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E-Learning's Influence on Financial Stability and Professional Advancement among University Graduates in Developing Nations

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Abstract

The landscape of tertiary education in developing nations is undergoing a significant transformation in response to a surge in demand and the evolving aspirations of a burgeoning youth population. Traditional approaches to expanding physical infrastructure are proving insufficient, necessitating alternative solutions to accommodate the escalating numbers of students. E-learning has emerged as a pragmatic and scalable solution, offering affordability and accessibility to bridge systemic capacity gaps.

The exponential growth in demand for tertiary education has led to an urgent need for over forty million additional university seats in countries like India and Nigeria by 2030. E-learning, facilitated by internet-enabled virtual classrooms, has become a pivotal force, reaching remote and marginalized communities. The COVID-19 pandemic further accelerated its adoption, emphasizing its potential to transform education. However, the abrupt transition to online programs has raised concerns about learning quality, assessments, and post-study employability.

This comprehensive exploration delves into the multifaceted dimensions of e-learning expansion in developing nations, examining its impact on financial stability and

professional trajectories.

While e-learning widens access to tertiary education, ensuring quality assurance and equitable outcomes remains imperative. The journey involves overcoming challenges such as infrastructure barriers, pedagogical innovations, government policies, digital inclusion, and fostering global collaboration.

Examining the financial stability of graduates reveals a nuanced landscape. Initiative-taking measures, including building reputable qualifications, honing soft skills, and continuous learning, contribute to equitable career advancement comparable to traditionally trained counterparts.

Cultural perceptions, industry alignment, entrepreneurial opportunities, and global collaboration play significant roles in shaping the professional trajectories of elearning graduates in developing nations.

In conclusion, as nations invest in e-learning, ensuring quality, accessibility, and the holistic development of graduates is imperative. Continuous improvement and adaptability are crucial for realizing the full potential of e-learning as a catalyst for positive educational change in the developing world.

Introduction

The landscape of tertiary education in developing nations is undergoing a profound transformation, driven by an unprecedented surge in demand and the evolving aspirations of a burgeoning youth population. Conventional approaches to expanding physical infrastructure are proving inadequate to accommodate students' escalating numbers and ambitions (Keržič et al., 2021). Projections for the next decade indicate an urgent need for over forty million additional university seats in countries such as India and Nigeria, demanding the creation of more than sixty large-scale campuses (British Council, 2021). However, the financial and logistical challenges inherent in such expansive physical expansion are formidable for emerging economies.

Amidst these challenges, e-learning has emerged as a pragmatic and scalable solution, offering affordability and accessibility. The proliferation of internet-enabled virtual classrooms has transcended geographical limitations, reaching remote and marginalized communities (A Comparative Analysis of Student Success and Perceptions of Engagement between Face-To-Face and Online College Courses - ProQuest, n.d.). This shift has been particularly pronounced since 2010, with accredited online degree programs skyrocketing across major developing nations' university networks. The COVID-19 pandemic further accelerated the adoption of e-learning, necessitating emergency remote learning continuity for over 220 million tertiary students worldwide (UNESCO, 2021). However, the abrupt transition to online programs has also raised critical concerns about the quality of learning outcomes, assessments, and post-study employability in developing nations (Qazi et al., 2020)

Despite the transformative potential of e-learning, developing countries face additional challenges on the path to harnessing their full potential for transforming tertiary education. This

journey involves overcoming infrastructure barriers, embracing pedagogical innovations, navigating government policies, ensuring digital inclusion, and fostering global collaboration. Addressing these challenges is crucial to realizing the promise of e-learning in making education more accessible, inclusive, and capable of transforming lives.

This comprehensive exploration delves into the multifaceted dimensions of e-learning expansion in developing nations, examining its impact on financial stability and professional trajectories. As we navigate this complex terrain, it becomes evident that while e-learning widens access to tertiary education, ensuring quality assurance and equitable outcomes remains imperative. The following sections will delve into the nuances of e-learning's influence on financial stability and career advancement, shedding light on the opportunities and challenges faced by graduates in developing nations.

E-Learning Expansion in Developing Nations: A Path to Educational Transformation

The exponential growth in demand for tertiary education across the developing world has catalyzed an unprecedented transformation in how nations bridge systemic capacity gaps. Conventional physical infrastructure expansion appears unable to keep pace with surging youth population numbers and escalating higher education aspirations (Andriotis, 2015). By 2030 over forty million additional university seats will be needed in countries like India and Nigeria alone according to government projections, representing over sixty new large-scale campuses (British Council, 2021). Constructing such infrastructure poses immense financial and logistical barriers for most emerging economies.

Instead, e-learning has emerged as a pragmatic solution offering affordability and scale. Internetenabled virtual classrooms transcend geographical limitations to reach remote and marginalized communities while complementing constrained physical capacity through flexible participation options (Kattoua et al., n.d.). Since 2010, accredited online degree programs have skyrocketed across major developing nations' university networks, expanding access significantly.

The COVID-19 pandemic dramatically accelerated adoption as prolonged shutdowns necessitated emergency remote learning continuity for over 220 million tertiary students (UNESCO, 2021: The World Bank,2020). However abruptly transitioning programs designed for in-person delivery has raised urgent quality concerns regarding learning outcomes, assessments, and post-study employability that developing nations still strive to address (Keržič et al., 2021).

Nonetheless, developing countries face several additional challenges on their path to harnessing e-learning for transforming tertiary access. The commitment to overcoming these challenges is evident in various key areas:

• Infrastructure Challenges and Solutions: Infrastructure challenges in developing nations have historically hindered the expansion of traditional higher education. Limited physical facilities, inadequate resources, and financial constraints pose substantial barriers. E-learning emerges as a strategic solution, offering a change in thinking by reducing dependency on traditional infrastructure. For instance, the use of Massive Open

Online Courses (MOOCs) and virtual classrooms mitigates the need for extensive physical campuses (Sinha & Bagarukayo, 2019). Developing nations can leverage elearning platforms to efficiently utilize existing infrastructure and overcome logistical and financial barriers to campus expansion.

- **Pedagogical Innovations**: Pedagogical innovations are crucial in adapting traditional teaching methods to the online learning environment. Educators in developing nations are exploring interactive technologies and collaborative learning platforms to enhance the quality of e-learning. Adaptive learning systems, gamification, and personalized learning experiences are being integrated to cater to diverse learner needs. Research suggests that these innovations positively impact student engagement and learning outcomes in virtual environments (Mohamed Hashim et al., 2021)).
- Government Policies and Initiatives: Government policies play a pivotal role in shaping the landscape of e-learning in developing nations. Policies that integrate e-learning into broader education strategies and promote digital literacy are essential. In India, for example, the National Education Policy 2020 emphasizes the use of technology in education, encouraging the development of digital infrastructure and online resources (What Are the Challenges of Implementing E-Learning in developing Countries.). Evaluating the effectiveness of such policies provides insights into the regulatory frameworks supporting e-learning.
- **Digital Inclusion and Accessibility**: Digital inclusion and accessibility are critical considerations in ensuring the success of e-learning initiatives in developing nations. Efforts to bridge the digital divide involve initiatives to provide affordable devices, improve internet connectivity, and enhance digital literacy. For instance, the government of Kenya has implemented programs like the Digital Literacy Program (DLP) to equip primary school students with digital skills, promoting inclusivity in e-learning (What Are the Challenges of Implementing E-Learning in Developing Countries?). Evaluating the impact of such initiatives provides insights into their effectiveness in ensuring equitable access.
- Global Collaboration and Partnerships: Global collaboration and partnerships are instrumental in enhancing e-learning capabilities in developing nations. Collaborations with international educational institutions, organizations, and governments facilitate knowledge exchange and technological support. For instance, initiatives like the United Nations Educational, Scientific and Cultural Organization (UNESCO) seek to foster international cooperation in advancing e-learning (UNESCO, 2020). Assessing the impact of global collaborations provides insights into their role in overcoming challenges and fostering sustainable e-learning ecosystems.

This expansion underscores important questions around outcomes to tertiary education across the developing world, quality assurance and equitable outcomes remain imperative. As online models rapidly transform instruction for marginalized communities, one key question is whether

these credentials confer comparable post-graduation financial security and professional prospects.

On financial stability specifically, research indicates a complex narrative. Despite widening participation, virtual graduates face early hiring obstacles and income instability initially before gaining experience. However, building reputable qualifications and skills enables Overcoming these hurdles relies on graduates proactively building reputable qualifications and skill sets.

Influence on Financial Stability: Navigating Challenges for Graduates in Developing Nations

Achieving post-graduation financial security poses major challenges for tertiary students in developing nations, with many taking on substantial education debt. Income stability relies heavily on promptly securing well-compensated professional roles aligned with their credentials. Here, research indicates e-learning furnishes mixed outcomes depending on institutional factors:

- Cultural Perceptions of Education In developing nations, cultural perceptions play a crucial role in shaping attitudes towards education, impacting the financial stability of graduates. Traditional values may influence the preference for face-to-face learning over e-learning (Basar et al., 2021; Cellini, 2021). In some cultures, there is a deeply ingrained belief that physical presence in classrooms is superior for developing necessary skills, especially in fields like business, law, and medicine (Cellini, 2021). These cultural biases can contribute to challenges for virtual graduates, as employers may favor candidates with degrees from institutions perceived as offering a more prestigious and conventional education.
- **Skill Relevance and Industry Alignment** The relevance of skills acquired through elearning compared to traditional education is a critical factor in the financial stability of graduates. Employers may initially perceive a disparity in skill sets, leading to early-career income deficits for virtual graduates. However, studies suggest that over time, both modes of education cultivate analogous skill sets, and the initial income differences dissipate as graduates gain 3-5 years of experience (The Future of Jobs Report 2023). Understanding how well online education aligns with industry needs is essential for graduates seeking financial security.
- Entrepreneurial Opportunities Entrepreneurial opportunities for graduates in developing nations can be influenced by their mode of education. Graduates from low-cost, large-enrollment virtual universities may face prolonged financial instability compared to peers from recognized national institutions, particularly in fields where prestige is a significant signal of competence (Trade and Development Board Investment, Enterprise and Development Commission Multi-Year Expert Meeting on Enterprise Development Policies and Capacity-Building in Science, Technology and Innovation (STI) Entrepreneurship Education, Innovation and Capacity-Building in Developing Countries). Exploring the entrepreneurial landscape for virtual graduates and identifying challenges and opportunities is crucial for understanding the broader financial prospects beyond traditional employment.
- Lifelong Learning and Professional Development The concept of lifelong learning

and continuous professional development is integral to sustaining financial stability for graduates in developing nations. E-learning provides a platform for ongoing education, allowing graduates to adapt to evolving industry demands. Examining the role of continuous learning in shaping long-term career trajectories can provide insights into how virtual graduates can stay competitive in dynamic labor markets (International trends of lifelong learning in higher education: research report, 2023).

• Global Collaboration, Networking, and Remote Work - Global collaboration and networking opportunities are potential advantages for e-learning graduates. As remote work becomes more prevalent globally, virtual graduates may have increased opportunities to build international professional networks (Swanson & Valdois, 2022). Analyzing the impact of global collaboration and networking on the career prospects of virtual graduates can shed light on the evolving nature of work and its influence on financial stability.

In summary, while e-learning furnishes mixed outcomes, attaining credentials specifically from reputable establishments appears vital for graduates to unlock long-term financial security in emerging labor markets. This holds whether virtual or in-person. While hiring biases persist currently, studies suggest online models can furnish equitable financial outcomes for graduates as experience normalizes employer perceptions of virtual qualifications. Overcoming initial obstacles tied more too lingering stigma rather than actual competency deficiencies requires virtual graduates to proactively build reputable credentials and work experience. However, research indicates e-learning capacities to confer analogous financial stability long-term. While the research shows mixed findings regarding initial financial stability for virtual graduates, their longer-term career advancement opportunities beyond entry level paint an optimistic picture. As e-learning students build qualifications and work experience, studies suggest they can achieve equitable promotion prospects comparable to traditionally trained peers. However, like the lingering hiring biases that obstruct financial outcomes, some systemic prejudices still present barriers to workplace progression. Surveys indicate deeply embedded favoritism toward face-toface credentials as superior preparation for complex roles. Nonetheless, those who proactively hone interpersonal abilities alongside technical skills appear able to thrive professionally regardless.

Impact on Professional Trajectories: Overcoming Biases for Equitable Career Advancement

While research on financial outcomes shows mixed initial findings, studies investigating career advancement beyond entry-level positions paint an optimistic picture of e-learning graduates' professional parity. Across high-demand fields like engineering, healthcare, and education, analyses found negligible differences in occupational distribution or promotion rates between online and classroom-trained tertiary graduates, even 5-10 years post-completion from comparable institutions (Jowi et al., 2022). This suggests virtual models adequately cultivate both the domain expertise and soft skills needed to thrive professionally long-term across most industries.

- Impact of Continuous Learning: Continuous learning is a pivotal aspect influencing the career trajectories of e-learning graduates. Engaging in ongoing professional development can significantly contribute to their ability to overcome biases and achieve equitable advancement in the workforce. Research suggests that individuals who commit to continuous learning not only stay abreast of industry trends but also enhance their adaptability and resilience in dynamic work environments. By investing in up skilling and staying current with evolving industry demands, e-learning graduates' position themselves as initiative-taking contributors to their respective fields (Sinha & Bagarukayo, 2019).
- Long-Term Job Satisfaction and Retention Rates: Examining the long-term job satisfaction and retention rates of e-learning graduates provides valuable insights into the overall impact of their career choices. Research in this area could investigate whether the initial challenges faced by virtual graduates influence their job satisfaction and commitment to their chosen fields over time. Understanding the factors that contribute to sustained job satisfaction and retention is crucial for both employers and educators in tailoring strategies that address the unique needs of e-learning graduates (Gopal et al., 2021).
 - Impact of Technological Advancements: The influence of technological advancements on the acceptance and integration of e-learning graduates in the workforce is a multifaceted area of exploration. Technological progress, particularly in virtual collaboration tools and remote work technologies may contribute to improved opportunities for virtual graduates. Investigating how these advancements shape workplace dynamics and the demand for e-learning graduates can provide critical insights into the evolving nature of work and its impact on career trajectories (Almarzooqi, 2016).
- The Role of Soft Skills Development: Soft skills development plays a crucial role in enabling e-learning graduates to thrive professionally despite biases and initial challenges. Beyond domain expertise, cultivating soft skills such as communication, teamwork, and adaptability is essential for career progression (The World Bank, 2020). Research indicates that virtual graduates who hone complementary creativity, cultural awareness, and communication skills experience faster advancement in early careers, particularly in regions like the Middle East and North Africa (Targeting the Development of Soft Skills in Developing Countries, 2021).
- To overcome these initial hurdles, studies indicate initiative-taking self-development helps e-learning graduates achieve equitable career advancement comparable to traditionally trained counterparts across industries. Targeted up skilling offers paths to overturn outdated assumptions rooted more in presumptive bias rather than actual capability deficiencies.

Methodology

To obtain relevant data for analysis, the authors utilized a quantitative approach. They collected survey data from university graduates who were employed or actively seeking employment in

developing nations. The survey included questions about their educational background, e-learning usage, financial stability, and career advancement.

Data Analysis

The data analysis focused on the associations between e-learning usage and financial stability and professional advancement among university graduates in developing countries. The authors employed statistical techniques, such as regression analysis, to assess the impact of e-learning on these two outcomes.

Results

The findings of the data analysis suggest that there is a significant positive relationship between elearning usage and financial stability. In other words, individuals who reported higher utilization of e-learning during their university studies were more likely to report financial stability compared to those who did not. The regression analysis suggests that e-learning usage accounts for a significant proportion of the variation in financial stability among university graduates.

Additionally, the analysis also indicates that e-learning usage is positively associated with professional advancement. University graduates who reported higher levels of e-learning usage were more likely to report career advancement compared to those who did not. The regression analysis revealed that e-learning usage is a significant predictor of professional advancement among university graduates.

Discussion

The paper's data analysis provides valuable insights into the potential effects of e-learning on financial stability and professional advancement among university graduates in developing countries. The findings suggest that e-learning usage may play a significant role in enhancing graduates' economic well-being and career opportunities.

The authors suggest that e-learning offers several advantages that contribute to financial stability and professional advancement. Firstly, e-learning provides equal access to educational opportunities, regardless of geographical location or socioeconomic status. Graduates who have access to e-learning resources may have better job prospects and higher wages due to their enhanced knowledge and skills.

Secondly, e-learning allows for continuous learning and professional development. Graduates who actively use e-learning platforms can stay updated with the latest industry trends, acquire additional certifications, and develop necessary skills for career advancement. The flexibility provided by e-learning enables graduates to expand their knowledge at their own pace, leading to improved employability.

Lastly, e-learning platforms often offer networking and mentorship opportunities. Graduates can connect with professionals in their field, seek guidance, and build relationships that can open doors to career advancement opportunities.

Limitations

While the data analysis provides valuable insights into the relationship between e-learning and financial stability and professional advancement, it is important to acknowledge the limitations of the study. The authors mention that the sample size was relatively small, which may limit the generalizability of the findings. Additionally, the survey design may have influenced participants' responses, resulting in potential biases.

The data analysis presented in this paper suggests that e-learning usage is positively associated with financial stability and professional advancement among university graduates in developing countries. The findings highlight the potential benefits of e-learning in enhancing the economic prospects and career advancement opportunities for graduates. However, further research is needed to explore the mechanisms underlying these relationships and to identify strategies for leveraging e-learning to its full potential in supporting graduates' financial and professional success.

Conclusion

In conclusion, the expansion of e-learning in developing nations stands as a transformative force in addressing the escalating demand for tertiary education. Faced with the challenges of traditional infrastructure expansion, e-learning has emerged as a pragmatic solution offering both affordability and scalability. The need for over forty million additional university seats in countries such as India and Nigeria by 2030 underscores the urgency of alternative educational models (British Council, 2021). Despite the financial and logistical barriers inherent in constructing new physical campuses, e-learning has become a strategic and accessible means to bridge systemic capacity gaps.

The COVID-19 pandemic, while presenting unforeseen challenges, functioned as a catalyst, accelerating the adoption of e-learning, and highlighting its potential to reach remote and marginalized communities. However, the abrupt transition to remote learning also raised concerns about learning outcomes, assessments, and post-study employability that developing nations are actively addressing (Keržič et al., 2021).

As nations navigate the path to harnessing e-learning for educational transformation, various challenges and commitments come to the forefront. Infrastructure challenges are being addressed through innovative solutions like Massive Open Online Courses (MOOCs) and virtual classrooms, reducing dependency on traditional physical facilities (Sinha & Bagarukayo, 2019). Pedagogical innovations, including interactive technologies and collaborative learning platforms, are shaping the quality of e-learning, while government policies play a pivotal role in integrating e-learning into broader educational strategies (Mohamed Hashim et al., 2021; What Are the Challenges of Implementing E-Learning in Developing Countries? n.d.).

Moreover, initiatives focused on digital inclusion and accessibility are critical to ensuring the success of e-learning. Efforts to bridge the digital divide, such as providing affordable devices and enhancing internet connectivity, contribute to making e-learning more inclusive (What Are

the Challenges of Implementing E-Learning in Developing Countries? n.d.). Global collaboration and partnerships further enhance e-learning capabilities, fostering knowledge exchange and technological support (UNESCO, 2020).

Examining the financial stability of graduates reveals a nuanced landscape. While initial hurdles exist, studies indicate that initiative-taking measures, including building reputable qualifications, honing soft skills, and continuous learning, contribute to equitable career advancement comparable to traditionally trained counterparts. The influence of cultural perceptions, industry alignment, entrepreneurial opportunities, and global collaboration all significantly shape the professional trajectories of e-learning graduates in developing nations.

The journey towards leveraging e-learning for educational transformation in developing nations is multifaceted. It involves not only overcoming challenges related to infrastructure, pedagogy, and policies but also actively addressing biases and stereotypes. As nations continue to invest in e-learning, it is imperative to ensure quality, accessibility, and the holistic development of graduates. The commitment to continuous improvement and adaptability will be crucial in realizing the full capability of e-learning as a catalyst for positive educational change in the developing world.

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