DETERMINANTS ON DIGITAL TRANSFORMATION CAPABILITY OF VIETNAMESE SMALL AND MEDIUM-SIZED ENTERPRISES: RESEARCH IN THE FIELD OF EDUCATION AND TRAINING

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ABSTRACT

The emergence of sophisticated technologies like blockchain, the Internet of Things, and artificial intelligence has profoundly transformed operational dynamics across several sectors during the Fourth Industrial Revolution. Consequently, digital transformation has become essential for enhancing operational efficiency and securing long-term competitiveness. Educational institutions and training organizations have significantly benefitted from various efforts implemented by the Vietnamese government to facilitate their rehabilitation and expansion in the post-COVID-19 period. Notwithstanding these benefits, issues pertaining to human resources, expenses, and awareness continue to endure. Utilizing primary data gathered from surveys and comprehensive expert interviews, the authors discerned numerous critical aspects that affect the digital transformation of educational and training institutions. The elements include leadership understanding, technology capabilities, resource availability, organizational structures, governmental legislation, market competitiveness, organizational culture, and the perceived use of digital technologies. Based on these results, some proposals have been put up to improve the digital transformation capacities of educational institutions and training organizations in Vietnam.

Keywords: Digital Transformation Capability; Small and Medium-sized Enterprises; Education; Vietnam

1.0 INTRODUCTION

The rapid development of technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), big data, and blockchain has profoundly altered the operations and competitiveness of enterprises in recent decades. This phenomena, integral to the Fourth Industrial Revolution, has underscored the need of digital transformation for maintaining

organizational sustainability and competitiveness. Pham Minh Chinh, the Prime Minister of Vietnam, said that "Digital transformation has permeated every alley, reached every door, and affected every individual," underscoring the extensive influence of this transition across several sectors, including education and training. Digital transformation is becoming more essential in the education industry, especially for educational institutions and training suppliers. The digitization of pedagogical approaches, administrative processes, and student engagement technologies is transforming the delivery of educational services. The Vietnamese government has implemented many policies to expedite digital transformation, including Decision No. 749/QĐ-TTg, which pertains to the National Digital Transformation Program, along with initiatives like the Project to Support the Innovative Startup Ecosystem. These initiatives seek to position Vietnam as a thriving digital country. In the education industry, digital platforms, e-learning systems, and online educational tools are crucial for enhancing teaching and learning experiences, therefore guaranteeing that schools maintain competitiveness and relevance. Nonetheless, akin to SMEs in other industries, several educational institutions encounter considerable obstacles in their digital transformation endeavors. Challenges such as inadequate awareness, insufficient financial resources, and a deficiency of trained digital staff continue to exist. Furthermore, the use of digital technologies in education is often obstructed by antiquated infrastructure and apprehensions about data security and privacy. The Vietnam Chamber of Commerce and Industry reports that 97% of SMEs have technical constraints, with a considerable number still using obsolete technology. This scenario is reflected in educational institutions, where digital tools and resources are often inadequate or underused, hindering their capacity to fully exploit the promise of digital transformation. Consequently, the research team selected the subject of "Factors Influencing the Digital Transformation of Small and Medium Enterprises in Vietnam: Research in the Field of Education and Training" in order to offer practical solutions to education and training SMEs in regions that have not yet completely realized the potential of digital transformation.

2.0 LITERATURE REVIEW

Digital transformation, despite extensive examination, lacks a cohesive definition due to its many interpretations across different disciplines and eras. Christof Ebert and Carlos Henrique C. Duarte (2018) assert that digital transformation entails using innovative technologies to augment productivity, generate value, and promote social welfare, so enabling organizations to maximize resources, processes, and customer happiness. Other scholars, including Stolterman and Fors (2004), underscore the importance of technology in enhancing business performance, whereas Fitzgerald (2013) contends that digital technologies, such as social media and analytics, catalyze substantial business transformations, including improved customer experiences and process optimization. The Law on Enterprise of Vietnam (2020) defines a company for Small and Medium Enterprises (SMEs) as an entity with a unique name, assets, and legal registration. Small and medium-sized enterprises (SMEs) are often defined according to staff count, income, or capital, with the European Commission (2003) defining them as organizations with less than 250 people, sales not above 50 million euros, or assets below 43 million euros. Small and medium-sized enterprises (SMEs) are important to economic expansion, innovation, and employment generation, however they often encounter limitations stemming from their reduced scale and constrained resources.

2.1 Theoretical Framework

The Diffusion of Innovation (DOI) Theory, developed by Rogers in 1962, examines the temporal dissemination of innovations within a social system, including five stages: information, persuasion, choice, implementation, and confirmation. Rogers categorizes adopters into five groups: innovators, early adopters, early majority, late majority, and laggards, each possessing unique traits that affect the adoption process. The phases and adopter categories are essential for comprehending the integration of new educational technology, pedagogical approaches, or digital tools inside schools, colleges, and training institutions. By identifying the determinants affecting each group's adoption process, educational institutions may formulate more precise plans to enhance the effective implementation of novel practices and technology. This comprehension may facilitate digital transformation in educational institutions, assuring their competitiveness and responsiveness to the changing requirements of students and instructors.

The Technology-Organization-Environment (TOE) Framework, established by Tornatzky and Fleischer in 1990, evaluates technology adoption through three dimensions: technology context (the available technologies and their comparative advantages, which may include digital tools such as Learning Management Systems (LMS), online assessment platforms, or collaborative technologies, and their potential to enhance teaching and learning efficacy), organization context (internal factors such as resources and leadership support, where robust leadership and a commitment to digital transformation are essential for successful adoption), and environmental context (external factors including competition and governmental policies, where initiatives and regulations that promote digital literacy or incentivize the utilization of educational technology can significantly influence institutional approaches to digital transformation). This holistic strategy assists educational institutions in addressing internal and external problems of digital transformation, allowing them to make educated choices and formulate plans that correspond with their unique requirements and the wider educational context.

The Technology adoption Model (TAM), created by Fred Davis in 1989, seeks to elucidate and forecast consumers' adoption of novel technology. The Technology Acceptance Model (TAM) is derived on the Theory of Reasoned Action (TRA) developed by Ajzen and Fishbein in 1980, but it has been modified for the examination of technology. The primary element of TAM theory posits Perceived Usefulness. Perceived Usefulness denotes the extent to which a person feels that using technology would improve their work performance. In educational institutions, if a school administrator perceives that the use of digital tools would enhance instructional efficacy or optimize administrative procedures, they are more inclined to exhibit a favorable disposition towards using such technology. When a technology proves beneficial, people are more inclined to have a favorable disposition towards it, thereby influencing their intention to use it. The desire to utilize is a key component in ascertaining whether a person will effectively use technology into their educational activities. If a school leader perceives that digital transformation would enhance their institution and considers the technology straightforward to apply, they are more inclined to commit to its adoption.

According to Vial (2019), the digital transformation process of enterprises is influenced by many factors, which can be divided into three main groups as follows: the technology factor group, the organizational factor group, and the external environmental factor group.

Technology factor group includes the infrastructure and technological capabilities necessary for digital transformation. Kane et al. (2015) emphasize the importance of IT infrastructure, as well as access to advanced technologies such as artificial intelligence (AI), big data, and the Internet of Things (IoT), in driving organizational change. These technologies play a crucial role in improving educational processes, optimizing resource management, and enhancing the overall competitiveness of educational institutions.

Organizational factor group focuses on resources, structural alignment, and corporate culture. Westerman et al. (2014) argue that leadership commitment to a clear digital strategy, alongside a flexible culture that fosters innovation, is essential for successful digital transformation in educational settings. Bharadwaj et al. (2013) also highlight the importance of digital skills among employees, noting that continuous training is critical not only for enhancing technical capacity but also for motivating staff to embrace new technologies in the teaching and learning process.

External environmental factor group encompasses external influences such as government policies, market competition, and customer demands, which significantly impact digital transformation. In the context of Vietnam, government policies such as tax incentives, credit support, and initiatives aimed at improving the business environment are vital in facilitating the digital transformation of educational institutions. These external factors help shape the readiness and willingness of educational organizations to integrate new digital technologies into their operations.

Research in China, government policies, such as financial incentives and partnerships with tech platforms, have been essential for overcoming the barriers to digital transformation, particularly for SMEs (Zhang et al., 2018). In Vietnam, similar themes emerge. Studies by Nguyen Danh Nam and Uong Thi Ngoc Lan (2021) point out that most Vietnamese SMEs face significant barriers to digital transformation, such as lack of awareness and insufficient technological infrastructure. However, they also highlight that government policies, like tax incentives and funding support, play a vital role in driving digital adoption. Research by Bui Thi Huong (2023) in Binh Duong and Nguyen Thi Mai Huong, Bui Thi Sen (2021) in Hanoi reveals that financial capacity and internal strategies significantly influence digital transformation, with businesses that align their digital strategies with available resources being more likely to succeed. Additionally, the importance of skilled human resources and training is stressed, echoing findings from India (Bharadwaj et al., 2013), where investing in employee digital skills was found to be a key enabler for successful digital adoption.

After reviewing relevant studies, based on the TOE framework, TAM Theory and DOI Theory, the author decided to propose the following research model:

Fig. 1. Research Model.
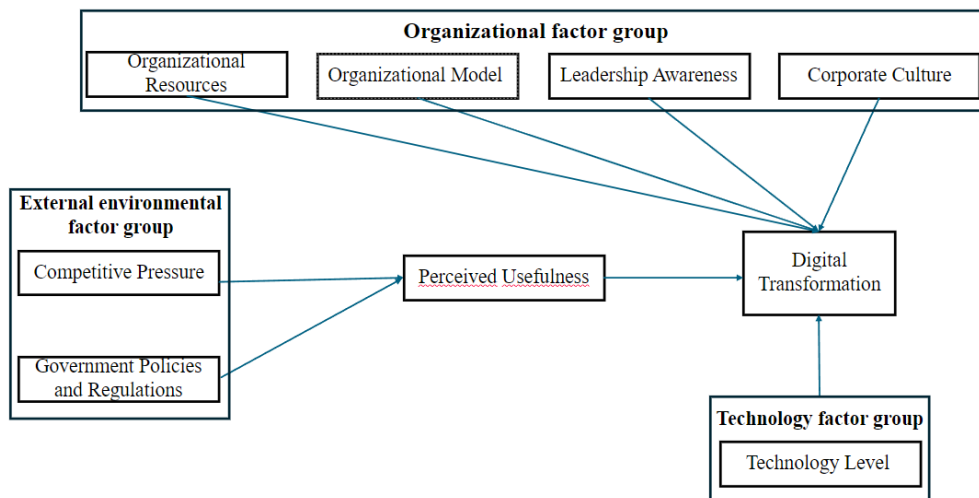
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2.2 Qualitative research methods: Expert opinion method

After the questionnaire was developed based on the research model and hypotheses, the author conducted in-depth interviews with experts in education field for validation and revisions. The survey data will be presented to the experts for practical evaluation. Finally, the results from the interviews will be systematically analyzed to draw key conclusions for the study.

2.3 Quantitative research methods: Questionnaire

Questionnaire Development: Data was collected through in-depth interviews with experts and business in education and training field representatives, as well as sociological surveys conducted via online and direct questionnaires distributed to SMEs in seven key economic regions of Vietnam. The interviews and surveys aimed to identify factors influencing the digital transformation of businesses in the field of education and training, including technology, organization, and environment.

Data Collection: The author targeted education and training SMEs in Vietnam and began data collection in May 2024, distributing questionnaires via emails, messages, and in-person meetings. A total of 668 completed responses were collected, and 500 valid questionnaires were cleaned, coded, and analyzed.

Data Analysis Procedure: The study used a 5-point Likert scale for 7 independent variables: Technological Level (TL), Leadership Awareness (LA), Organizational Resources (OR), Corporate Culture (CC), Organizational Model (OM), Government Policies and Regulations (GPR), Competitive Pressure (CP), Perceived Usefulness (PU), along with Digital Transformation (DT) as the dependent variable. Data analysis was performed using SmartPLS 3, assessing reliability and validity through Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE).

3.0 RESULTS AND DISCUSSION

3.1 Evaluation of Measurement Models

The evaluation of measurement models includes:

- Assessing the reliability of the indicators at both the indicator level (indicator reliability) using the outer loading and at the structural level (internal consistency reliability) using two indices: Cronbach's Alpha and CR.
- The assessment of validity focuses on evaluating the convergent validity of each measurement using the AVE and discriminant validity, where we compare all the structural constructs within the same model based on the Heterotrait-Monotrait Ratio (HTMT).

The analysis results indicate that all indices fall within the acceptable range. Therefore, the observed variables and the influencing factors in the model demonstrate sufficient reliability, adequately representing the latent constructs, and the constructs in the model are distinct, containing unique information that is not reflected in other constructs. The results are presented in Table 1, Table 2, Table 3 and Table 4.

Table 1. Measurement properties.

Construct/Items	OL	CR	AVE	Cronbach's Alpha (α)
Digital Transformation (DT)		.947	.817	.925
DT1	.923			
DT2	.902			
DT3	.900			
DT4	.890			
Leadership Awareness (LA)		.931	.730	.908
LA1	.885			
LA2	.886			
LA3	.829			
LA4	.812			

LA5	.858			
Organizational Resources (OR)		.922	.702	.894
OR1	.817			
OR2	.782			
OR3	.844			
OR4	.877			
OR5	.868			
Organizational Model (OM)		.942	.891	.877
OM1	.942			
OM2	.945			
Technology Level (TL)		.909	.769	.850
TL1	.877			
TL2	.903			
TL3	.851			
Government Policies and Regulations (GPR)		.944	.894	.881
GPR1	.944			
GPR2	.947			
Competitive Pressure (CP)		.956	.878	.931
CP1	.935			

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CP2	.929			
CP3	.947			
Corporate Culture (CC)		.868	.569	.820
CC1	.779			
CC2	.727			
CC3	.703			
CC4	.803			
CC5	.754			
Perceived Usefulness (PU)		.928	.762	.896
PU1	.855			
PU2	.920			
PU3	.847			
PU4	.870			

Sourse: Compiled by the authors

All indicator loadings exceed 0.7, ranging from 0.703 to 0.951, ensuring strong indicator reliability for the constructs. The CR values for all constructs are significantly above the 0.7 threshold, ranging from 0.868 (CC) to 0.956 (CP). This demonstrates excellent internal consistency reliability across constructs. Cronbach's Alpha values range from 0.820 (CC) to 0.931 (CP), exceeding the minimum acceptable level of 0.7. These results confirm that the scales are internally consistent and reliable. All constructs meet the minimum AVE threshold of 0.5, with values ranging from 0.569 (CC) to 0.894 (GPR). This confirms good convergent validity, indicating that a substantial portion of variance is captured by the constructs.

Table 2. Discriminant validity.

	CP	DT	GPR	OM	OR	LA	TL	PU	CC

CP	.937							
DT	.622	.904						
GPR	.423	.499	.945					
OM	.478	.615	.449	.944				
OR	.471	.653	.538	.466	.838			
LA	.435	.594	.363	.592	.503	.855		
TL	.533	.602	.313	.467	.433	.419	.877	
PU	.490	.576	.415	.528	.464	.363	.573	.873
CC	.441	.492	.425	.593	.409	.517	.371	.380	.754

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Table 3. HTMT criteria.

	CP	DT	GPR	OM	OR	LA	TL	PU	CC
CP									
DT	.671								
GPR	.469	.551							
OM	.529	.679	.511						
OR	.515	.715	.601	.524					
LA	.474	.642	.408	.662	.553				
TL	.600	.678	.361	.540	.496	.477			
PU	.530	.623	.464	.592	.511	.397	.651		
CC	.460	.509	.457	.598	.427	.558	.392	.368	

Sourse: Compiled by the authors

Table 2 and 3 confirm the model's discriminant validity, meeting Fornell & Larcker (1981) and Henseler et al. (2015) criteria. Each construct's AVE square root exceeds inter-construct correlations, and all HTMT values are below 0.90, with most under 0.70. This ensures construct uniqueness and strengthens the measurement model's reliability.

3.2 Evaluation of the Structural Model

Table 4. Multicollinearity Assessment using VIF.

Construct/Items	Digital Transformation (DT)	Perceived Usefulness (PU)
TL	1.661	
LA	1.826	
OR	1.582	
CC	1.680	
OM	2.164	
GPR		1.218
CP		1.218
PU	1.789	
DT		

Sourse: Compiled by the authors

Multicollinearity Assessment using VIF: The results in Table 4 show that the VIF values are well below the critical value of 3.0, ranging from 1.581 to 2.076. This indicates no significant multicollinearity among the predictors, ensuring the stability of the structural model's estimates.

R-Square: This evaluates the explanatory power of the model. The adjusted R-Square is recommended as it accounts for the number of independent variables, providing a more accurate assessment of model fit. According to Table 5, the adjusted R-Square values are 0.638 for Digital Transformation, and 0.290 for Perceived Usefulness, indicating explanatory power of 63.8% and 29.0%, respectively.

F-Square: This assesses the impact of the independent variables on the dependent variable. According to the table, there are 5 relationships with small effects and 2 relationships with medium effects: Corporate Resources on Digital Transformation and Competitive Pressure on Perceived Usefulness. 1 relationship that have no significant effect and no relationship shows a large effect.

Table 5. Direct correlations between variables.

Effects	Hypothesis	Beta standardized	R-squared adjusted	P-Value	f-Value	Result
Effects on DT			.638			
by TL (+)	H1	.223		.000	.084	Accepted
by LA (+)	H2	.176		.000	.048	Accepted
by OR (+)	H3	.310		.000	.170	Accepted
by CC (+)	H4	.042		.310	.003	Not accepted
by OM (+)	H5	.163		.000	.035	Accepted
by PU (+)	H6	.138		.000	.030	Accepted
Effects on PU			.290			
by CP (+)	H8	.383		.000	.171	Accepted
by GPR (+)	H9	.253		.000	.074	Accepted

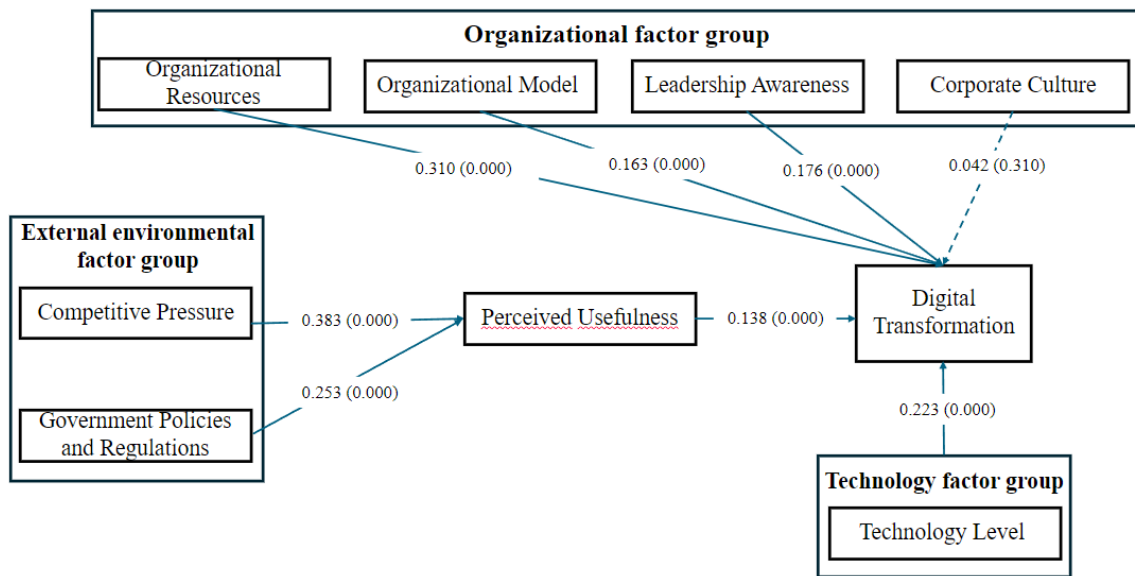**Sourse:** Compiled by the authors

3.3 Evaluation of Impact Relationships

The analysis results show that most of the relationships are statistically significant (P-value<0.05), with the exception of CC (β=0.042) has no significant effect, suggesting that cultural may require further strengthening or alignment to play a more impactful role in driving digital transformation in educational filed. Two variables impact Perceived Usefulness, namely Competitive Pressure (β=0.383) and Government Policies and Regulations (β=0.253).

Five variables significantly affect DT, ranked from strongest to weakest as follows: Organizational Resources, Technology Level, Leadership Awareness, Organizational Model, and Perceived Usefulness.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Fig. 2. Results of the Research Model

Sourse: Compiled by the authors

This research shows that the digital transformation capabilities of educational SMEs in Vietnam is significantly affected by both internal and external variables. Organizational Resources have the most substantial influence, since they are critical for strategy formulation, resource distribution, and fostering a climate favorable to digital transformation. Organizations with well qualified personnel and enough financial resources are more likely to succeed in executing digital transformation programs. The use of Learning Management Systems (LMS) or data analytics technologies markedly improves educational operations and increases competitiveness. Nevertheless, more than 80% of SMEs have difficulties stemming from obsolete infrastructure and constrained technology resources (Cuong et al., 2020).

Secondly, the research shows that technical advancement and competitive pressures are crucial catalysts for transition. The adoption of digital technologies such as Artificial Intelligence (AI) and the Internet of Things (IoT) has enabled Vietnamese universities and schools to augment teaching efficacy, enhance student engagement via personalized learning experiences, and optimize administrative processes (Bharadwaj et al., 2013). These technology improvements enhance operational efficiency and provide new opportunities for educational delivery and innovation, including remote learning and data-driven curriculum creation. Furthermore, AI and IoT have proven essential in promoting student-centered models that adjust to individual

learning requirements, thereby enhancing overall educational results and institutional competitiveness (Brynjolfsson & McAfee, 2014; Chien, 2018).

Thirdly, the research emphasizes the essential need of leadership knowledge and adaptable organizational structures as pivotal elements for effective digital transformation in educational institutions. A well-articulated strategic goal from leadership, along with a culture that fosters innovation, is essential. Educational institutions that establish explicit and open criteria for evaluating digital transformation projects have been shown to improve staff involvement and cultivate increased commitment to transformation initiatives (Westerman, Bonnet, & McAfee, 2014).

Fourth, competitive pressure is crucial in propelling digital change in educational institutions. In a more competitive educational landscape, institutions must develop and use digital solutions to sustain their relevance. Universities using e-learning systems and big data analytics have achieved significant benefits in student recruitment, engagement, and operational efficiency. Inability to adjust to these external influences may lead to a decline in market share and threaten long-term viability. Consequently, tackling these competitive difficulties is both a strategic need and an opportunity for educational institutions to excel in the digital era (Nita and Gutu, 2023).

Fifth, perceived usefulness is crucial in the digital transformation of educational institutions, as it directly affects the readiness of staff and leaders to embrace and execute digital solutions. When stakeholders clearly see the advantages of digital technologies, like better pedagogical techniques, heightened student involvement, and streamlined administrative operations, they are more inclined to adopt these innovations. The integration of technology such as Learning Management Systems, virtual classrooms, and data analytics tools in education and training may markedly enhance the learning experience, maximize resource use, and elevate institutional competitiveness. Venkatesh et al. (2003) assert that an increase in the perceived utility of a technology correlates with a higher probability of its adoption by persons within the company. As educational institutions increasingly depend on digital tools to address the changing needs of students and faculty, acknowledging the effectiveness of these tools is crucial for the success of digital transformation initiatives (Nita & Gutu, 2023).

The influence of corporate culture on the digital transformation of educational institutions has been minimal due to numerous distinct factors. In several educational institutions, the core culture often embodies the ideals and practices established by the founding members, which may develop gradually over time. These organizations often prioritize short-term objectives, operational efficiency, and resource optimization, hence minimizing the significance of CC as a principal catalyst for DT. Moreover, within the realm of education and training, digital transformation is mostly influenced by external forces, including market pressures, technical innovations, and the awareness and leadership of key decision-makers, rather than by the organizational culture itself. The emphasis on urgent operational requirements and the speed of cultural transformation often obstructs the capacity of CC to facilitate significant digital transitions within the industry.

4.1 Recommendations

1. Solutions for Improving Awareness:

To augment understanding of the utility of digital transformation in educational institutions, it is important to refine rules and regulations governing the creation and use of technology in educational processes, management, and operations. The government and regulatory agencies should implement mechanisms to promote digital transformation via tax policies and incentives that benefit educational institutions. This will enable firms to identify the strengths and possibilities afforded by digital transformation.

Educational institutions have to provide resources for staff training in skills and technology relevant to digital transformation. Engaging in training programs, attending digital transformation seminars, and asking experts to disseminate information can enhance understanding of the advantages of digital transformation. Such measures will result in improved job performance and the capacity to effectively address the requirements of students and stakeholders.

Effective internal communication is crucial. Educational institutions must to use internal communication channels, including newsletters and weekly emails, to provide precise, timely, and continuous information on the advantages and accessibility of digital transformation initiatives. By regularly disseminating success narratives and empirical instances of other institutions that have effectively executed digital transformation, educational institutions may excite and galvanize their personnel.

Facilitating experiential learning opportunities, such as trips to educational institutions that have experienced digital transformation, may provide useful insights. Moreover, institutions need to initiate pilot digital transformation initiatives inside designated departments, enabling personnel to engage with digital tools and solutions on a limited scale, consistent with their routine duties.

It is necessary to provide clear, user-friendly guidelines on digital tools, procedures, and laws, and to establish a dedicated staff to respond inquiries and give assistance. Moreover, implementing a round-the-clock feedback system to collect information from personnel would guarantee ongoing improvement and attentiveness to issues. Encouraging employee engagement in digital transformation is essential. Educational institutions may establish performance measures to incentivize people, teams, and departments who actively participate in and contribute to the digital transformation process. Acknowledging accomplishments in digital innovation will cultivate a culture of engagement and passion for transformation.

2. Solutions for Improvement Technology:

Educational institutions may partner with external technology companies to provide specialized training programs in IT and digital transformation for individuals at all levels, including management and operational staff. Acquiring professional counsel and consulting programs will facilitate the surmounting of early obstacles and provide institutions with the requisite expertise to begin effective digital transformation endeavors. Educational institutions need to derive insights from effective digital transformation frameworks used by other

enterprises. Conducting seminars, conferences, or experience-sharing initiatives will foster cooperation and facilitate knowledge exchange within the education sector.

Educational institutions must incorporate modern digital tools into pedagogy, including platforms such as Google, Kahoot, Quizlet, and virtual reality technology to augment participation and facilitate interactive, multimedia-rich educational experiences. Moreover, data-driven methodologies are crucial for enhancing student performance, enabling institutions to use analytics to monitor student progress, identify obstacles, and provide tailored assistance according to individual requirements. Collaborative learning need to be promoted via digital platforms like Microsoft Teams and Google Meet, enabling students and educators to collaborate on projects and tasks in real time. For instance, Figma or Canva for collaborative creative projects and presentations involving students and educators. Furthermore, curriculum development must include emerging technologies such as Artificial Intelligence (AI), robots, and automation, ensuring that students acquire the competencies necessary to succeed in a swiftly changing labor market. Educational institutions must engage in ongoing professional development for professors, including training programs on digital technologies, e-learning platforms, and online classroom management. Enhancing cooperation between educational institutions and parents is vital, facilitated by digital platforms that promote improved communication and support for kids' academic and personal development.

3. Solutions for Improvement Organizational Context:

Educational institutions must to design adaptable business models capable of swiftly responding to market fluctuations and emerging technology. This entails converting conventional activities into digital platforms, including e-learning and online student assistance services. These business models must integrate emerging technologies, like Artificial Intelligence (AI) and data analytics, to enhance accessibility and efficiently cater to students and stakeholders.

Employing data-driven management solutions will augment operational efficiency, including the administration of student information, curriculum delivery, and the enhancement of contact with students. Educational institutions must establish comprehensive budgets for investing in digital transformation initiatives, delineating the necessary expenditures for IT infrastructure, hardware, software, and networking, which are essential for facilitating digital operations.

Investing in training programs for employees to improve their digital competencies and project management skills is essential. Training must include training on data management, information security, and business analytics technologies to equip personnel for the digitalized educational landscape.

Acquiring IT professionals and personnel with digital competencies is essential to propel the digital revolution inside educational institutions. Leadership in these businesses must exhibit passion and devotion to digital change, fostering inspiration across the institution. This leadership strategy will exemplify the significance of digital technology for the whole team.

Consistent communication between leadership and personnel about the aims and advancements of digital transformation projects will guarantee that all individuals comprehend the goals and

can participate in the process. This will reduce worker resistance and enhance their engagement in digital projects.

Workshops and training sessions for leaders on the advantages and procedures of digital transformation should be conducted. By acquiring a comprehensive grasp of how technology may improve operational efficiency and competitiveness, educational leaders will be better prepared to guide their institutions through the digital transformation process.

The government and local authorities must persist in formulating and revising policies that promote and facilitate digital transformation in education. This include the provision of tax incentives, subsidies, or low-interest loans for digital transformation initiatives, as well as the streamlining of administrative procedures associated with the use of new technology.

Moreover, technical assistance and consultancy services from governmental bodies or technology corporations have to be accessible to aid educational institutions in their digital transformation initiatives. This assistance may include aiding organizations in formulating digital strategies, executing appropriate technology solutions, and surmounting technical obstacles.

Continuous monitoring, assessment, and feedback systems must be implemented to evaluate the advancement of digital transformation initiatives inside educational institutions. This will facilitate the prompt identification of difficulties and provide chances to modify policies and plans appropriately. Collaborating with specialist organizations to provide regular reports and evaluate the efficacy of assistance programs would enhance the optimization of digital transformation in the education sector.

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