

Leveraging Entrepreneurship and Digital Innovation in Higher Education to Revitalise Namibia's Hospitality & Tourism Sector Post-COVID-19 Era

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Abstract

Sustainability has become a major theme in the literature on international travel in the wake of the COVID-19 epidemic. With their well-known vast value chains, hospitality and tourism (H&T) education institutions are being pressured to adopt entrepreneurship and virtual learning to keep up with changing educational contexts. This paper looks at the role of entrepreneurship and digitization in furthering sustainable hospitality and tourism education as the country attempts to recover and rebuild its economy. The paper examines the future of hospitality and tourism education with a focus on entrepreneurship and digital innovation in Namibia's post-COVID-19 era. Qualitative research methods, including key informant interviews and triangulation, were employed to gather data until a saturation level was reached after conducting 20 interviews in Windhoek, Namibia. The results highlight the need to enhance natural, ecological and cultural sustainability through entrepreneurship-focused education to revive the sector and ensure its long-term resilience. Tourism-driven economic development's ability to promote regional regeneration must be covered in hospitality and tourism entrepreneurship education. Sustainable tourism education may play a significant role in reviving the sector and ensuring its long-term resilience by leveraging entrepreneurship and digitalization. Online learning resources, conventional classroom techniques, and incubation initiatives will probably all be used in the education of hospitality and tourism entrepreneurs in the future. Recognising the complexities of the sector, where some talents cannot be fully digitalised, stable internet connectivity, government backing, and academia's capacity to satisfy changing student demands are all essential for the implementation of digitalization to be successful. Based on the study's findings, academics must become more knowledgeable and skilled in order to keep up with trends, such as artificial intelligence, to promote sustainable entrepreneurship in tourism education. The paper concludes that a resilient and sustainable future for the sector in the digital era will be shaped broadly by leveraging entrepreneurship and digital innovation transition.

Keywords: Entrepreneurship, Sustainable Tourism Education, Digitization, Innovation, Resilience.

Introduction

In the wake of the COVID-19 outbreak, sustainability has emerged as a key subject in the literature on international travel (Hossain et al., 2020). Numerous other sectors of the economy, particularly Namibia's hotel and tourism (H&T) businesses, have been significantly impacted by the COVID-19 pandemic. Despite these challenges, there is a hope that entrepreneurship and technological innovation will help the sector recover (Hossain et al., 2023; Khaled et al., 2019). By embracing technological advancements and the entrepreneurial spirit (Polas et al., 2019), Namibia may not only recover from the pandemic but also thrive. Hospitality and tourism education institutions are under pressure to implement entrepreneurship and virtual learning due to their well-known extensive value chains in order to keep up with shifting educational environments. The process of fundamentally altering enterprises through the use of technology is known as digital transformation (Alkaabi et al., 2020). With the ultimate goal of making these various processes intrinsically connected, it does not focus on one project specifically but rather defines a collection of initiatives that collectively affect various aspects of each organisation, from its back-end operations to consumer interactions (Imtiaz & Kim, 2019 p. 91). The use of mobile devices (such as tablets and smartphones) and social media networks (such as Twitter, Facebook, Instagram, What's app, etc.) has created a demand for digital transformation. In order to improve businesses and give customers an opportunity to interact with brands in novel ways, digital transformation also entails re-examining company structures and procedures (Samuels, 2018). These developments have sparked an exponential revolution in the information that calls for a creative business analysis to comprehend the data and fully capitalise on it (Imtiaz & Kim, 2019, p. 91). In this paper, we look at how entrepreneurs and technological developments may reinvigorate Namibia's hospitality and tourism industry in a sustainable way.

Problem Statement

The issue is focused on Namibia's specific post-COVID-19 issues and prospects for hospitality and tourism education institutions. Given the expanding environment of international travel and education, these hospitality and tourism institutions must contend with the rising demand for sustainability and adaptation. The main issue is the need to increase the hospitality and tourism industry's sustainability, which includes natural, ecological and cultural factors to ensure its long-term resilience in the wake of the epidemic. The paper also addresses the crucial roles of entrepreneurship and digitalization and it recognises that barriers such as limited technological accessibility, the need for reliable internet connectivity and the demand for government support may arise throughout the digital transformation in education. Furthermore, in order to promote sustainable entrepreneurship in hospitality and tourism education, the study emphasises the significance of educators remaining up to date with emerging technologies like artificial intelligence.

Limitations

The study is based on information gathered from 20 interviews, which is not a complete sample of those Namibians active in hospitality and tourism education. Given the subjectivity

of qualitative investigations, it's possible that the conclusions can't be properly extrapolated to a wider context. The study's qualitative research methodology, which focused primarily on key informant interviews and yielded insightful information, may have prevented it from fully capturing quantitative data or from allowing for statistical generalisation. The study also concentrated on Namibia's post-COVID-19 era, which may have limited the application of its findings to other areas with various economic, social, and educational situations. Furthermore, because the digital ecosystem (Schallmo & Boardman, 2018a, 2018b) is dynamic and results are subject to change, the study may not consider the fast-evolving technology trends and achievements in the field of hospitality and tourism education.

Literature Review

In the wake of the COVID-19 outbreak, sustainability has emerged as a key subject in the literature on international travel. Perhaps as a result of the global pandemic during the past two years, digital entrepreneurship and creative businesses in tourism have recently been growing rapidly (Varotsis, 2022; Hossain et al., 2023). It is noteworthy that demand for tours that combine intangible value and a unique experience, as well as the penetration of technology into tourists' daily lives, have contributed to growth during the past ten years. Over the past ten years, the tourism sector's component of digital entrepreneurship has experienced growth (Jelinic, 2021). The need for more sustainable tourism development (Torres-Delgado and Saarinen, 2014), the rise in the demand for high-quality tourism services (Garrigos-Simon et al., 2019, Varotsis, 2019), and the increased competition in the tourism market have all aided in the growth of new digital entrepreneurship models and creative industries in the tourism sector. There are three sections to the definition offered by Mckinsey (Imtiaz & Kim, 2019, p. 92) namely, "(i) producing value at the new frontiers of the business world, (ii) creating value in the processes that execute a vision of customer experiences, and (iii) developing foundational skills that support the entire overall business initiative. However very often, the terms digitization and digitalization are used synonymously.

According to Schallmo and Williams (2018), digitization is the process of going from analogue to digital. A succinct explanation of digitalization was provided by the digital business consultancy i-SCOOP (2016) where it is referred to the use of digital technologies and data (digitised and natively digital) to generate revenue, advance operations, replace/transform business processes (rather than just digitise them), and establish a setting for digital business, with digital data at its core. Although the concept of digital products, services, information and channels was widely acknowledged in the 1990s, the term "digital transformation" is currently a topic of substantial discussion (Auriga, 2016). Mazzone (2014) stated that "digital transformation is the deliberate and ongoing digital evolution of a company, business model, idea, process, or methodology, both strategically and tactically". Digitally empowered organisations can benefit from significant growth potential. Information and communication (ICT) technologies including smart devices, social media, Internet of things (IoT), big data, artificial intelligence, virtual and augmented reality, etc. are used to assist digitally empowered enterprises (Hossain et al., 2022). Businesses that have the intention of fusing (Auriga, 2016) business operations with digital technologies will reap significant reward (Hossain et al., 2022; Imtiaz & Kim, 2019 p. 93).

People used to physically visit a travel agent to book a ticket in the past, but today's use of digital technologies (such as smartphones, wearables, virtual realities, artificial intelligence,

etc.) has made a significant difference and led to the development of computerised reservation systems (e.g., e-ticket) as well as global distribution systems that allow tourism businesses (such as tour operators, airline companies, etc.) to meet the needs of their customers and deliver a positive travel experience. In order to create personalised offers for customers, artificial intelligence (AI) is essential (Rusch et al., 2022). Nowadays, passengers can complete their jobs using their Mobile phones with a Chatbot responding to their questions. The adoption of various smart systems and chatbots by travel and tourism businesses has a substantial impact on the tourist industry (Hossain et al., 2023). The best advancement in the marketing of travel businesses and for advertising campaigns is virtual reality technology. With the use of modern technology, travel agencies can offer consumers an exciting experience by giving them the chance to visit new places or go on exotic adventures while remaining in the comfort of their own home.

The usage of virtual reality technology in the travel and tourism sector will have an impact on how customers perceive a destination (Njoroge et al., 2019). Big data can help create intelligent travel experiences. The idea of "smart tourism" hinges on the ability of the tourism industry to not only collect a lot of data but also to intelligently store, process, analyse, and apply big data to create new products, services and business models. The growth and development of information and communication technologies, which act as platforms for facilitating interactions with and among customers, is a crucial contributor to this speedy change (Imtiaz & Kim, 2019, p. 94).

Customers rely heavily on mobile apps for their daily tasks in the era of digitization (Ong et al., 2020). Businesses are being compelled to reconsider their customers' expectations and undergo digital transformation in order to compete with their rivals as a result of the rising demands of the internet and mobile apps (Carlborg et al., 2014). Big data and analytics, the internet of things, mobile devices, social media, artificial intelligence, blockchain and cloud computing, all of which have recently and quickly developed due in part to the COVID-19 pandemic (Rusch et al., 2022), have prompted new entrepreneurs with a focus on new business opportunities to innovate in digital entrepreneurship (Varotsis, 2022). The way that businesses conduct themselves and connect with their clients is changing as a result of social media (Li et al., 2009). Social networks, where personal and professional contacts, product choices, home video clips, favourite news articles and real-time location are shared instantaneously and widely, are playing a bigger role in influencing consumer purchasing decisions (Imtiaz and Kim, 2019).

Organisations must reinvent themselves for digital transformation by re-evaluating their value proposition, market positioning, innovation strategy and operational model as a whole (Imtiaz and Kim, 2019). Firstly, organisations in the hospitality sector are more focused on novel and imaginative ways to please clients than they are on technology advancements (Njoroge et al., 2020). Secondly, because entrepreneurial orientation (EO) requires a lot of resources, businesses in the hospitality sector might not always allocate resources to functional units in the same proportions as businesses in the manufacturing sector (Njoroge, Mossberg, Mbura, Anderson, 2020, p. 527). The characteristics of EO were creativity, risk-taking, initiative, autonomy and competitive aggressiveness. The findings show that none of the five EO traits improves the performance of businesses. Njoroge et al (2020, p. 527) concluded that entrepreneurs in the informal sector in developing economies work under

distinct conditions compared to their counterparts in industrialised nations based on these contradicting effects of EO aspects.

Additionally, Ahmad (2015) discovered a number of entrepreneurial tactics used in the UAE hotel industry, including competitive pricing, improved marketing and promotion channels, improved service quality and excellent customer service. These methods transcend the conventional EO dimensions, which are primarily based on the manufacturing sector. Peters and Kallmuenzer (2018) also affirm that hospitality companies' entrepreneurial practices might take on new facets. For instance, non-aggressive competition was associated with regionalism, communication, cooperation and competitive aggressiveness. Entrepreneurship and work-based learning (WBL) both value self-direction, creativity, innovation and awareness. The development of an entrepreneurial mindset and skill set depends on each of these traits (Ahmad et al., 2020, p.128). WBL can pave the way for lucrative employment and business ventures. A highly effective educational paradigm is created when entrepreneurial courses are merged with a traditional curriculum.

WBL programme development calls for the creation of pertinent and integrated curricula. There is a need for educational programmes that cover both conventional courses and WBL methodologies (Abdul et al., 2020, p. 128). The instructors must define objectives for both the businesses and the students for the learning programmes to be successful. Furthermore, academicians and organisational leaders should receive thorough instructions from learning programmes. Introduction incorporating social, mobile, analytics, cloud computing, internet of things, artificial intelligence and blockchain technologies, digital technologies (DTs) are a group of information, computing, communication and connectivity technologies (Busulwa et al., 2022, p. 1). Information must be transformed into a digital format during digitization in order to be stored, processed, or communicated. The digitalization of H&T organisations, on the other hand, necessitates the use of DTs and digitised data to modify roles, processes and workflows in order to streamline current methods of operation and boost productivity. By incorporating sustainability into the daily operations of their businesses, sustainable entrepreneurs are able to highlight their role as wealth creators (Ariful et al., 2023; Leonelli et al., 2022). Additionally, the sustainability perspective empowers businesspeople to strike a balance between moral and ethical principles when seizing chances, setting them apart from conventional businesspeople who occasionally compromise their principles (Hossain et al., 2022). These abilities enable businesspeople to comprehend and foresee how decisions will affect the environment and social balance in the short- and long-term (Hossain et al., 2020; Leonelli et al., 2022). In this line, business owners with strong sustainability orientations can run their companies in a way that is both socially and environmentally responsible (Hossain et al., 2022). Entrepreneurs who are committed to sustainability should think more strategically, value diversity and interdisciplinarity and embrace innovation.

Research Questions

The Research Questions of the Study were as follows

- To what extent does entrepreneurship contribute to the sustainability of hospitality and tourism education in the post-COVID-19 era in Windhoek, Namibia?
- How do digitization and innovation influence the resilience of hospitality and tourism education in particularly in the context of post-COVID-19 recovery?

- What strategies can be implemented to promote sustainable tourism education in focusing on the enhancement of natural, ecological and cultural sustainability through entrepreneurship-based approaches?
- What are the key challenges and requirements for successful digitization and innovation in hospitality and tourism education in Windhoek, Namibia considering factors like internet connectivity, government support and changing student demands?

Research Objectives

The Objectives of the Study were as follows

- Assess the role and impact of entrepreneurship in enhancing the sustainability of hospitality and tourism education in the post-COVID-19 era in Windhoek, Namibia through qualitative research and data analysis.
- Investigate the influence of digitization and innovation on the resilience of hospitality and tourism education.
- Identify and develop strategies for promoting sustainable tourism education with an emphasis on natural, ecological and cultural sustainability through entrepreneurship-focused education.
- Examine the challenges and prerequisites for the successful implementation of digitization and innovation in hospitality and tourism education, considering factors such as stable internet connectivity, government support, and the adaptability of academia to meet evolving student needs.

Research Methodology

Data were gathered qualitatively utilising a key informant technique. Conversational and open-ended communication are key components of qualitative research's approach to data collection. Qualitative research methods are designed to show how a target audience acts and perceives a certain topic. The researchers personally conducted the interviews, making phone calls to possible participants, hotel and industry managers, lecturers and students to invite them to participate. Despite mentioning their tremendous business, some of the possible participants asked to have the interview guide emailed to them beforehand so they may read it before the interviews, which was done. In order to encourage participants to openly express their viewpoints, active listening, probing, and follow-up questions were used throughout the interviews. This method's outstanding ability to gather precise information about people's ideas and motivations is one of its benefits. The use of in-depth interviews increased the researchers' capacity to decipher respondent body language and match the responses. The researchers were able to study how decisions are made and acquire in-depth knowledge by using qualitative data collecting.

Data Analysis Plan

Researchers were able to investigate the study's information's hidden potential and decipher the words and activities, thanks to qualitative research approaches. Themes and categories that emerged from the data were used to analysed the results. Thematic analysis was used to transform unstructured data into structured data in order to identify recurring themes, patterns and novel findings.

Data Analysis

The thorough, broad and nuanced data that was acquired was used to develop conclusions. Transcriptions, handwritten notes, and an audio recording were used to document the data. The data were analysed and categorised using textual analysis once the number of interviews peaked at 20 and reached saturation in the capital city, Windhoek. Due to the fact that it enables researchers to investigate the study's information's latent potential and decode the words and activities, text analysis distinguishes itself from all other qualitative research approaches when analysing data. Thematic analysis was used to turn unstructured data into structured data in order to identify recurring themes and patterns as well as new information. We gained a deeper knowledge of the phenomenon being studied by evaluating the results in the context of the entire study.

Findings

Twenty (20) potential participants were contacted for interviews in Windhoek, and a response rate of 100% was attained. Gender-wise, 63% of respondents were female while 36% were male and all worked actively in the tourism and hospitality industries. The findings showed that in order to revitalise the industry and secure its long-term resilience, it is necessary to improve natural, ecological and cultural sustainability through entrepreneurship-focused education. Education in hospitality and tourism entrepreneurship must address the capacity of tourism-driven economic development to support regional regeneration. By utilising entrepreneurship and technology, sustainable tourism education may significantly contribute to recovering the industry and assuring its long-term resilience. Future training programmes for hospitality and tourist businesses will undoubtedly combine the use of online learning resources, traditional classroom methods and incubation programmes. Understanding the industry's complexity and the fact that some operations cannot be fully digitalized, along with reliable internet connectivity, government support and academic institution's ability to meet changing student demands, are all prerequisites for the successful application of digitalization. In order to foster sustainable entrepreneurship in hospitality and tourism education, according to the study's findings, academics must become more aware and skilled in order to stay up with developments like artificial intelligence. Below are the remaining findings and respondent accounts.

Internationalisation and Collaboration

The respondents emphasised the critical need for partnerships and knowledge sharing among various stakeholders under the heading of collaboration with global organisations, in particular to shed light on the opportunities and strategies for Namibia's higher education institutions to revitalise the hospitality and tourism Industry post-COVID-19. These partnerships can include shared research projects, exchange programmes and platforms for information-sharing that make it easier to get access to the resources and best practises required for industrial recovery. The necessity of a digital platform where local institutions, international organisations, business leaders and foreign universities can work together to address difficulties, conduct SWOT assessments and create practical strategies is highlighted through key ideas. It is also emphasised that such partnerships should cover measures for government assistance, infrastructural development and cultural interaction, to assist students in accessing educational and training opportunities and finance through partnerships with international organisations in addition to knowledge transfer. The findings acknowledge the relevance of fostering entrepreneurship, innovation, and sustainability in

the hotel and tourist sector, with a focus on empowering recent graduates and professionals in the field to provide value and boost competitiveness. To entice passengers in the post-COVID-19 age, recommendations include the implementation of sanitary measures, digital services and loosened visa restrictions. Through joint efforts with international organisations and business titans, these findings collectively indicate to a potential route for the recovery and expansion of Namibia's hospitality and tourism sector.

Business Incubation Incentives through Government

To encourage innovation and create an environment that is supportive of entrepreneurs, the Namibian government should adopt initiatives for business incubation that are specifically tailored to the hotel and tourism sectors. Training, coaching and financial support provided by these programmes can help aspiring entrepreneurs as they develop and launch their firms. It was clear from the responses, which were organised under the heading "Financial Incentives through Government Collaboration," that the collaboration between government agencies and institutions of higher education can be crucial in motivating students and entrepreneurs interested in starting businesses in the hospitality and tourism sector. Collectively, the participants stress the importance of fostering entrepreneurship and job growth within the sector. Grants, scholarships, low-interest loans and tax incentives were among the financial incentives suggested by the replies, all of which were intended to encourage a change from job-seeking to job-creating. It was clear that the proposals cover a wide range of helpful strategies, including no-interest business loans, instruction in creating company plans and curriculum changes that incorporate entrepreneurial skills.

Students and aspiring entrepreneurs will be given the tools they need through collaboration with the business sector to implement their creative ideas methodically. Additionally, encouraged are mentoring, platforms for promotion, help with business workshops and online courses. The government and higher education institutions in Namibia can support entrepreneurship by offering financial assistance, low-interest loans, and business grants by establishing a cooperative ecosystem. This will also help to increase employment opportunities for graduates and reduce poverty, which will ultimately help Namibia's economy. These realisations highlight the possibility of a game-changing partnership between governmental organisations and educational institutions to support entrepreneurship and innovation in the hospitality and tourism industry.

Enhancing Collaboration on Online and Remote Learning

The question that focussed on online and remote learning, underscores the transformative role that online and remote learning tools can play in advancing the skills and knowledge of individuals interested in the hospitality and tourism industry, particularly in rural areas of Namibia. Entrepreneurs ought to be encouraged to work together, develop alliances and share resources. This may result in the development of novel tourism goods and experiences, boosting Namibia's comparative advantage and drawing in additional visitors. The respondents jointly emphasised the potential of technology to bridge geographical gaps and offer flexible learning options, industry-relevant courses and virtual internships. These tools are seen as a means to empower individuals to acquire skills and industry exposure from anywhere. It is further emphasised that technology infrastructure acceleration is key, especially in rural settings, to ensure easy access to career guidance and information. Additionally, online tools are seen as a means to empower individuals to acquire skills and

industry exposure. They can assist people in balancing employment and school by enhancing their knowledge and digital abilities.

Online and remote learning can be a flexible platform for further study and research in the hospitality sector, encouraging independent learning and the development of new skills. Entrepreneurs can benefit from digital innovation by developing user-friendly online platforms that offer comprehensive information on Namibia's tourism offerings. Travellers should be able to reserve hotels, activities and tours on these websites, allowing them to create their own itineraries based on their interests. Furthermore, integrating these platforms with online payment options ensures a seamless booking experience and promotes confidence. Infrastructure development, specialised curriculum, digital literacy instruction, community involvement and support services are suggested for the efficient use of these tools in rural Namibia. The overall findings highlight the great potential of technology to empower people in distant locations and to support Namibia's growing hospitality and tourism sector, local economic development and sustainability.

Continuous Curriculum Development and Re-curriculation

The inquiries under the category "Curriculum Development" offered thorough guidelines for Namibian universities and colleges to create current, pertinent curricula and training programmes that meet the changing demands of the hospitality and tourism sector after COVID-19. The respondents emphasised the significance of ongoing feedback mechanisms with industry stakeholders as the key tactic for maintaining curricular content's relevance to the industry. The creation of one-stop digital platforms for stakeholder communication, the hosting of guest lecturers with first-hand knowledge of pandemic-related difficulties, and yearly engagement workshops are just a few of the proposals. Flexibility is essential, with an emphasis on reorganising courses to accommodate current trends and the demands of both domestic and foreign tourists. Additionally, there is a focus on curriculum modifications in response to consumer requirements and industry interests. Regular curriculum revisions, the creation of modular programmes, the inclusion of courses focusing on technology, the teaching of sustainability and responsible tourism and the development of soft skills are all crucial. Research and innovation, crisis management, global perspectives, experiential learning, ongoing professional development and research are all seen as essential elements of curricular improvement. Importantly, it is recommended to use feedback mechanisms and digital learning resources to continuously evaluate and enhance the curriculum, ensuring that it remains dynamic and responsive to market developments. These findings offer a thorough road map for higher education institutions in Namibia to maintain their programmes in line with the changing demands of the hospitality and tourist sector following COVID-19, thereby preparing graduates for the expansion and resilience of the sector. One of the participants said:

"...The strategies (plans of action) that can be employed by the Namibian institutions of higher learning to ensure that relevant curriculum programmes are infused into the curriculum to be able to meet the ever-changing needs of the industry especially after COVID-19 to ensure that; These 2 stakeholders create a "one-stop" table discussion platform (preferably digital) where they exchange opinions, ideas and the expectations can be discussed for implementation. Once the training institutions understand better the needs of the industry, then appropriate amendments are to be made to the hospitality and tourism curriculum at the institution's level. Moreover, consultations should not only be limited locally but a benchmarking exercise should

also be done with the global partners in order to tap the best practise from them..."
(Respondent no. 2)

Digital Transformation and Innovation

The responses under the heading "Digital Technologies for Transformation" provided information on specific digital innovations and technologies that have the potential to change the Namibian hospitality and tourism sector. They also provided a wide range of technologies and strategies that can be used to improve the sector. These featured contactless check-in/check-out methods, VR tours, data analytics for customised guest experiences and language translation apps, also included smartphone apps for tourism information. The recommendations emphasised the value of social media, online booking systems and digital marketing for simplicity and accessibility. The use of blockchain for travel verification, virtual tourism and reputation management was emphasised as an effective technique for guaranteeing risk-free and secure travel. One of the respondents highlighted the following,

"...There are quite numerous digital platforms already in existence and there are also potential new platforms that can be created to transform the industry: These platforms include but are not limited to:

Already existing online Global hotel system networks i.e. Galileo, Amadeus, SABRE, Apollo, World Span, System One, etc.

A new innovation platform can also be created whereby both global government, global training institutions, global industries and under one roof share and exchange relevant information on how best to innovate/transform the hospitality and tourism industry holistically as a global intervention rather than at national or regional level..." (Respondent no.2)

Another respondent revealed the following

"Personally I think,... there are Specific digital technologies and innovations such as mobile apps for tourism information, contactless check-in/check-out systems, virtual reality (VR) tours and data analytics for personalized guest experiences which have the potential to transform the Namibian hospitality and tourism sector. Institutions should emphasize these technologies in their programmes..."
(Respondent No. 1)

Another respondent emphasised that: "

... Artificial intelligence can help improve guest experience, mobile ordering can help increase efficiency and robots can lower staff workload and minimize operational costs however initial costs may be high. After all,.....Virtual reality helps one experience a service in the comfort of their home...." (Respondent no .11)

It is acknowledged that environmentally friendly lodging, wise destination management and sustainable tourism technology all support Namibia's commitment to eco-tourism. As potential improvements to customer experiences and operational efficiency, robotics, mobile ordering, and artificial intelligence are discussed. The results highlight the necessity for Namibia to invest in digital literacy programmes and infrastructure in order to fully utilise these technologies. Collaboration is also regarded as being crucial for enabling the successful adoption of these technologies between the public and commercial sectors and local

communities. These observations give the Namibian hospitality and tourism industry a road map for utilising digital technology and innovations for transformational growth and sustainability.

Support for Integration of Digital Innovations and Technologies

Respondents offered insights into how higher education institutions can support the adoption and integration of digital innovations and technologies in the hospitality and tourism sector in response to questions about support for the uptake and integration of digital innovations and technology. Particularly in this case, the responses provided a diverse strategy to meet this pressing demand. The government is emphasised as a major force for accelerating the adoption of technologies in institutions. It is deemed vital to invest in wireless networks, digital infrastructure and technology training. Digital technology user-friendly apps are advised, coupled with instructions on how to utilise them. A road map for higher education institutions to actively encourage the adoption and integration of digital innovations and technology in the Namibian hospitality and tourism sector is provided by this comprehensive collection of results. One respondent brought out the fact that

“...Institutions of higher learning can foster a culture of innovation, prepare students for the digital workforce, and contribute to the broader adoption of digital technologies by actively engaging with technology trends, industry partners, and their own academic communities. This multidimensional approach ensures that higher education institutions remain at the forefront of digital innovation and technology integration.” (Respondents No. 10).

In addition, another respondent reasoned

“... By developing more digital infrastructure, by investing in Good wireless networks, by training the youth to adopt technology...” (Respondent No. 3)

Another tactic for remaining at the forefront of digital innovation was to cooperate with foreign businesses through staff and student exchanges. In addition, institutions can cooperate with business owners and managers to offer specialised programmes, workshops, and online courses. Together, these actions foster an innovative culture, equip students for the digital workforce, and keep higher education institutions at the cutting edge of technology adoption, which benefits both the business and academic communities.

Collaboration with Industry

Respondents emphasise the significance of active collaboration between academia and the industry, with a focus on collaboration with the hospitality and tourism industry to shed light on strategies that institutions of higher learning in Namibia can employ to foster entrepreneurship and innovation among students and graduates. The strategies suggested allow students and recent graduates to get real-world experience and interact with business executives through mentorship programmes, industry-sponsored research initiatives, and internship opportunities. These tactics also emphasise the importance of open dialogue, constructive criticism, and continuous programmes like mentorships, apprenticeships and internships to develop students' entrepreneurial abilities. In order to remove obstacles to entrepreneurship, industry-sponsored projects and active interaction with the sector through research and innovation are considered crucial. Among the respondents, one said:

"...it will be good if Institutions can foster entrepreneurship and innovation by actively collaborating with the hospitality and tourism industry. Initiatives like mentorship programmes, industry-sponsored research projects, and internship opportunities can help students and graduates gain practical experience and network with industry leaders..." (Respondent No. 1).

Mentorship, in addition to workshops, short courses, and financial aid for graduates wishing to launch their own enterprises, is essential for promoting entrepreneurship and ensuring its success. Collaboration promotes a vibrant, encouraging environment that encourages creativity and entrepreneurship among students and recent graduates, ultimately helping the education sector as well as the hotel and tourism sector.

Incorporating Digital Technologies into the Curriculum

One of the most important factors, according to the respondents, is integrating digital technology into the curriculum. They offered various suggestions for how to do this in Namibia's curriculum for tourism and hospitality. The significance of updating and modernising education to prepare students for the digital economy was underscored by these strategies. To focus on digital technologies important to tourism and hospitality, specialised digital courses must be developed. A few examples are online reservation systems, digital marketing, customer relationship management (CRM), and data analytics. One of the respondents noted the necessity for hands-on practice using industry-standard digital tools and platforms during practical training sessions and seminars. Collaboration with industry partners to generate real-world case studies was another component on which a major emphasis was placed. Not to mention the difficulty of bringing in guest lecturers who are knowledgeable in digital technology to provide their insights on how those advances are changing the industry. In addition, it was noted that interactive simulations, video lectures, and online tutorials may be used to enhance conventional classroom training.

It was crucial to incorporate teamwork, problem-solving, and project management abilities into the curriculum through collaborative digital projects. In order to give students, the opportunity to interact with these tools in real-world contexts, respondents indicated that it was necessary to plan field excursions to businesses that effectively use digital technology. The ability to arrange internships was crucial for exposing students to the real-world application of digital technology in business. The curriculum needed to be regularly updated and evaluated to match advancements in technology and business practises, and it was crucial to get input from students, lecturers, and industry partners. By incorporating these techniques, higher education institutions in Namibia will make sure that their students have the digital expertise and skills necessary to succeed in the rapidly changing travel and hospitality business while boosting its growth and competitiveness. One of the Respondents highlighted that

"...Digital technologies and innovations can be incorporated into the tourism and hospitality curriculum through dedicated courses and modules. Topics may include digital marketing, data analytics, e-commerce, and customer relationship management systems. Hands-on experience with industry-standard software can also be valuable..."(Respondent No. 1)

In addition, another respondent emphasised: *"... This can be done by infusing the current training approach with a more research-based approach whereby*

students/trainees will be required to constantly do research on their topics of training to bring content to the lessons etc. Moreover, the allocation of students' assignments should include the use of digital technologies and innovations. By so doing, these students will be well-vested in the culture of technology as a result..”
(Respondent No. 2)

Offering industry-recognized credentials for mastery of particular digital tools and technologies, which would improve students' employability, was one feature that stood out. The curriculum was to include discussions on ethical issues relating to digital technologies, such as data privacy and cybersecurity. In order to stimulate innovation and a greater grasp of industry concerns, research possibilities were repeatedly addressed to urge students to take part in research projects relating to digital advancements in the tourist and hospitality sector.

Leveraging Digital Technologies for Revitalization of the Tourism Industry

The results of the study highlighted the essential role that digital innovations and technology may play in reviving Namibia's hospitality and tourism sector in the post-COVID-19 era. Here, particular features of these innovations and technologies, such as the use of online booking and reservation systems, which are user-friendly platforms for lodging, excursions and activities with real-time availability updates and contactless processes, can propel this rejuvenation. One of the most crucial elements was the creation of virtual reality and augmented reality experiences to motivate tourists and highlight Namibia's attractions. One commenter, for instance, stated;

“...Online training platforms to be made mandatory in all training institutions and industry sectors in Namibia. Skilling, Re-Skilling and Upskilling of educators/trainers and industry so that they are knowledgeable on how to manage/utilize digital training platforms and respond to the new demands of students. Investment in technological infrastructure is to be made mandatory or part of the annual budget in every training institution and every hospitality/tourism establishment. Continuous inspection to be done by the relevant authorities if the industry stakeholders are indeed adhering to these digital technologies and innovation requirements or possibly face identified punitive measures as a result...”(Respondent No. 2)

It was crucial to implement health and safety technology, such as contactless check-ins, temperature monitoring stations, and health declarations using QR codes. The use of data analytics and artificial intelligence (AI) to tailor marketing campaigns based on traveller data proved crucial. A positive internet reputation must be actively managed in order to establish trust and preserve it, according to the respondents. Technology-based eco-friendly practices must be embraced by sustainable tourism, and travellers must be informed about ethical travel. One of the components was Destination Management Systems, which was a wonderful resolution for giving travellers real-time information and recommendations using mobile apps and digital systems. In order to give information and safety updates to visitors, smart tourism infrastructure investment is also required. This infrastructure includes the Internet of Things (Everything), sensors, and interactive kiosks. Additionally, it was crucial to develop crisis management and communication in order to provide emergency services and real-time updates.

The hospitality and tourism industry will innovate through collaboration with tech companies, according to the respondents, and digital payment solutions need to be promoted as a means of frictionless financial exchange. One respondent brought up that

"...Virtual Tourism can be used as an innovative aspect to regenerate Namibia's Tourism Industry. Aspects in Culinary Arts, such as Cultural food can be used as a Niche Product to lure a new niche Market to Namibia..."(Respondent no.3)

In addition to assisting in the recovery from the pandemic's effects, these digital initiatives coupled with expanding telecommunications infrastructure, such as high-speed mobile networks, will improve the overall visitor experience and position Namibia as a competitive and sustainable destination in the post-COVID-19 era. For these initiatives to be implemented successfully, cooperation between government organisations, business stakeholders, and educational institutions would be essential.

Addressing Challenges and Opportunities

The issue, which addresses both possibilities and difficulties, offers insightful information about how higher education institutions can successfully encourage entrepreneurship and digital innovation in Namibia's hospitality and tourism sector. The comments showed how important it is to carry out an in-depth study to uncover both the opportunities and difficulties present in this endeavour. The study will act as the cornerstone for well-informed policy suggestions, training programmes and curriculum development. Enhancing the curriculum, emphasising digital platforms and forming solid partnerships with the corporate sector to foster entrepreneurial initiatives that assist economic growth are among the main proposals. Institutions can make sure that their offerings will suit the changing needs of the market by requiring modules on digital innovation and doing research that is in line with education courses. Additionally, the importance of raising awareness, promoting entrepreneurship incubation, developing talent and working with international partners was emphasised. The responses also identify tactical options for fostering entrepreneurship and digital innovation, such as curriculum development, industry alliances, training in digital skills, start-up competitions, and funding efforts (Hossain et al., 2018). Through workable solutions, they simultaneously address the problems of scarce resources, the digital gap, regulatory impediments, market awareness, risk aversion, infrastructural issues, sustainability integration, and the lack of mentors. The findings essentially highlight the need for higher education institutions to adopt a multifaceted strategy that combines curriculum improvements, industry collaboration Hossain et al (2022), digital skills training, and overcoming various obstacles in the context of the particular challenges and opportunities in Namibia's hospitality and tourism sector in order to effectively foster entrepreneurship and digital innovation.

Conclusion

The paper concludes that utilising entrepreneurship and the digital innovation shift will significantly influence the sector's resilient and sustainable future in the digital era. Hotel and tourism workers should have access to opportunities for appropriate training and skill upgradation. By developing their digital literacy and entrepreneurial skills, employees can adapt to the changing dynamics of the industry and effectively support the sector's regeneration. Namibia needs to have widespread internet connectivity in order to take full advantage of technological breakthroughs and entrepreneurship. People will find it simpler to obtain information and execute online transactions as a result of government investments

in internet infrastructure enhancements, particularly in remote and rural areas. Through the use of virtual reality (VR) technologies, tourists may virtually experience Namibia's natural beauty to enhance their pre-travel experience. Working with VR content creators may help business owners spark curiosity and inspire wanderlust, which will ultimately lead to an increase in bookings and visitor numbers. Namibia's hospitality and tourism industry has tremendous growth potential, notwithstanding the COVID-19 pandemic. Namibia can revitalise its tourism industry in a sustainable way by promoting entrepreneurship, embracing digital innovation, and enhancing infrastructure. While entrepreneurs can create innovative, long-lasting enterprises, technological developments can enhance the entire tourist experience. The trends, preferences, and behaviour of a customer's market can be understood by business managers with the aid of big data analytics. By studying this data and then adjusting their offerings and marketing strategies as necessary, businesses may create personalised experiences that appeal to their target market. As a result, customer satisfaction might increase, promoting repeat business. With a concerted effort from all parties involved, Namibia may come out stronger from the crisis and position itself as a top tourist destination in the post-COVID-19 future.

Recommendations

The suggestions included providing students and experts in the sector with training, workshops, and seminars; promoting technology and digital literacy; and setting up innovation hubs on campuses. To integrate digital innovations and technology into the curriculum and make it more in line with market demands and current trends, a thorough assessment of the current curriculum was necessary. In order to ensure that students are competent in utilising computers, the internet, and common software programmes, another part was to start with foundational courses that teach key digital literacy skills. To reach a global audience and market Namibia as a premier destination, digital marketing and promotion tactics including Search Engine Optimisation (SEO), content marketing and social media marketing are recommended. Additionally, training courses on Digitalization and Capacity Building must be developed to equip tourism workers with up-to-date digital skills.

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