**A Digitization Model in Ugandan Technical, Vocational and Education Training Institutions: An Agency Theory Perspective**

**Abstract**This research examines global digitization project success, emphasizing the contrast between developed and developing economies. While developed nations experience declining failure rates, developing economies, notably Uganda, grapple with a 70% project failure rate. Focused on Uganda's Technical, Vocational Education, and Training (TVET) institutions, the study investigates integrating digital technologies for skill enhancement. Applying Agency theory, it introduces a tailored model to mitigate project failures. Through a quantitative approach, variables (Goal conflict, Shirking, Communication, Task Programmability, Contract Type, Process Quality, and Digitization) contributing to improved success are identified. Results show positive responses, ensuring high overall validity and reliability. Cronbach's alpha exceeds 0.7 for all variables; lowest at 0.732. Convergent validity, exceeds 0.5 for independent variables. The validated model comprehensively addresses digitization success, highlighting risks related to shirking and goal conflict. Future research should explore these risks, examine contributing factors, and refine the guiding model for digitization investments.

**Keywords**

Agency theory, Digitization, Project failure, Uganda’s TVETs, Digitization Model

**1.0 INTRODUCTION**

Digitization is crucial in shaping a country's education system. Estonia and Finland exemplify the significance of technological innovation and quality enhancement in education (Kattel & Mergel, 2019). Estonia, known for technological innovation, leads in digitization, while Finland prioritizes digitization post-COVID-19 (Bogdandy et al., 2020).

However, global history shows persistent challenges in digitization, with Estonia succeeding in the public sector (Bravo et al., 2022). Developing economies struggle, with a 30% success rate in digitization projects (Fattah & Setyadi, 2021; Stoica, 2021).

Even Estonia faces challenges like digital exclusion, emphasizing the need for equitable technology access before widespread digitization (Drechsler, 2018). Effective communication of organizational change is crucial. Resource misallocation is critical, with $900 billion misallocated out of the $1.3 trillion spent globally on Digitization in 2018 (Sun, 2018). Uganda's 70% failure rate aligns with the global trend (Zobell, 2018), emphasizing the need to focus on critical tasks (Zobell, 2018)to achieve digitization.

In education, Uganda addresses challenges post-COVID-19 (Nakaziba & Ngulube, 2024). Integrating e-learning in TVET institutions requires tailored digital frameworks for practical skills training (Sani et al., 2023). Research aims to mitigate failure rates, introducing frameworks aligned with developed economies (Hanna, 2020; Kimuli et al., 2021).

Emphasizing quality in digitization is crucial, especially for TVETs with limited resources (Sampaio et al., 2022; Wang & Wang, 2022). These insights highlight the complexities, challenges, and opportunities in the global landscape of digitization, particularly in education and development contexts.

This study leverages agency theory to address the prevalent challenge of information asymmetry (Sternberg et al., 2022), employing its principles to enhance communication channels and bridge gaps among stakeholders, ultimately improving overall process quality (Sampaio et al., 2022). Furthermore, the research incorporates agency theory into the development of controls for initial agent conduct and the establishment of clear contractual arrangements.

Agency theory, a conceptual framework examining interactions between principals (those owning or controlling resources) and agents (those acting on principals' behalf), is essential for managing conflicts and information disparities in organizational relationships (Yimenu & Surur, 2019). The theory emphasizes aligning both parties' interests through effective incentives, clear contracts, and controls for agent conduct. In the specific context of the study on digitization projects in Ugandan TVET institutions, agency theory is foundational for understanding the dynamics between policymakers (principals) and the project implementation teams (initial agents).

After the completion of the project implementation teams' assignment as initial agents for digitization, educators and administrators transition into the role of subsequent agents. To implement controls for subsequent agent conduct, the study adopts monitoring mechanisms and performance metrics. These controls aim to ensure educators and administrators adhere to prescribed strategies, fostering accountability and aligning their actions with the overarching objectives of digitization projects. The research also underscores the significance of well-defined contractual arrangements, outlining roles, responsibilities, and expectations. This clarity contributes to effective governance, reducing the potential for conflicts, and enhancing project management practices.

In summary, the study, guided by agency theory, not only examines the theoretical framework but practically applies its principles to address challenges in Ugandan TVET institutions' digitization. By incorporating controls and clear contracts for both initial and subsequent agents, the study aims to minimize project failures and create an environment conducive to successful digitization initiatives, offering valuable insights to readers new to the theory and the specific context.

**1.1 Digitization in Uganda**

In the context of Ugandan TVETs, the challenges posed by infrastructure limitations and financial constraints are emphasized, presenting significant challenges to effective digitization (Ismail et al., 2022; Oviawe, 2017). Governance issues and policy implementation gaps are noted as factors affecting the successful transition of TVET graduates into the labor market, contributing to the challenges in seamlessly integrating digital technologies into the educational framework (Kintu, 2019).

Digitization in Ugandan TVETs plays a pivotal role in redefining the learning experience by breaking down complex learning components, making education more manageable and accessible throughout learners' lives (ILO, 2020). The incorporation of digital tools and technologies in learning and teaching, along with essential training for instructors, is highlighted as a critical need to effectively advance digitization in Ugandan TVETs (Holler et al., 2023; Teis & Christo, 2021). The necessity of digital literacy is emphasized for both learners and instructors to leverage tools effectively, addressing challenges and improving employability and outcomes in the TVET sector (Ismail et al., 2022).

**2.0 LITERATURE REVIEW**

IT Governance Frameworks comprise structures, processes, and relational mechanisms within an organization. Their purpose is to align Information Technology and business operations, promoting value creation from IT-enabled procurements and investments (de Haes & van Grembergen, 2009). Previous research highlights the strategic domain's significant impact on IT Governance performance in TVET institutions (Khalil & Belitski, 2020). This study validated this assertion within the context of Ugandan TVET institutions. This section explores selected frameworks considered in this study.

## 2.1 IT GOVERNANCE MODELS AND FRAMEWORKS

ITIL Version 4 offers a wide array of management service practices that can adapt and work with existing frameworks (José et al., 2013; Moudoubah et al., 2021). Its service categorization into areas like Service Design and Strategy, Service Operation, Service Transition, and Continual Service Enhancement is robust (Nyeko, 2019). However, within Uganda's distinctive educational environment, particularly in TVETs, there's a notable gap: ITIL lacks specific guidance on aligning processes, structures, and relational mechanisms essential for optimal IT-business orientation and alignment (Wulandari & Buliali, 2019), necessary for improved success of digitization projects.

COBIT, might not singularly meet business and IT alignment needs and is best applied in conjunction with other frameworks (Moudoubah et al., 2021; Zhang & Zhou, 2014) leveraging the strengths of multiple frameworks, addressing various aspects of digitization and control more comprehensively. This frameworks complexity could overwhelm resource-limited TVET institutions (Mutebi & Ferej, 2023; Okumu & Bbaale, 2019).

The COSO framework lacks quantitative aspects as its focus, which are needed to assess and improve project success (Gomes & Romão, 2023) in Ugandan TVETs. Adapting the COSO framework for TVETs may support improved success of digitization projects (Riyadi et al., 2021) mainly focusing on managing risks and controls comprehensively (Horwath et al., 2012).

The rigid structure and reliance on predefined templates make the Projects IN Controlled Environments (PRINCE2) methodology, unsuitable for the dynamic environment within Ugandan TVETs' digitization projects (COOKE, 2016; Hughes et al., 2017).

The National IT Project methodology, tailored for managing IT projects overlooks guidance on monitoring process quality, a critical factor for successful digitization. Additionally, its linear approach to IT governance doesn't align well with the multifaceted and complex nature of digitization initiatives.

**2.2 CONCEPTUAL MODEL**

Building upon prior research (Mahaney & Lederer, 2011), this study introduces a Model that addresses gaps in comprehending the relationship between digitization and project success (Joshi et al., 2022), aligning with the insights from Agency Theory that emphasize high quality, effective organizational processes (Jackson, 2024). The framework incorporates crucial elements, including goal conflict, communication, shirking, task programmability, and contract type, with a central focus on "Process Quality" as a pivotal mediating influence in the success of digitization projects in Ugandan TVETs (Berthon et al., 2002; Ozili, 2023).

Drawing inspiration from both the DeLone and McLean theory and the Dynamic Capabilities theory, the conceptual model herein enhances our understanding of the aspects influencing digitization projects in the TVET context. The framework envisions the improvement of Digitization Projects in Ugandan TVETs through effective IT governance processes (Joshi et al., 2022). In accordance with the agency theory discussed above, the framework emphasizes that, for successful digitization projects, principals should prioritize the highest quality in each process (Joshi et al., 2022) managed by the agents with support from top management (the principal). Decision-making at all stages of the transformation process underscores the significance of clear communication to minimize goal conflicts. This conceptual Model, rooted in agency theory principles, provides critical inferences for enhancing successful digitization within the unique context of Ugandan TVETs.

Furthermore, Task programmability plays a crucial role by outlining tasks in advance during the planning phase (Joshi et al., 2020).

**Goal Conflict**

* Politics
* Power
* Policy

H1b

**Shirking**

* Multiple Projects
* Time on other tasks

H2

**Process Quality**

* Monitoring
* Top Management Participation

**Digitization**

* IT asset use
* User Satisfaction

H1a

H5a H5b H5c H5d

H7

H3

**Communication**

* Under Reporting
* Information Asymmetry
* CIO/CEO relationship

H4

H6

**Contract Type**

* Outcome oriented contracts
* Behavior Oriented Contracts

**Task Programmability**

* Defined Processes
* Execution Methodology

*Figure 1: Showing the conceptual model for successful digitization projects derived from Mahaney and Lederer, (2003).*

**3.0 RESEARCH METHODS**

This paper employed quantitative methods to explore factors influencing the success of digitization in TVET institutions. Quantitative data underwent analysis using SPSS v22. The study utilized the Smart-PLS method within Structural Equation Modeling for factor analysis. The research followed a pragmatist approach, using abductive methodology, to refine the conceptual model. Overall, it conducted a descriptive field study, to derive a tailored model for enhancing digitization success in TVET institutions.

**3.1 RESEARCH DESIGN**

This inquiry adopted Design Science Research (DSR) as its research methodology to develop the Model for Digitization in Ugandan TVETs, conceptualized as a strategy to advance digitization in these institutions. The study investigated various aspects including project adherence to schedules, impact on teaching and administrative tasks, reported errors, CEO-CIO relationships, quality of interventions, process quality, user satisfaction, contract types, policy influence, task programmability, and activities related to implementation team shirking. Hour-long questionnaires were administered.

This study adopted quantitative research methods within the framework of pragmatism and design science research (Vom Brocke et al., 2020; Hevner et al., 2004) principles. To develop the model, quantitative data was gathered through a structured questionnaire administered to key stakeholders in TVET institutions (Baskerville, 2022), utilizing both Krejcie and Morgan Sample Size Determination and purposeful sampling. There was a total of 177 participants in this study. Statistical methods such as Structured Equation Modelling (SEM) and Partial Least Squares (PLS-SEM) were used for the analysis of the quantitative data collected in this study. The sampling methods encompass purposive, random, and critical case sampling, focusing on six Centres of Excellence selected by the government for digitization efforts. This multifaceted approach ensured a robust and comprehensive exploration of the Digitization Projects' success in TVET institutions.

**3.2 DATA COLLECTION**

Structured interviews were conducted across all 12 newly digitalized technical colleges in Uganda, engaging 177 participants in total, all from Ministry of Education and Sports officials, College Principals, administrators, technical instructors, IT heads, and students. Of these, data from 100 participants were fit for analysis after carrying out a missing value analysis so as to alleviate misleading results. These institutions were selected to represent diverse specialties and sizes, ensuring a comprehensive understanding of digitization management. All twelve colleges agreed to participate, and the interviews employed open-ended questions to gather insights on project implementation, monitoring processes, and project goals.

**3.3 INTERNAL CONSISTENCY**

The table below shows the Composite Reliability (CR) and Cronbach Alpha (CA) values for the constructs and their variables. These values, exceeding 0.70, indicate meeting the standards for internal consistency (Hair et al., 2021).

|  |  |  |  |
| --- | --- | --- | --- |
| Constructs | Composite Reliability (CR rho-A) | Composite Reliability (CR rho-C) | Cronbach’s Alpha (CA) |
| Criteria | 0.818 | 0.818 | 0.724 |
| Politics | 0.886 | 0.904 | 0.872 |
| Power | 0.889 | 0.886 | 0.831 |
| Counterproductive multitasking | 0.93 | 0.936 | 0.92 |
| Self-deployment | 0.886 | 0.917 | 0.855 |
| CEO-CIO Relationship type | 0.938 | 0.940 | 0.916 |
| Information Asymmetry | 0.855 | 0.871 | 0.783 |
| Outcome Oriented contract | 0.734 | 0.882 | 0.732 |
| Behaviour Oriented contract | 0.92 | 0.917 | 0.879 |
| Monitoring & Evaluation | 0.963 | 0.908 | 0.878 |
| Top Management Participation | 0.991 | 0.929 | 0.893 |
| IT Resources Usage | 0.868 | 0.909 | 0.867 |
| User Satisfaction | 0.845 | 0.904 | 0.839 |

*Table 1: Showing composite Reliability (CR) and Cronbach Alpha (CA) values for the constructs and their variables*

**4.0 EXPLORATORY AND CONFIRMATORY FACTOR ANALYSIS**

Smart PLS software was employed to analyze this data to verify the conceptual framework and to test the hypotheses. The partial least squares (Smart PLS) software was used to analyze the measurement and structure of the research framework (Castellanos, 2021).

Results in this study have shown that despite the College principals' extensive experience (averaging 15 years), they had limited digitization exposure. This too was detrimental to the amplification of digitization success in these TVET institutions. Table 2 provides details of the level of education of the respondents in this study.

|  |  |  |
| --- | --- | --- |
| Highest level of Education | Frequency | Percent% |
| Bachelor’s Degree | 30 | 30 |
| Certificate | 31 | 31 |
| Diploma | 15 | 15 |
| Master’s Degree | 16 | 16 |
| Post Graduate Diploma | 7 | 7 |

*Table 2: Table showing the Highest level of education for each of the respondent categories*.

The total cost of the digitization effort for digitizing the 12 TVET institutions was $1,271,408.16. This study highlighted that most institutions lacked a skilled IT manager or CIO, who is trained and skilled in ICT. In situations where one was present, only one CIO had the requisite ICT skills and had a positive relationship with the CEO, greatly impeding the advancement of digitization as revealed in the results of this study. The position for an officer in charge of ICT was filled by someone assigned to manage the role without requisite training, as observed in several instances. Table 3 below shows the titles and responsibilities of the respondents in this survey.

|  |  |  |
| --- | --- | --- |
| Job description | Frequency | Percent% |
| Academic Registrar | 7 | 7 |
| Commissioner TVET | 1 | 1 |
| Head of Division or Department | 19 | 19 |
| Head of ICT | 4 | 4 |
| ICT Officer Institution | 7 | 7 |
| Institution Principal | 7 | 7 |
| Instructor at TVET institution | 8 | 8 |
| Principal Officer TVET | 2 | 2 |
| Project Implementer | 1 | 1 |
| Project Supervisor | 2 | 2 |
| Student | 42 | 42 |
| Total | **100** | **100** |

*Table 3: Table showing the titles and responsibilities of the respondents in this survey.*

The findings in this study emphasized the pivotal relationship between the CIO and CEO in influencing digitization outcomes. Moreover, the study revealed that the project implementation team juggled multiple projects simultaneously (Shirking), including construction, agriculture, furniture procurement, vehicle acquisition, and infrastructure refurbishment. Consequently, the digitization projects suffered due to limited attention, with construction projects predominantly occupying the focus on monitoring and process quality as seen in the field study findings.

**4.1 Confirmatory Factor Analysis results for Goal Conflict**

The CFA for Goal conflict is as presented in figure 4 below. Three factors (Power, Criteria and Politics) were retained after the construct, ‘Policy’ and all its indicators were deleted.

**4.2 Reliability and Validity for Goal Conflict**

Scores (Cronbach’s Alpha) above 0.7 were deemed satisfactory. To complement Cronbach’s alpha, Average Variance Extracted (AVE) above 0.5 for all factors and Heterotrait-Monotrait ratio (HTMT) below 0.85 for each pair of constructs, was confirmed.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Cronbach’s Alpha | CR | CR | AVE | HTMT |  |
|  |  | **rho-A** | **rho-C** |  | **Criteria** | **Politics** |
| Criteria | 0.724 | 0.818 | 0.818 | 0.624 |  |  |
| Politics | 0.872 | 0.886 | 0.904 | 0.616 | 0.494 |  |
| Power | 0.831 | 0.889 | 0.886 | 0.666 | 0.562 | 0.52 |
| *Model Fit Indices: SRMR=.0091, d\_ULS=.756, d\_G=.313, Chi-square=178.257, NFI=.756* | | | | | | |

*Table 4: Showing the test results for Reliability and Validity for Goal Conflict*

**4.3 Reliability and Validity for Communication**

The results in table 5 show that the AVE for all the factors is greater than 0.5 and the HTMT ratio is greater than 0.2 but below 0.85 as was postulated by Henseler et al, (2015).

Table 5 confirms the discriminant validity of the two factors. Furthermore, the SRMR of 0.079 for Communication falls within the acceptable range for the SRMR index which is between 0 and 0.08 (Hu and Bentler, 1999) showing a good model fit for the measurement model for Communication.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Cronbach Alpha | CR | CR | AVE | HTMT |
|  | **rho-A** | **rho-C** | Information Asymmetry |
| CEO-CIO Relationship Type | 0.916 | 0.938 | 0.940 | 0.798 |  |
| Information Asymmetry | 0.783 | 0.855 | 0.871 | 0.695 | 0.594 |
| *Model Fit Indices: SRMR=.079, d\_ULS=.173, d\_G=.091, Chi-square=57.669, NFI=.870* | | | | | |

*Table 5: Showing the test results for Reliability and Validity for Communication*

**4.4 Confirmatory Factor Analysis results for Contract Type**

The CFA for Contract Type is as presented in figure 6 below. Two factors (Outcome Oriented and Behavior Oriented) were retained after analysis.

**4.5 Reliability and Validity for Contract Type**

The results below show that the indicators retained in the summary of the measurement model of Contract Type guarantee both reliability and validity. The Table 6 below shows that for both Outcome and Behaviour Oriented contract indicators the Cronbach’s Alpha value after testing for reliability is higher than 0.7, showing compliance with internal consistency. These indicators were later found not to be significant when establishing the structural model.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Cronbach Alpha | CR | CR | AVE | HTMT |
|  | **rho-A** | **rho-C** | Behavior Oriented |
| Outcome Oriented | 0.732 | 0.734 | 0.882 | 0.789 |  |
| Behavior Oriented | 0.879 | 0.92 | 0.917 | 0.735 | 0.488 |
| *Model Fit Indices: SRMR=.072, d\_ULS=.108, d\_G=.085, Chi-square=54.420, NFI=.820* | | | | | |

*Table 6: Showing Reliability and Validity Measures for Contract Type*

**4.6 Reliability and Validity for Process Quality**

The results in table 7 below demonstrate that the indicators retained in the summary of the measurement model of Process Quality guarantee both reliability and validity.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Cronbach’s Apha | CR | CR | AVE | HTMT |
|  | **rho-A** | **rho-C** | Top Management Participation |
| Monitoring & Evaluation | 0.878 | 0.963 | 0.908 | 0.769 |  |
| Top Management Participation | 0.893 | 0.991 | 0.929 | 0.813 | 0.167 |
| *Model Fit Indices: SRMR=.079, d\_ULS=.152, d\_G=.141, Chi-square=92.099, NFI=.746* | | | | | |

*Table 5.25: A table showing Reliability and Validity of Measures for Process Quality*

Convergent validity and discriminant validity were assured. AVE for both factors is over 0.5 and the HTMT for both constructs is below 0.85 (Henseler et al., 2015) as the thresholds for the HTMT ratio.Additionally, the SRMR of 0.077 in table 5.22 falls between the allowable range for the SRMR index between 0 and 0.08 (Hu & Bentler, 1999).

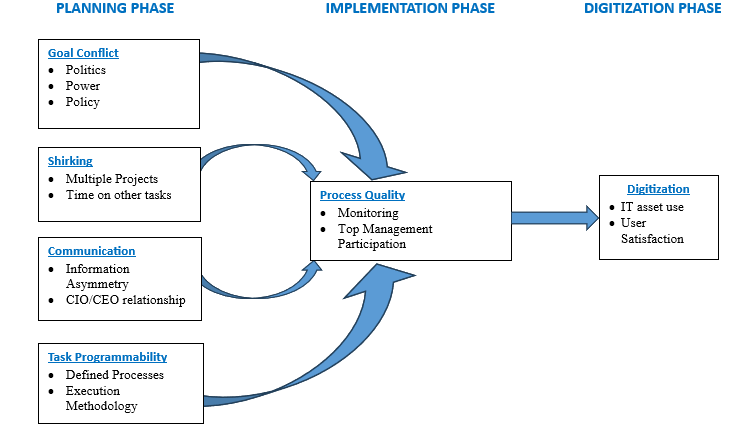
**4.7 Reliability and Validity for Digitization**

The results in table 8 below show that the indicators retained in the summary of the measurement model of Digitization guarantee both reliability and validity. Furthermore, the AVE for all factors is over 0.5 and the HTMT for the construct pair in table 8 is below 0.85.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Cronbach’s Alpha | CR | CR | AVE | HTMT |
|  | **rho-A** | **rho-C** | **IT Resources Usage** |
| IT Resources Usage | 0.867 | 0.868 | 0.909 | 0.715 |  |
| User Satisfaction | 0.839 | 0.845 | 0.904 | 0.759 | 0.824 |
| *Model Fit Indices: SRMR=.069, d\_ULS=.261, d\_G=.192, Chi-square=123.372, NFI=.749* | | | | | |

*Table 8: A table showing the Reliability and Validity of ‘Digitization*

**5.0 THE PROPOSED MODEL FOR DIGITIZATION**   
This section presents a comprehensive model specifically tailored to guide Ugandan TVETs and related organizations through the details of the digitization project journey.



*Fig. 1: Model for digitization in Ugandan TVETs.*

This newly created model incorporates the planning, implementation and transformation phases of digital change. It integrates established practices from the Agency theory, theoretical insights from the DeLone and McLean Theory and practical considerations to offer a visual roadmap that Ugandan TVETs and similar organizations can follow.

**5.1 Applicability of the model**

The model for digitization seen in figure 1 presents clear model guidelines for project execution, adherence to clear procurement rules from start to finish, and clear specifications designed by the IT experts for Digitization procurements respectively. The Success of Digitization Projects (SDTP) model is designed to improve digital initiatives in Ugandan Technical and Vocational Education and Training (TVET) institutions. It helps align project goals with the institution's objectives, promotes effective communication, identifies areas for automation and efficiency, encourages engagement from all stakeholders, emphasizes continuous progress monitoring, and it supports quality assurance for process quality and continuous improvement. This highlights the importance of building digital skills, and guides the measurement of project success. Applying this model systematically provides a structured approach to improving and increasing the chances of success in digitization projects within TVETs.

The model variables assist in decision-making, engaging stakeholders, and allocating resources, ultimately leading to successful implementation and positive project outcomes. In conclusion, this ‘Success of Digitization Projects’ model offers a robust and comprehensive approach to improving IT project governance and success. By aligning project goals with organizational objectives, emphasizing effective communication, and promoting task programmability and automation, the model provides valuable insights for IT project managers. Monitoring progress, ensuring quality assurance, and promotion of continuous improvement align with essential aspects of IT project governance. The emphasis on capacity building for digitization and the measurement of success through defined Key Performance Indicators (KPIs) further contribute to the model’s applicability in enhancing IT project outcomes. Integrating this model into IT project governance practices provides a structured and adaptive methodology, enhancing the likelihood of successful IT project implementation and fostering positive organizational outcomes for TVETs.

**6.0 DISCUSSION OF FINDINGS**

This study showed what makes these projects work well. The leaders (Principals) play a big role, but just checking ongoing work (Monitoring) and evaluating work completed isn't enough. This seems to have been the case for such projects. Four main problems: unclear contracts, not watching for issues, undesirable internal politics (poor CEO-CIO relationships) within the institutions, and not planning tasks well are the reason for poor digitization outcomes. As found in this study, project implementation teams at the institution don't use contracts focused on outcomes, which turned out to be the same with the Project Coordination team that implemented the project. This explains the removal of the ‘contract type’ construct as earlier proposed in the conceptual model. Good teamwork and preventing slacking off (Shirking) were very important for success, just like previous studies showed. We discovered that having clear roles and responsibilities was crucial, not just planning tasks. Confusion in who does what and when, in these areas made it hard to ensure everything went smoothly. We introduced a new idea called "Process quality." It means doing each step (process) of the project well. We found that success depends on doing each step right. In Uganda, contracts based on outcomes aren't as important because fixed-wage worker engagements are common. In short, our research challenges previous thoughts. It highlights that good communication, and not just privately held information, clear roles and responsibilities, and doing each step well (Process Quality) are key to successful digitization in TVETs. Our findings, while building on past studies, differ on the importance of Contract Type. This study also found that a good relationship between the CEO and the CIO amplifies digitization success. Overall, we found that focusing on doing each step well—good communication, clear roles defined, and getting tasks right (Task programmability) and a healthy CEO-CIO relationship—is crucial for success in making digitization work in TVETs.

**7.0 CONCLUSION AND RECOMMENDATIONS**

Our study actively applied Agency theory to identify the prerequisites for tailored digitization and proposing model to actively fortify digital initiatives within learning institutions. Using design science, we constructed a purpose-specific model firmly rooted in Agency theory, pivotal for driving digitization. This study illustrates how Agency theory applies to understanding the limitations of digitization, aligning with and complementing prevailing research in this domain. Rather than conflicting, it harmonizes with these studies, providing insights at various levels and equipping us with a model to comprehend the research and failures of such projects within developing economies. Leveraging Ugandan TVETs as a case study, the results hold applicability across diverse contexts. While monitoring and evaluation of the digitization projects are important, mere oversight isn't enough. In concluding, unclear contracts, limited issue monitoring, internal politics, CEO-CIO challenges and task planning issues stand out as critical to the enhancement of project success. Clearly defining roles and emphasizing "Process quality" are crucial, especially in Uganda's context with prevalent fixed-wage contracts. Our study challenges conventional beliefs, highlighting the significance of communication, defining roles and responsibilities for digital success in TVETs. Excelling in each phase—communication, roles, and tasks—is crucial. Prioritizing quality processes, nurturing a healthy CEO-CIO relationship and addressing conflicts in project goals between principal and agent can significantly reduce the agency problem and digitization failures in Uganda, aligning with our study's objective.

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