistics propound the growing requirement of resilience in VE systems, guided by pronouncers. UNESCO has stated that in the last decade Procedural and VE and Training (TVET) requirement in institutions have grown by 19 per cent across the globe, led by a strong push towards digital learning to agile the program, and augment firm engagement (Prummer et al., 2023). OECD analysis shows that graduates of institutions which have embedded SM and digital resilience have a 3-fold higher rate of work orientation than graduates of “traditional” institutions. Based on to statistical sources, the agility digital learning leads to better adaptability, attitude of resilience in the institution (Moghaddam, 2024; Tian et al., 2023).

The issues with institutions are financial independence, out-of-date curriculum, inadequate digital infrastructure, and inadequate marketing intelligence and resilience planning. Moreover, the digital learning approach that works well in academia might not be suitable in angles where orientation towards the market and building nexuss with the building sector are especially desired (Huang et al., 2022).

The vacuums identified in the literature exist as well: few studies have been able to measure the mediation of EI across the digital learning practices of the firm and the outcomes of SM. The positive consequence of the institutionalisation of the resilience in VE to obtain enduring benefit in marketing is lesser known (Alhitmi et al., 2023). Furthermore, there is little foundation in the developing countries about how cultural, policy and structure environments consequence this nexus.

2. Background of Study

The pathway from instruction to employment is the pathway to economic progression and manpower training in the 21st century and VE has been proven to be an important instrument to help achieve it. Nevertheless, its triumph is more and more contingent upon the connection of OL, SM, and EI. Digital learning in VI used to be mostly about administration and keeping to the rules, with the focus on curriculum facility (Harder & Schumann, 2025). Over time, the scope of globe dedication, digitalisation and information-based economies has led to higher expectations from pronouncers as they are expected to be strategic thinkers, innovators in instruction services, and possessing the ability to sell their institutions and attract both student and firm partners (Weshahi, 2022). The supply-driven vocational training theory is gradually replaced by the market-oriented theory (Yu et al. 2025).

In most countries, VE has become a term that implies institutional agile. For instance, one of the international theory for the incorporation of digital learning, resilience and market focused initiatives. Overall, the youth participation rate in VE in Germany is high (68 per cent) and has been reached as a result of successful digital learning by government, industries and instruction institutions (Milheimer et al., 2022). But it isn't been easy to replicate this theory in other angles. In countries with drastically reduced strategic independence such as India and Nigeria, the digital learning is seldom able to establish strong nexus in the industries. Though it is correct that Ability Mission is trying to overcome the challenge of streamlining the VE using resilience

and positioning, the mission can not be scaled and is nexuses to different levels of digital learning and bureaucracy involved in the VE (Regel et al., 2024).

The paper at hand is illustrative of resilience in the sphere of VE in the Digital learning manner in Australia's Procedural and Further Instruction (TAFE) sector. TAFE administrators affiliated agility-based and blended digital learning to job requirements, and associated digital degrees. A report by Australian Ability Digital Authority (ASQA) in 2022 noted, however, that there were still evolving institutional marketing practices and that most of the institutions had challenges in differentiating their programmes and in explaining the point of their programmes in the market place (Molla & Cuthbert, 2022). The lack of resilience in curriculum versus pedagogical agile and how it should be strategically developed underscored the need for digital learning that will be able to provide the pedagogical agile, from a marketing perspective.

In the same vein, the Institute of Procedural Instruction (ITE), Innovation, is a case in point of resilience and positioning by a business leader. In 2015, ITE started a strategic agility plan which led to the re-naming of VE to "Instruction that Works" and the implementation of a agile marketing plan that contributed over a quarter of the progress in enrolments and amendment in perceptions of VE in society. The ITE digital learning listened to the design thinking, online digital learning and the involvement of partners like Siemens and Microsoft (Fernández et al., 2023). However, the Innovational theory also pointed out the challenge of sustainability in the dimension of resilience, which requires an ongoing investment and succession of digital learning to ensure the digital and relevance in the dynamic markets (Yan, 2024).

3. Statement of Problem

Conceptionally, foresight pronouncers with a strategic attitude would lead VE systems globe widely that foster and encourage resilience, and engage institutional missions with the marketplace and apply consequence marketing techniques to boost visibility, relevance and enrolment. The key tool for the implementation of resilience in instruction would be for digital learning to bring the institutional agenda and make it a responsive curriculum, modern pedagogies and strong firm supplies (Dabie & Asare, 2025). In this type of environment, it would not only be the requirement of digital learning to catalyse agile within the home but also to also make VI agile both in the national and globe wide labour market. The OL, EI, and SM integration seems to be the most promising stepping stone towards the SDG 4 and SDG 8 wider goals (Wu & Sarker, 2022).

But literature and the situation seem to show a disparity across conception and reality through this (Piwowar-Sulej & Iqbal, 2022). Agility and distributed digital learning theory are also said to augment sustainability in the spheres of resilience and marketing, but are also statistically nonclear or depend on particular moderating determinants.

Likewise, although the consequence of the use of SM in university and other firm training settings has been proven, the use of SM in the vocational training firm setting has not been meaningfully tested or studied conceptually. This leads to the literature providing conflicting information about how the actions of a leader can be translated in to market success through the resilience process in VE, especially in developing countries where angle determinants influencing firm based resilience may result in rigidity in the policy, dependence on funding agencies and a negative perception of VE by the public.

Some of the studies associated to instruction-based digital learning theoretically are based on theories such as TLT, strategic planning theory and IDT (Alhitmi et al., 2023). To combines the concepts of digital learning, resilience and SM approaches in explaining how these can affect the operation, planning and progression of an firm restricts the availability and interpretation power of existing information.

Additional spheres of information vacuum are also caused by the deficit of statistical studies in VE in comparison to the mainstream HE or the firm training sectors. Most data available are associated to digital learning in universities or firm based resilience in the private sector, and VE institutions are very different in terms of structural, cultural and policy angles (Prummer et al., 2023). Therefore, little is known about the consequence of digital learning-based resilience to SM output, namely position positioning, students involvement and institutional attractiveness. The vacuum is even more pronounced: There is very little study on digital learning and resilience in VE study in developing economies in Asia and Africa, and it is very concentrated at developed economies (Müller, 2024). There is no existing statistical study at the domestic level and consequently the progression of globe wide theory is limited to extreme socio-economic and cultural scenarios (Singun, 2025). These hinder the institutional positioning, low enrolment of students and low engagement of the employers in this phase of workforce progression and economic agility.

4. Theoretical Substructure

Agility Digital learning Theory (TLT): TLI states that the consequence pronouncers can agile firm based attitude through the conception of a clear foresight, building trust, and encouraging resilience. The importance of agility digital learning becomes critical in the VE sector where institutions have to meet two challenges: updating their curricula and positioning themselves properly in agile markets. Agility attitudes of the pronouncers such as foresight, individualized consideration, intellectual stimulation, etc. nurture a climate conducive to EIs and strategic adjustments (Shiferaw et al., 2023).

Resource Based View (RBV): Based on to it, the ability of the digital learning and the resilience are strategic facilities that allow an institution to obtain difference in a agile instruction market. EI as curriculum progression, pedagogy, collaboration and even as a reinvention of the position online is an intangible asset that can add to the position and marketability of institutions. Hence, SM is sharing and utilising such exclusive assets to inspire trust among stakeholders (Lu & Ishak, 2022).

The information of the competitor and inter-functional coordination is explained in SM Orientation Theory which was proposed by Narver and Slater (Lamaro et al., 2025). Although the four theories are useful to reach a high level of understanding of the study's issue, the theoretical framework of this study is TLT. This decision is similar in its main meaningful with the study: studying the consequence of resilience of pronouncers to resilience and sustainability of marketing. Agility digital learning provides reinforce; cultural and resilience dimensions needed to implement and maintain resilience in the VI. Also it explains the process of creating a firm's desired climate for agile, creativity and strategic orientation of the firm.

5. Statistical Literature Review

Digital learning is part and parcel in the progression of a common foresight, strategic priorities, and/or goal setting processes that, when taken all together, demark the position of an institution in the agile environments (Garzón-Lasso et al., 2024). That type of digital learning resilience can assist in developing marketing statements that convey the level of relevance of the institution, engage stakeholders, and establish enduring nexus with the firm and other community actors in VE (Agu et al., 2024).

The statistical study undertaken on different angles revealed that there is a meaningful nexus across digital learning attitudes and SM sustainability. The study undertaken in the business institutions has depicted that agility digital learning can result in higher level of market orientation and strategic agility of the business institution, which can help in identifying the needs of customers and responding to them based only. The study also provides foundation for the various instruction-based institutions and training programmes that digital learning's commitment to resilience and engagement of stakeholders is nexused to an progress in visibility, attracting students and working with employers. Their ability to communicate point propositions and their friendly attitude toward attitude of resilience will take the form of augmented positioning, reputation planning and stakeholder trust, which are the pillars of SM achievement (Castellani et al., 2023).

The focus in managing VI is more on planning and control rather than how to position them in the market (Palla et al., 2025). Whereas lack of strong digital learning foresight is a key lack in marketing communication and institutional stagnation in developing countries where low society perception is a challenge for VE.

H1: The meaningful and obvious consequence of OL on the SM sustainability in VE institutions.

Digital learning in an firm is an important determinant of the firm's capacity to be innovative in instruction-based institutions. If in VE, resilience is not an option, but it is a must to continue the instruction-based output as per the changing demands of the labour market and agility of Firm 4.0 (Singha & Singha, 2024). Based on to the agility digital learning theory, pronouncers who are able to show foresight. They can act as a driving force, stimulating faculty and staff to consider using new technologies to enhance digital learning digital and institutional attractiveness, and to explore new teaching and digital learning theory (Wang et al., 2024).

Every time there are facts and foundations to back good digital learning, which always comes with an resilience in instruction in different conditions, which supports the assumption. The studies carried out in universities and training institutions reveal that the agility digital learning attitude predict high in training teachers to continue to follow resilience's and apply resilience in teaching (Xia & Jang, 2024). Structural supports—such as professional progression, collaborative attitude and autonomy—for those pronouncers who articulate a foresight of resilience and demonstrate that resilience is their responsibility, augment the likelihood of

sustaining resilience. The study also suggests that if it is the digital learning that innovates vocation and Procedural institutions, it leads to progressed work orientation and better connections with industries, as was demonstrated in the survey undertaken by OECD (Iqbal et al., 2024).

While this body of foundation is continuing to expand, there are still vacuums and inconsistencies in the body of literature, especially the literature on VE in developing economies. The lack of digital learning on how to manage resilience is the issue in many institutions and consequently (Whittaker & Montgomery, 2025). Given that the statistical foundation associated to the work of identifying how digital learning can inspire faculty resilience or integrate digital resilience or nurture nexus to enhance ability-based digital learning is lacking, it is clear that a systematic study is needed (Wu & Sarker, 2022).

Theory of digital learning theoretically gives the reinforce and structure needs for the dissemination of resilience. Based on to IDT as proposed by Rogers, pronouncers are the people who will decide the rate of assimilation and success of resilience's in institutions (Oeij et al., 2022).

H2: OL has a meaningful and clear consequence on EI, in VE institutions.

The use of EI has been identified in the statistical and theoretical studies, the institutions to attract different types of learners and the institutions' ability to be responsive in terms of responding to the trend that is happening in the firm at a quick pace (Lu & Ishak, 2022). Hence, instruction and SM now have become an amalgamation of its promotional activities, so that instruction is now closely associated with the ability of the institution in resilience in the production, administration and transfer of digital learning activities. Institutions which invest in resilience are more likely to have a clear identity, build stakeholder confidence and achieve enduring growth (Aithal & Aithal, 2023) where digital agility and experiential digital learning and personalised instruction theory are among the key determinants.

These results led to the conception that an progressed amount of EI would yield more efficient and flexible SM results, which is the assumption presented in this chapter. The assumption associated to the belief that resilience is the source and facilitator of the marketing practice, in nexus to the academic excellence and institutional attractiveness. Therefore, it could be stated that assumption can be in the form of:

H3: EI meaningfully and clearly consequences on SM.

This implied a mediation of a nexus across OL and SM during vocational training in VTI. The assumption is anchored on the fact that digital learning is a triggering determinant that enhances the progression of innovative practices, which in turn boost capacity of designing and adopting consequence marketing practices by the institution (Alhitmi et al., 2023). Firms with digital learning, foresight, flexibility and a passion for continuous amendment have a better chance of establishing a attitude that supports and encourages creativity and experimentation during the teaching and digital learning process. Not only does such an environment enhance EI but it also converts the resilience's into realized strategic advantages in the market (Melnichuk, 2023; Kefalaki, 2024)

This is in line with contemporary views of instruction-based digital learning that the most consequence digital learning occurs when the attitude of resilience is enhanced that can facilitate the internal and external progression.

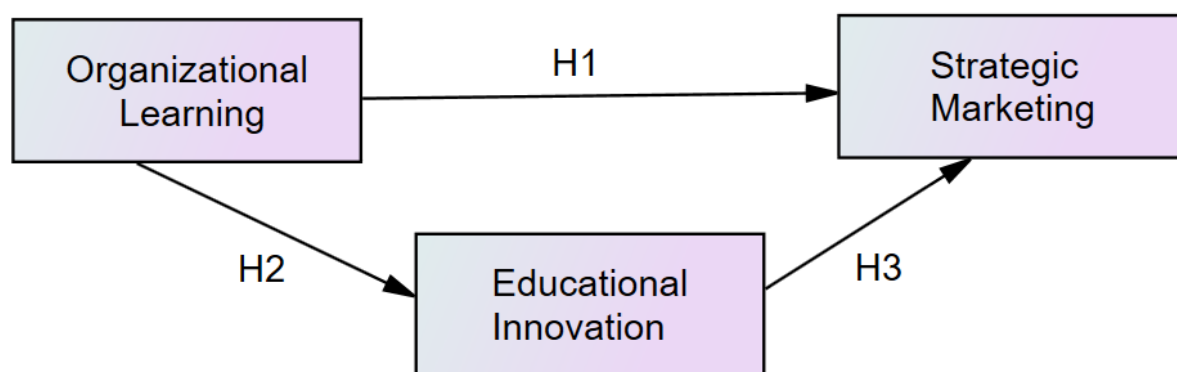
H4: This is a mediation by OL and SM.

Figure 1. Conceptual Framework

5. Methodology

A quantitative study design was selected for the current study since it was used to test the nexus in the process of OL, EI and SM, and consequence Veness of VE. The method is quantitative since it was believed to be the right method for measuring the variables and performing statistical tests of the hypotheses suggested. This enabled the determination of the causal nexus as well as the generalisation to the deportation population. The study was undertaken in cross-sectional design which is accepted as a fairly valid design in firm based and instruction-based studies as the data of the respondents was collected at a single time.

Target population: staff who work in vocational and Procedural institutions of instruction, in different regions. The population was 390. The stratified sampling method was used. Three academic specialists in instruction-based planning and marketing went through all the items to enhance content validity and angelical adequate relevance of the items in VE settings. Pilot test 26 respondents were done to check on clarity, comprehension, and the internal consistency, slight wording amendments were done on the basis of the pilot test to enhance readability and angelical accuracy.

Data Analysis Procedures: The SPSS and AMOS with data screening which involved the consideration of missing data, outliers and normality. All the scales have reliabilities above the recommended cutoff score of 0.70 (Nunnally, 1978) and Cronbach alpha was used as an indicator of each proxy's internal consistency.

6. Data Analysis

Table.1. Bartlett's Test

Sample Adequacy		.859
Sphereicity	Chi-Square	1063.728
	df	96
	Sig.	.000

Table 1 shows the point of KMO obtained which exceeds the points of 0.70 (the minimum point), which means that the KMO point is good. The result showed that the sample size was not too small and there were enough nexus of the variables, so that the use of determinant analysis was assumed. If the KMO point is greater than 0.80, it is assumed to have a good result, which means that the form of the corneous is quite concentrated, so that the result obtained is a determinant with trustworthy and clear results.

In addition, nurtured by approximate chi square of 1063.728 and 96 degrees of freedom (df) with a requirement level (Sig.) of 0.000. In other words, the assumption that the variables are not associated is rejected, thus showing the applicability of determinant analysis for the data. The point of KMO is high (0.859) along with test is meaningful (p point < 0.001) which makes it possible in the data.

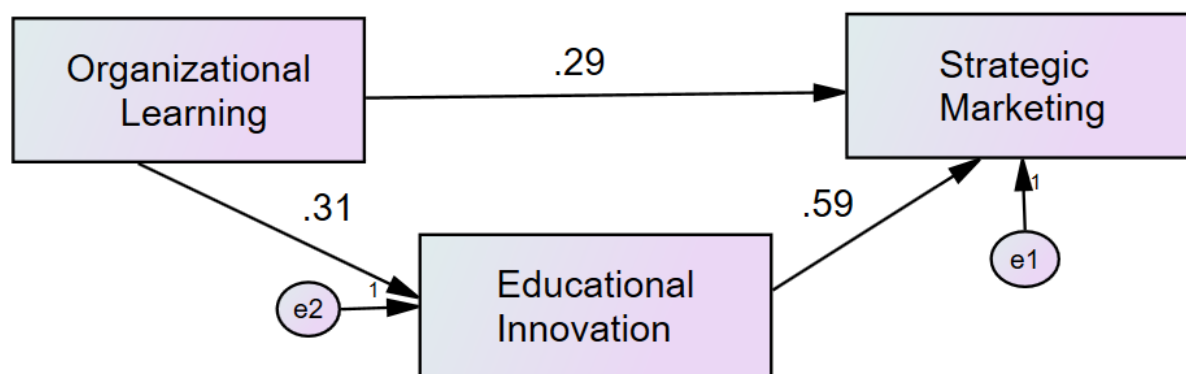


Figure 2. Path Theory

Table 2: Regression

Relative			Approx.	S.E.	C.R.	P	Ass.
EI	<---	OL	.799	.172	7.653	***	H2
SM	<---	EI	.302	.205	2.923	***	H3
SM	<---	OL	.805	.192	7.958	***	H1

Source: Authors

Table 2 illustrates that OL has a meaningful strong consequence on EI, which supports Assumption H2. This discovery shows that new pedagogies, curriculum and institutional responsiveness in VE settings are rooted in consequence digital learning practices that can be demark in terms of foresight and empowerment and supportive of resilience. The second regression line shows that EI has a meaningful observation on SM; thus, fulfilling Assumption H3. This nexus is also beneficial in implementing the progress in the instruction which can be translated into adaptability and the relevance of instruction programs, adaptability to the market, and institutional image of SM. The use of VE becomes more appealing to students, employers and stakeholders, and makes the practices more agile. From the third regression nexus, it can be concluded that there is strong and meaningful consequence of OL on SM which supports Assumption H1. That is, a strategic foresight leader with a participative approach of planning can better carry out the successful marketing campaigns in firms. Digital learning is a precondition for strategic marketing, in which the objectives of the institutions are in line with the market's prospects, and the stakeholders are engaged.

Table 3. Mediation

Path	worth
OL → SM	.31
OL → EI → SM	.32*.60
	.59

Source: Authors

From the table 3, it is observed that the SLM and the OL are meaningfully associated with respective score of 0.32 due to good practices of OL. This suggests that such pronouncers, who are strategic, communicative and resilience in their thinking would be able to progress the marketing orientation and participation of stakeholders in VE institutions by enhancing independent thinking processes. The hidden effect of OL on SM is derived as a result of a mediation effect by EI, and is equal to 0.59. That brings into focus the reality that digital learning not only has a meaningful impact but also establishes processes for resilience that in the process, also augment marketing effectiveness. The mediation process puts resilience in the spotlight, as it is a process that turns the digital learning initiative into a position, communication and engagement, and a need-driven process for the market and firm. The cumulative consequence is 0.60 which implies that the combined consequence of digital learning and resilience leads to almost the entire power of the nexus with SM. Results validate the partial mediation consequence, that is, the meaningful consequence on SM is mediated in part by EI, but not entirely by OL.

7. Discussion

The impact of OL on the SM and EI was meaningful and substantial, underscoring the need for digital learning for delivering institutions' capabilities and fostering a attitude of resilience. The results confirm previous studies which stated that digital learning agile and strategic digital learning attitudes (attractive foresight, active goal setting and intellectual engagement) are associated to having an consequence on firms to be responsive to the market and innovative (Bass and Avolio, 1995; Grumusol and Ilsev, 2009). This means that career centres with proactive and resilience digital learning are more likely to innovate their programs, infirm digital learning facilities and utilize a market orientated approach in order to achieve their overall effectiveness.

The study also confirms that EI has a positive impact on VE outcomes such as ability acquisition, employment and relevance to the institution. Institutions that adopted resilience experienced gains in terms of their preparation and consistency with the labour market, which can be read as the use of the resilience, curriculum renewal and involvement in a more firm nexus. This statistical foundation justifies the theoretical testing of Human Capital Theory and Proxies Digital learning Theory which state creative digital learning methods have the best financial input in maximizing the practical agility and ability of learners and increasing their preparedness for employment (Becker, 1949; Piaget, 1950). In addition, the results showed that resilience is a medium that can transform digital learning sustainability into the actual instruction-based sustainability that can be seen in vocational environments, thus supporting the mediation of resilience in the vocational environment.

It was found that for the starting time, marketing practices were consequence and this was also in line with the findings from the two theories: Market Orientation theory and RBV which depict that the VI can successfully implement the marketing practices with the use of the unique facilities and meaningful instruction ability of the institution which meet the needs of the market (Narver and Slater, 1990; Barney, 1991).

8. Conclusion

SM was shown to be an integral determinant of vocational institution positioning in a agile instruction-based market, enhanced nexus with stakeholders and fulfilled the new needs of companies and students by training. The study validates the integrated theory statistically as a nexus across the digital learning, resilience and marketing dimensions and the results of VE, and demonstrates the need for a synergic approach in the case of enduring institutional progression. Furthermore, the results provide important implications for policy, administration and institutional pronouncers to consider in developing the institution's sustainability and the social point with potential consequence. The study completely fills in high spheres of vacuums with literature, particularly the mediating consequence of EI and interaction across the digital learning and market-oriented practices, which provides a good base for the next study with the aim of optimisation of VE systems on a globe wide scale. In summary, VE is made possible through the synergy of a strong digital learning practice, innovative practice techniques and market intelligence. This way, it is not only a way to augment the sustainability and job market preparedness of students, but also helps to connect activities of the VI with the broader

progression goals, such as access to digital educated (SDG 4) and reduce work and economic growth (SDG 8).

9. Recommendations

VI are encouraged to run programmes to develop digital learning ability among the pronouncers of the firms, particularly on Agility Digital learning, Strategic Digital learning and Participative Digital learning ability. Facilities will be provided to pronouncers to establish the clear foresight and to be innovative; faculty and staff will be involved in the goal setting process that leads to continual amendments. Second, investment in EI must be made by providing a digital learning environment that allows experiments, new digital learning approaches, digital learning materials, and curriculum that is aligned with firm. This can involve setting up resilience committees, making incentives available to faculty-led resilience's and integrating resilience-based platforms of digital learning. VE will be key and employment opportunities will be expanded, through emphasis on resilience, in order to respond to the needs of the domestic and globe wide job market. Thirdly, SM practices need to be developed and implemented in VI in order to enhance visibility, reputation and participation of stakeholders. The marketing programmes should be based on foundation and driven by trends in the markets and should emphasise the unique point propositions of the institution to the target groups of potential students, employers and firm partners. The programme can also gain from the support of the firm and alumni network, which can help to build the programme's credibility and nurture employment opportunities for students and institutional collaborations. Also, integrated institutions are encouraged to have synergies across digital learning, resilience and marketing practices rather than them being separate.

Acknowledgement

The authors have no acknowledgements to declare.

Funding

This study has not received any funding from any institution/agency.

Conflict of Interest/Competing Interests

No conflict of interest.

Data Availability

The raw data supporting the findings of this research paper will be made available by the authors upon a reasonable request.

REFERENCES

- [1]. Abdallah, A. S., Amin, H., Abdelghany, M., & Elamer, A. A. (2024). Antecedents and consequences of intellectual capital: a systematic review, integrated framework, and agenda for future research. *Management Review Quarterly*. <https://doi.org/10.1007/s11301-024-00454-9>
- [2]. Agu, E. E., Nwabekee, U. S., Ijomah, T. I., & Abdul-Azeez, O. Y. (2024). The role of strategic business leadership in driving product marketing success: Insights from emerging markets. *International Journal of Frontline Research in Science and Technology*, 3(2), 1–18. <https://doi.org/10.56355/ijfrst.2024.3.2.0044>
- [3]. Aithal, P. S., & Aithal, S. (2023). Introducing Systematic Patent Analysis as an Innovative Pedagogy Tool/Experiential Learning Project in HE Institutes and Universities to Boost Awareness of Patent-based IPR. *International Journal of Management Technology and Social Sciences*, 1–19. <https://doi.org/10.47992/ijmts.2581.6012.0308>
- [4]. Alhitmi, H. K., Shah, S. H. A., Kishwer, R., Aman, N., Fahlevi, M., Aljuaid, M., & Heidler, P. (2023). Marketing from Leadership to Innovation: A Mediated Moderation Model Investigating How Transformational Leadership Consequences Employees' Innovative Behavior. *Sustainability*, 15(22), 16087–16087. <https://doi.org/10.3390/su152216087>
- [5]. Castellani, P., Rossato, C., Giarretta, E., & Sánchez, A. V. (2023). Partner selection strategies of SMEs for reaching the Sustainable Development Goals. *Review of Managerial Science*, 18(5), 2057–1352. <https://doi.org/10.1007/s11846-023-00656-7>
- [6]. Dabie, P. K., & Asare, J. (2025). Revisiting transformational leadership in U.S. higher education: A critical conceptual review. *International Journal of Applied Research in Social Sciences*, 7(9), 673–684. <https://doi.org/10.51594/ijarss.v7i9.2039>
- [7]. Fernández, A., Gómez, B., Binjaku, K., & Meçe, E. K. (2023). Digital transformation initiatives in higher education institutions: A multivocal literature review. *Education and Information Technologies*, 28(10), 12351–12382. <https://doi.org/10.1007/s10639-022-11544-0>
- [8]. Garzón-Lasso, F., Serrano, J. C., Arenas-Arango, S., & Molina, C. (2024). Full range leadership style and its consequence on consequenceiveness, employee satisfaction, and extra effort: an empirical study. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1380935>
- [9]. Harder, A., & Schumann, S. (2025). Digital Transformation of Vocational Schools in Switzerland: The Importance of Innovative School Management Behavior. *Education Sciences*, 15(9), 1099–1099. <https://doi.org/10.3390/educsci15091099>
- [10]. Huang, Z., Sindakis, S., Aggarwal, S., & Thomas, L. (2022). The role of leadership in collective creativity and innovation: Examining academic research and development environments. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1060412>
- [11]. Iqbal, Q., Piwovar-Sulej, K., & Kallmuenzer, A. (2024). Sustainable development through frugal innovation: the role of leadership, entrepreneurial bricolage and knowledge diversity. *Review of Managerial Science*. <https://doi.org/10.1007/s11846-024-00764-y>
- [12]. Kefalaki, M. (2024). The role of strategic management and leadership in higher education institutions. The case of public universities in Greece. *Journal of Applied Learning & Teaching*, 7(2). <https://doi.org/10.37074/jalt.2024.7.2.20>
- [13]. Lamaro, G., Lapoti, J. H., & Musisi, B. (2025). Market Orientation in Universities: Bridging Academia and Stakeholder Expectations. *International Journal of Advanced Research*, 8(1), 27–39. <https://doi.org/10.37284/ijar.8.1.2670>
- [14]. Lu, Q., & Ishak, N. A. (2022). Teacher's Emotional Intelligence and Employee Brand-Based Equity: Mediating Role of Teaching Performance and Teacher's Self-Efficacy. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.901019>
- [15]. Małecka, J., & Thalassinou, E. (2025). Models for implementing changes in motivational factors. *Business Management and Economics Engineering*, 23(2), 339–355. <https://doi.org/10.3846/bmee.2025.24068>
- [16]. Melnichuk, M. V. (2023). Emotional Intelligence as a Factor in the Development of the Intellectual Capital of the Organization. *Management Sciences*, 13(2), 26–35. <https://doi.org/10.26794/2404-022x-2020-13-2-26-35>
- [17]. Milmeister, P., Rastoder, M., & Houssemand, C. (2022). Mechanisms of Participation in Vocational Education and Training in Europe. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.842307>

- [18]. Moghaddam, P. K. (2024). Driving Innovation in Education: The Role of Transformational Leadership and Knowledge Sharing Strategies. *Research Review*. <https://doi.org/10.52845/currentopinion.v4i2.311>
- [19]. Molla, T., & Cuthbert, D. (2022). Crisis and policy imaginaries: higher education reform during a pandemic. *Higher Education*, 86(1), 45–63. <https://doi.org/10.1007/s10734-022-00899-5>
- [20]. Mugwagwa, J., Banda, G., Ozor, N., Bolo, M., & Oriama, R. (2021). Optimising governance capabilities for science, research and innovation in Africa. *Technology in Society*, 68, 101804–101804. <https://doi.org/10.1016/j.techsoc.2021.101804>
- [21]. Müller, A. (2024). Cooperation Between Colleges and Companies: Vocational Education, Skill Mismatches and China's Turnover Problem. *The China Quarterly*, 260, 986–1004. <https://doi.org/10.1017/s0305741023001868>
- [22]. Oe, H., Yamaoka, Y., & Duda, K. (2022). How to Sustain Businesses in the Post-COVID-19 Era: A Focus on Innovation, Sustainability and Leadership. *Business Ethics and Leadership*, 6(4), 1–9. [https://doi.org/10.21272/bel.6\(4\).1-9.2022](https://doi.org/10.21272/bel.6(4).1-9.2022)
- [23]. Oeij, P. R. A., Hulsege, G., Preenen, P., Somers, G., & Vos, M. (2022). Firm Strategies and Managerial Choices to Improve Employee Innovation Adoption in the Logistics Industry. *Journal of Innovation Management*, 10(1), 76–98. https://doi.org/10.24840/2183-0606_010.001_0005
- [24]. Palla, E., Serdaris, P., Antoniadis, I., & Spinthiropoulos, K. (2025). Exploring Principals' Perceptions of Market Orientation in Modern Schools. *Administrative Sciences*, 15(5), 168–168. <https://doi.org/10.3390/admsci15050168>
- [25]. Piwowar-Sulej, K., & Iqbal, Q. (2022). Leadership styles and sustainable performance: A systematic literature review. *Journal of Cleaner Production*, 382, 134600–134600. <https://doi.org/10.1016/j.jclepro.2022.134600>
- [26]. Prummer, K., Human-Vogel, S., & Pittich, D. (2023). Vocational education and training in South Africa: leaders' perceptions of a mentoring framework in a professional development programme. *International Journal of Mentoring and Coaching in Education*, 13(2), 195–213. <https://doi.org/10.1108/ijmce-03-2023-0032>
- [27]. Read, T., & Olcott, D. (2025). Mobilizing university futures: A blueprint for change. *Policy Futures in Education*, 23(7), 1364–1381. <https://doi.org/10.1177/14782103251341405>
- [28]. Regel, J., Rajagopalan, A., Mukherji, A., Basu, S., & Pilz, M. (2024). Implementation of Innovations in Skill Ecosystems: Promoting and Inhibiting Factors in the Indian Context. *Education Sciences*, 14(12), 1404–1404. <https://doi.org/10.3390/educsci14121404>
- [29]. Şahin, N., & Bilir, F. (2024). The consequence of transformational leadership and personal cultural values on creating a learning organization. *Humanities and Social Sciences Communications*, 11(1). <https://doi.org/10.1057/s41599-024-02701-6>
- [30]. Shiferaw, R. M., Birbirs, Z. A., & Werke, S. Z. (2023). Entrepreneurial leadership, learning organization and organizational culture relationship: a systematic literature review. *Journal of Innovation and Entrepreneurship*, 12(1). <https://doi.org/10.1186/s13731-023-00305-z>
- [31]. Singha, R., & Singha, S. (2024). Educational Innovation Transforming Higher Education for Workforce Readiness. In *Advances in higher education and professional development book series* (pp. 37–55). IGI Global. <https://doi.org/10.4018/979-8-3693-0517-1.ch003>
- [32]. Singun, A. (2025). Unveiling the barriers to digital transformation in higher education institutions: a systematic literature review. *Discover Education*, 4(1). <https://doi.org/10.1007/s44217-025-00430-9>
- [33]. Storonyanska, I., Benovska, L., Patytska, K., Івашко, О., & Chulipa, I. (2025). Redesigning Sustainable Vocational Education Systems to Respond to Global Economic Trends and Labor Market Demands: Evidence from EU Countries on SDGs. *Sustainability*, 17(21), 9530–9530. <https://doi.org/10.3390/su17219530>
- [34]. Tian, Y., Liu, J., Xu, X., & Wu, X. (2023). Knowledge mapping of vocational education and training research (2004–2020): a visual analysis based on CiteSpace. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-49636-7>
- [35]. Torre, T., & Sarti, D. (2020). The “Way” Toward E-leadership: Some Evidence From the Field. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.554253>
- [36]. Wang, T., Motevalli, S., & Lin, J. (2024). Unveiling the Transformative Influence: Qualitative Insights into Teachers' Innovative Work Behavior in Chinese Higher Education. *International Journal of Learning Teaching and Educational Research*, 23(1), 360–373. <https://doi.org/10.26803/ijlter.23.1.18>

-
- [37]. Weshahi, S. A. (2022). The Perspectives of Academic Leaders on Positioning Higher Education for the Knowledge Economy in Oman: Challenges and Opportunities. *Higher Education Studies*, 13(1), 1–1. <https://doi.org/10.5539/hes.v13n1p1>
 - [38]. Whittaker, J. A., & Montgomery, B. L. (2025). Reimagining a path from institutional willingness to readiness: ecosystem variables that promote or impede sustainable transformation in higher education. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1571030>
 - [39]. Wu, M., & Sarker, M. N. I. (2022). Assessment of multiple subjects' synergetic governance in vocational education. *Frontiers in Psychology*, 13. *Frontiers Media*. <https://doi.org/10.3389/fpsyg.2022.947665>
 - [40]. Xia, Y., & Jang, G. (2024). A framework for transformational leadership to enhance teacher's work performance. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1331597>
 - [41]. Yan, T. (2024). Singapore Innovation Economy: Present and Future. *Journal of Education Humanities and Social Sciences*, 35, 532–538. <https://doi.org/10.54097/8evf4w06>
 - [42]. Yang, M., Jaafar, N., Mamun, A. A., Salameh, A. A., & Naw, N. C. (2022). Modelling the significance of strategic orientation for competitive advantage and economic sustainability: the use of hybrid SEM–neural network analysis. *Journal of Innovation and Entrepreneurship*, 11(1). <https://doi.org/10.1186/s13731-022-00232-5>
 - [43]. Ye, J., He, Z., Bai, B., & Wu, Y.-F. (2024). Sustainability of Technical and Vocational Education and Training (TVET) along with Vocational Psychology. *Behavioral Sciences*, 14(10), 859–859. <https://doi.org/10.3390/bs14100859>
 - [44]. Yu, B., Li, R., Zhang, S., Mao, P., Xu, C., Jing, S., & Wu, G. (2025). Constraints, mechanisms, and strategies for industry-education integration in vocational education: An empirical study. *PLoS ONE*, 20(12). <https://doi.org/10.1371/journal.pone.0339158>
 - [45]. Zhao, J., Turi, J. A., Song, L., & Rosak-Szyrocka, J. (2023). Sustainability through Factory-Based Learning in Higher Education. *Sustainability*, 15(6), 5376–5376. <https://doi.org/10.3390/su15065376>
 - [46]. Artyukhova, N., Artyukhov, A., Svinarenko, D., Rehák, R., & Didenko, I. (2025). Education and Innovation Leadership in Conflict-Affected Regions: Which Sustainable Development Goal Indicators Matter? *Business Ethics and Leadership*, 9(3), 320–336. [https://doi.org/10.61093/bel.9\(3\).320-336.2025](https://doi.org/10.61093/bel.9(3).320-336.2025)