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Digital Transformation of Communities in Nigeria Using Organizational Development: Case Study of SEED ICT Hub Nguzu Edda

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Abstract

The digital transformation of communities in Nigeria is exemplified by the SEED ICT Hub in Nguzu Edda, which is a project aimed at bridging the digital divide in rural areas. This initiative, led by the Sowing Empowerment for Edda Development (SEED), seeks to enhance digital literacy, economic opportunities, and educational outcomes for the community. The project addresses the significant disparities in access to technology and digital literacy, which are critical for community development and empowerment. SEED, as a civil society organization, launched the ICT hub to provide comprehensive training in information and communication technologies (ICT) to students and community members. The hub aims to improve digital skills, access information, economic empowerment, and educational advancement.

By integrating ICT into education and local businesses, the hub enhances economic growth and social inclusion, and Organizational Development (OD) plays a crucial role in this transformation. OD strategies such as strategic alignment, change management, capacity building, process optimization, and performance management are essential for leveraging digital technologies and fostering innovation. The SEED ICT Hub employs these principles to ensure that digital transformation initiatives align with broader organizational goals and community needs and faces several challenges, including security concerns and low initial ICT literacy levels among students. Measures such as enhancing security and providing foundational training were implemented to address these issues.

The hub's sustainability is ensured through continuous community engagement, local partnerships, and adaptive strategies, which include community engagement, capacity building, local partnerships, sustainability efforts, and continuous monitoring and evaluation. These lessons highlight the need for a holistic approach that integrates technology with broader development goals. The SEED ICT Hub in Nguzu Edda demonstrates how organizational development can drive digital transformation, enhancing digital literacy and empowerment in rural communities. A project's success provides a model for similar initiatives and underscores the importance of sustained support and stakeholder involvement in achieving long-term goals.

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Introduction

The advent of the digital age has necessitated a transformation in communities worldwide to foster skills that are crucial for economic and educational advancement. In Nigeria, where digital literacy remains a significant challenge, initiatives such as the SEED ICT Hub in Nguzu Edda are pivotal. This article examines the efforts of Sowing Empowerment for Edda Development (SEED) in establishing an ICT hub to empower the community through digital education, focusing on the project's inception, challenges, and prospects for future development.

Civil society organisations (CSOs) play a critical role in bridging the digital divide in developing countries. SEED, a prominent CSO in Nigeria, launched the Nguzu ICT Hub to provide comprehensive ICT training to students and community members. This initiative is designed to serve as a catalyst for community transformation, enhancing the digital literacy and employability of youth and adults in Nguzu.

Background

The digital age has ushered in an era of unprecedented connectivity and access to information, transforming the way societies function across the globe (Fonseca & Domingues, 2017; Werthner, 2023). However, Basu (2016) identified that this digital revolution has highlighted significant disparities in access to technology and digital literacy, particularly in developing countries. Organizational development, as explained by Sanchez (2017), encompasses the strategies and processes that organisations use to improve their effectiveness and achieve their goals. It plays a crucial role in addressing these disparities and fostering digital transformation in communities. Ndulu et al. (2023) pointed out that digital transformation refers to the integration of digital technology into all areas of a community or organisation, fundamentally changing how they operate and deliver value to stakeholders. This process goes beyond mere digitisation of existing processes; it involves a cultural shift that requires organisations and communities to continually challenge the status quo, experiment with new technologies, and adapt to changing circumstances (Belolipetskaya et al., 2020; Ifenthaler et al., 2021b).

Petzolt et al. (2022) note that the importance of digital transformation in communities cannot be overstated. It enhances access to education, healthcare, economic opportunities, and social services, thereby improving the quality of life. Digital platforms can provide educational

resources to remote areas, telemedicine can offer healthcare services to underserved populations, and digital marketplaces can connect local businesses to global markets. Sacoto-Cabrera and Perez-Torres (2023) opined that digital transformation acts as a catalyst for social and economic development.

Organizational Development in the Context of Digital Transformation

Tsaples et al. (2024) stated that the contemporary era, marked by rapid technological advancements and pervasive digital integration, has fundamentally reshaped the way organisations operate. This seismic shift necessitates a comprehensive approach to organizational development (OD) to effectively navigate the complexities of digital transformation. OD, traditionally focused on improving an organisation's overall health and effectiveness, must now also encompass strategies for leveraging digital technologies to foster innovation, enhance efficiency, and drive competitive advantage (González-Varona et al., 2021; Shani & Noumair, 2021). According to Shani et al. (2021), organisational development is a systematic, planned effort to increase an organisation's relevance and viability. It involves a variety of interventions and strategies designed to improve the processes, structures, and cultures within an organisation. Schwanholz et al. (2017) pointed out that the primary goals of OD include enhancing organizational performance, fostering adaptability, and promoting continuous improvement. The key components of an OD typically include strategic planning, change management, leadership development, and performance enhancement.

Digital Transformation: A Paradigm Shift

Ndulu et al. (2023) refer to digital transformation as the integration of digital technology into all areas of an organisation, resulting in fundamental changes to how the organisation operates and delivers value to its stakeholders. Ifenthaler et al. (2021a) argued that this transformation goes beyond mere digitisation of existing processes; it requires rethinking organizational models, processes, and customer interactions to harness the full potential of digital technologies. De Mattos et al. (2024) highlighted the core elements of digital transformation, including the adoption of advanced technologies (such as artificial intelligence, cloud computing, and the Internet of Things), data-driven decision-making, and a customer-centric approach.

The Intersection of OD and Digital Transformation

The convergence of OD and digital transformation represents a strategic alignment that can significantly enhance organizational agility and resilience (Adekunle et al., 2024; Nkomo & Kalisz, 2023). The following are the key areas where OD principles can be applied to facilitate digital transformation:

Strategic Alignment: OD ensures that digital transformation initiatives are aligned with the organisation's strategic goals (Gehde et al., 2022). This involves developing a clear vision and roadmap for digital adoption that supports broader organizational objectives.

Change Management: Digital transformation often entails significant changes in organizational processes, structures, and culture (Otto et al., 2019). Effective change management strategies, a cornerstone of OD, are crucial for managing these transitions smoothly. This includes preparing employees for change, addressing resistance, and fostering a culture embracing innovation.

Capacity Building: OD focuses on enhancing the skills and capabilities of the workforce. In the context of digital transformation, training and development programs are provided to equip employees with necessary digital skills (Hippmann et al., 2019; Neugebauer, 2019). Capacity building also includes developing digital leadership skills to guide and sustain transformation.

Process Optimisation: OD methodologies can be used to streamline and optimise organizational processes to take full advantage of digital technology. This involves reengineering processes to eliminate inefficiencies and leverage automation and data analytics for better decision-making (Petzolt et al., 2022).

Howard-Grenville et al. (2011) noted that a key aspect of digital Transformation is fostering a culture of continuous innovation and learning. OD interventions can help shape an organizational culture that supports experimentation, risk-taking, and adaptability. This cultural shift is essential for sustaining long-term digital transformation (Matyushkina 2023; Reckwitz 2002).

Performance Management: Tomasi et al. (2013) explained that Organizational Development emphasises the importance of measuring and managing performance. In a digitally transformed organisation, performance metrics must be aligned with digital

objectives. This involves the development of new KPIs that reflect digital maturity and impact (Hawash et al., 2020; Shirouyehzad et al., 2017).

Case Study: SEED ICT Hub Nguzu Edda

The Sowing Empowerment for Edda Development (SEED) ICT Hub in Nguzu Edda represents a visionary initiative aimed at bridging the digital divide in rural Nigeria. This project seeks to empower the local community through enhanced access to information and communication technologies (ICT), thereby fostering economic growth, educational advancement, and social inclusion. The rationale for this hub is grounded in the pressing need to address existing disparities in digital access and literacy, which are critical to the overall development and empowerment of the community. The SEED ICT Hub in Nguzu Edda, Nigeria, exemplifies how organizational development can drive digital transformation in a community.

The digital divide refers to the gap between those who have easy access to the Internet and digital technologies and those who do not. In Nigeria, this divide is particularly pronounced in rural areas, such as the Nguzu Edda, where infrastructure and resources for ICT are severely lacking. The SEED ICT Hub aims to mitigate this gap by providing the necessary facilities, training, and support to ensure that community members can engage with and benefit from digital technology.

Key Objectives:

- Improving Digital Literacy: Providing basic and advanced ICT training to enhance the digital skills of community members.
- Access to information: This ensures that residents have access to global information resources, which can enhance education, business opportunities, and overall quality of life.
- Economic Empowerment: Enabling individuals to leverage ICT for entrepreneurial activities, thus fostering economic growth within the community.
- Educational Advancement: Supporting local schools and students by integrating ICT into their curriculum and providing access to online educational resources.

The Rationale for the ICT Hub

The introduction of an ICT hub is a strategic move to stimulate economic growth in Nguzu Edda. By equipping residents with digital skills, the hub opens new avenues for income generation. For instance, individuals can engage in online businesses, freelance work, and other digital economic activities that were previously inaccessible. Furthermore, local businesses can use ICT to improve their operations, reach a broader market, and increase their competitiveness.

Education is a cornerstone of development, and the SEED ICT Hub seeks to enhance the educational outcomes in Nguzu Edda by integrating ICT into the learning process. The hub provides students and teachers access to a wealth of online educational resources, facilitating a more interactive and engaging learning experience. Additionally, the hub offers specialised training programmes that prepare students for ICT-related careers, thereby expanding their future employment prospects.

One of the fundamental goals of the SEED ICT Hub is to promote social inclusion by ensuring that all community members, regardless of age, gender, or socioeconomic status, can benefit from digital technology. This involves creating a welcoming and supportive environment in which individuals can learn at their own pace and access the resources they need to thrive in the digital age. Sustainability of the SEED ICT Hub is paramount to its long-term success. This involves ensuring the continuous operation and maintenance of the hub and fostering a culture of digital literacy and innovation within the community. Future plans include expanding the hub's services, developing partnerships with local and international organisations, and continuously adapting to emerging technological trends.

Major Activities Undertaken

1. **Recruitment of an ICT Facilitator**: A pivotal first step was hiring an ICT Facilitator, Mr. Joseph Uka. His extensive experience in technology-driven teaching environments is essential for the success of training programs. Joseph's role involves designing and delivering effective training modules tailored to the community's needs.

2. **Setting/Installation of Equipment**: The setup phase involved the installation of essential ICT equipment, including computers, solar systems, access control devices, and internet connectivity solutions. These infrastructures are fundamental to the hub's functionality,

enabling digital classes and access to online learning resources, especially for those in exam classes. The installation process was completed efficiently, ensuring that the systems were optimised for student and community use.

3. **Registration of Students with Ulesson**: To enhance the educational strategy, students were registered with Ulesson, an online learning platform offering diverse educational content. This platform provides interactive tools and practice quizzes, particularly for students preparing for exams.

4. **Initial Student ICT Knowledge Assessment**: Before commencing formal training, an initial assessment of the students' ICT knowledge was conducted. This evaluation mapped out the existing skill levels within the student population, serving as a baseline for measuring future progress and effectively tailoring training programs.

Challenges Encountered

1. **Security Concerns**: The project faced challenges related to security, particularly the safety of equipment and students. Additional security measures, including the installation of surveillance cameras and engagement of neighbourhood security personnel supported by the Nguzu community, were implemented to address these concerns.

2. **Poor Performance in Initial Assessments**: The initial assessments revealed that many students had limited prior exposure to ICT (15% digital literacy), resulting in generally low scores. This outcome highlights the necessity for a foundational phase in the training program, where students could gain basic computer literacy before advancing to more complex topics.

Next Steps and Future Plans

Sustainability is a key consideration for the digital transformation of communities. The inauguration of an oversight committee and the introduction of early ICT education platforms are steps towards ensuring the long-term sustainability of the ICT hub. Continuous support from stakeholders and adaptive strategies to meet evolving needs are crucial for project success.

Lessons Learnt

1. **Community Engagement is Crucial**

Lessons: Effective community engagement is essential for the success of any development project. From the outset, the involvement of local leaders, residents, and other stakeholders helped build trust and ensure that the project met the needs of the community.

Application: Future projects should prioritise early and continuous engagement with the community to foster a sense of ownership and ensure that the project is tailored to local needs. Regular meetings, workshops, and feedback sessions can help maintain engagement.

2. **Capacity Building is Key**

Lesson: Providing training and capacity-building programs is crucial for ensuring that community members can effectively use new technologies. This not only improved digital literacy but also empowered individuals to leverage ICT for personal and economic growth.

Application: Capacity building is a core component of ICT projects. Comprehensive training programs that cater to different skill levels and ongoing support to reinforce learning are essential to maximise the impact of digital initiatives.

3. **Importance of Local Partnerships**

Lessons: Collaborating with local organisations, schools, and businesses was instrumental in the project's success. These partnerships provided valuable resources, expertise, and support to enhance project sustainability.

Application: Establishing strong local partnerships from the beginning can provide critical support and enhance a project's integration into the community. Future projects should actively seek and cultivate these relationships.

4. Sustainability Requires Ongoing Effort

Lessons: Ensuring the long-term sustainability of the ICT hub involves more than just the initial setup. Continuous efforts are needed to maintain infrastructure, update technologies, and provide ongoing training and support.

Application: Sustainability plans should be integral to project design and include provisions for ongoing funding, maintenance, and community involvement. Developing local capacities to manage and sustain a project can help ensure longevity.

5. Monitoring and Evaluation are Essential

Lessons: Regular monitoring and evaluation helped identify what was working well and what needed improvement. This feedback was crucial for making timely adjustments and for ensuring that the project remained on track.

Application: Implementing robust monitoring and evaluation frameworks can provide valuable insights and drive continuous improvement. Collecting both qualitative and quantitative data will help measure the impact and inform future initiatives.

6. Technology as a Tool, Not a Solution

Lessons: While technology can provide powerful tools for development, it is not a standalone solution. The success of the ICT hub depended on integrating technology with broader development goals and addressing the underlying social and economic issues.

Application: Future projects should adopt a holistic approach using technology as a tool to support broader development objectives. This involves addressing underlying issues, such as poverty, education, and infrastructure, alongside technological initiatives.

Conclusion

The digital transformation of communities in Nigeria, exemplified by the SEED ICT Hub in Nguzu Edda, showcases the potential of organizational development initiatives to enhance digital literacy and empowerment. Through strategic planning, community engagement, capacity building, and adaptive strategies, SEED established a model for similar initiatives in other communities. The challenges encountered and mitigation strategies employed provide valuable lessons for future projects. As SEED continues to advance its mission, sustained support and involvement of all stakeholders will be essential in realising the long-term goals of this transformative initiative.

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