Sustainability Model for Integrating Green Concepts and Practices into the Curricula of Tourism and Hospitality Training Institutions in Zambia

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Abstract: **The paper presents a sustainability model that could be used to integrate green concepts and practices into the curricula of tourism and hospitality training institutions of Zambia. The paper is based on the findings that were done in ten tourism and hospitality training institutions that were offering tourism and hospitality training at the time of data collection in Lusaka district. Data was collected through questionnaires, interviews and document study from ten heads of department, fifteen lecturers and ten principals in the different institutions. The major findings of the study were that topics on green concepts and practices either did not exist or were not the area of focus in the curricula. Therefore, the study proposed that specific courses which should be included in the curricula, including conservation of natural resources, keep Zambia clean, green and healthy, waste management and technology, water conservation, energy efficiency, and waste reduction. These courses should be offered from diploma to doctoral levels so that students are able to practice sustainability in the provision of services upon graduation. The study recommended the need for an intentional integration of environment and sustainability education in the curricula of tourism and hospitality training institutions, with a specific focus on green aspects in the tourism and hospitality industry.**

Key words: **green concepts and practices, sustainability, sustainable education, tourism, hospitality, training institutions**

I. INTRODUCTION

The environment has come under threat due to human anthropogenic activities (Hove et al., 2020). Some of the threats include climate change, biodiversity loss, overpopulation, poverty, and competition for limited resources (Department of Environment Water Heritage and the Arts, 2009). This has necessitated advocacy from different stakeholders and well-wishers. Many have turned to environment and sustainability education for a possible solution to this environmental threat (Moonga & Chileshe 2019). In Zambia, this has necessitated the training of environmental educators, in line with the Zambian National Policy on Environment (NPE) and other environmental related policies, to meet these ever-growing environmental challenges (GRZ, 2019).

While this training is desirable for many key sectors of Zambia's economy, one sector that stands out is the tourism and hospitality industry. The industry is one of the biggest employers and sectors of economic development. Among the main challenges facing tourism development and management is the need to mitigate the negative impacts of hotel activity (Leyva & Parra, 2021). According to Santos et al. (2020), the hotel sector is responsible for 21% of all the ecological footprint generated by tourism contributing to global problems such as pollution and inappropriate waste management. Hotels are also major contributors to climate change by emitting significant proportions of carbon dioxide, generating waste, and consuming large amounts of water and energy (Gössling, 2011; Reid, Johnston & Patiar, 2017; Pan et al., 2018; Leyva & Parra, 2021). Legrand et al. (2012, p. 115) indicate that "the tourism industry at large is estimated to be responsible for 5% of the world's carbon dioxide (CO_2) gas emissions. The hotel sector represents 1% of all CO_2 gas emissions."

On their part, the tourism and hospitality companies, particularly the major international hotel chains, have started increasing their involvement in regard to matters of sustainability and to integrating it into their core business strategies. According to Rusinko (2007), Legrand et al. (2012) and Jones, Hillier and Comfort (2014), the companies are concerned about the rising operational costs (for example, increasing costs of energy), growing public scrutiny and demand for sustainable products, and regulatory constraints. Bader (2015) attributes the growing importance of sustainable practices in the tourism and hospitality industry to the changing perceptions of responsibilities among managers and the desire by companies to polish their image while doing something good for the environment. Bohdanowicz (2015) acknowledges the growth of sustainability in popularity among hotels and attributes it to forces such as consumer demand, environmental regulation, managerial concerns with ethics, consumer satisfaction, and maintenance issues related to physical buildings.

For the reasons advanced here, it is argued that employees in the tourism and hospitality industry should be among the key drivers of the sustainability agenda particularly in Zambia where the country has been ushered into a period of increased pollution and waste production without attendant waste management capacity and infrastructure (Chileshe & Moonga, 2017, 2019). According to Pan et al. (2018), sustainable tourism reduces the negative effects of tourism activities on the environment, society and the economy. One of the strategies for achieving this is by including environment

and sustainability education in the curricula of tourism and hospitality training institutions. This argument is fostered by the global community's commitment (as espoused by the 2030 Agenda) to achieve sustainable development in its three dimensions of economic, social and environmental, in a balanced and integrated manner (Slaper & Hall, 2011; Bright & Cortes, 2019). Similarly, the U.S. Environmental Protection Agency (EPA) (2008, p.23) posits that "sustainability encompasses ideas, aspirations and values that continue to inspire public and private organisations to become better stewards of the environment and that promote positive economic growth and social objectives." Thus, there is a consensus among different stakeholders that sustainable development is largely based upon being pro-development where economic growth, social justice, and environmental conservation can exist in harmony (Dryzek, 2005, p. 157). The call worldwide is that education must be rethought and reformed to be a vehicle of knowledge, thought patterns, values and skills needed to build a sustainable world (Wals, 2012).

In Zambia, the policy and strategic frameworks put emphasis on the production of a learner who is capable of "participating in the preservation of the ecosystems in one's immediate and distant environments and rationalising resource mobilisation and utilisation" (Ministry of Education, 1996: 5). Furthermore, the policy endeavours to promote the development of a curriculum that is comprehensive, balanced, integrated, diversified and relevant to the real needs of both the learner and society, a curriculum that will provide a learner with knowledge and appreciation of the social, cultural and physical environment. Even more candidly, the 1994 National Environmental Action Plan (NEAP) advocates for teaching and learning environmental education and Education for Sustainable Development (ESD) at all levels of education (Chilufya, 2014).

This paper presents a generic model with respect to how to integrate sustainability in curricula in tourism and hospitality training institutions. It is important that students in these institutions are taught the knowledge, skills and values which they need to practice in the tourism and hospitality industry after they have graduated. Namafe and Chileshe (2013) have argued for the importance of quality and relevancy in the provision of education by ensuring that students are engaged in learning both what they are already familiar with and what is relevant to their work life upon graduation. In essence, the paper suggests modifications to the current tourism and hospitality training curricula and positions environmental education and Education for Sustainable Development as powerful tools for promoting environmental sustainability in the tourism and hospitality industry.

1.1 Statement of the Problem

Sustainability education is important for the purpose of training workers in the tourism and hospitality industry. In Zambia, the policy direction is that environmental education and Education for Sustainable Development (ESD) should be taught at all levels of education (NEAP, 1994). Yet, while several studies and much work on sustainable tourism (for example, Aipanjiguly & Jacobson, 2002; Choi & Sirakaya, 2005) have been published over the past several years, it has remained unclear whether the curricula of tourism and hospitality training institutions in Zambia cover sustainability concepts and practices. It is argued that, although the tourism and hospitality industry in the country has evolved over the years, it is not known if the curricula of tourism and hospitality training institutions have similarly evolved to integrate green concepts and practices. For example, Namafe and Muchanga (2017) argue that, in most countries, including Zambia, real integration of EE into the educational systems is still lacking. This gap is worthy filling up since the tourism and hospitality sector has become one of the important sectors not only for investment and contribution to the national economy but also for the pollution and waste management problems that it contributes to the environment (Serrano-Bernardo et al., 2012). It is argued that the sustainability of the industry depends on the employment of an available and well-trained human resource. Therefore, it is imperative that the training curricula include green concepts and practices to adequately prepare its graduates for workplace responsibilities.

1.2 Purpose of the Study

The objective of the study was to establish the inclusion of green concepts and practices in the curricula of Zambian tourism and hospitality training institutions and to develop a model that could be used to integrate green concepts and practices into the curricula of these training institutions.

1.3 Significance of the study

The significant of this study is fourfold. Firstly, the paucity of scholarly publications on designing appropriate curricula on sustainability education for tourism and hospitality training institutions in Zambia made undertaking this study important. Secondly, it was hoped that the outcomes of the study might be helpful to curriculum designers and implementers to understanding that integrating green concepts and practices in curricula was not only widely desirable and acceptable but had also become an important norm in training personnel for the tourism and hospitality industry. Thirdly, the outcomes of the study could also help policy makers formulate informed policies and make more strategic decisions about integrating sustainability in the curricula of tourism and hospitality training institutions. Fourthly, the paper contributes to existing literature on how to integrate sustainability in the curricula, particularly of tourism and hospitality training institutions.

II. LITERATURE REVIEW

Solís-Espallargas et al. (2019) assert that education is one of the important routeways for achieving the implementation of sustainability in people's daily lives. This necessitates training of professionals capable of acting as agents of change and transformation of the socio-

environmental reality. To realise this will require the inclusion of sustainability in the curricula of training colleges. Studies by Chawla and Manhas (2015) have shown that tourism and hospitality management curricula needed a fundamental change to embrace sustainability and green practices throughout programmes. However, a study by Thomas et al. (2017) highlighted the large gap between educators' attitudes in favour of sustainability and schools actually teaching sustainability. They explained that, although 72% of the hospitality educators sampled in their study indicated that they felt it was important for students to be taught about sustainable issues, green technology, recycling and conservation from the first year of any hospitality related qualification up to the last year, only 12% of them were actually teaching sustainability in the classroom. This apparent discrepancy between what educators profess and what they actually do is known as the knowledge to action gap. It is a good idea to analyse the determinants causing this gap in order to identify and understand the barriers to adopting a given action. Rusinko (2010) cited some of the determinants as weak linkages between plans and practices, offerings that focus mainly on the environmental dimension of sustainability (that is, other than social and economic), lack of administrative commitment to integrating sustainability into higher education, and limited time and resources. Barber et al. (2011) noted that African study programmes had significant challenges which needed sorting out systematically. They revealed that, although all the three stakeholder groups in their study demonstrated a 'sincere' interest in environmental sustainability, there were significant differences amongst the stakeholders as to the level of importance of environmental sustainability. The existence of such a gap necessitated conducting a study, such as the current one, to determine the size and nature of the gap and the factors that were causing it (Kitson & Straus, 2013).

Solís-Espallargas et al. (2019) argue that the inclusion of sustainability education in curricula does not mean merely introducing environmental content into teaching, but rather training people to enable them to critically analyse the interrelations between environmental, social and economic factors in such a way that their decisions are based on more sustainable and socially responsible criteria. This argument is in tandem with Omar (2014) that a training programme in an organisation is a process by which people should be taught with relevant skills and given the necessary knowledge or attitude to enable them to carry out their responsibilities to the required standard in the present job and to undertake greater and more demanding roles for effective job performance. Omar's study also argues that it is essential for the tourism and hospitality industry to have an effective training programme to meet customers green demands.

All these studies cited show that integration of sustainability in training curricula is important. Nevertheless, information on the integration of sustainability in tourism and training institutions in Zambia is non-existent.

III. METHODOLOGY

The study was guided by the constructivist philosophy and used a phenomenological research design to explore the problem at hand and to develop a model that can be used to integrate green concepts and practices into the curricula of tourism and hospitality training institutions in Zambia. The target population comprised all the ten functional tourism and hospitality training institutions in Lusaka district at the time of data collection. Data was collected through interviews and focus group discussions from ten heads of department, fifteen lecturers and ten principals in the different institutions. All the participants were purposively sampled because they were deemed to possess the information that was required for the study. Interviews were conducted with heads of department and college principals while questionnaires were administered to lecturers and students. Curriculum related documents such as the syllabus and text books were also analysed for content.

The data collected was analysed thematically. This entailed coding and grouping of the data in related themes which were then described (Valsiner, 2006) and interpreted (Kothari, 2004). Conclusions were made concerning the kind of content that was taught in the institutions and an understanding of the content that should be taught. This understanding helped to create a generic model for the integration of sustainability education into the curricula of training institutions.

IV. FINDINGS OF THE STUDY

The findings of the study fall into two categories or themes: first, inclusion of topics in the curricula of tourism and hospitality industry, and secondly, the formulation of a generic model for the integration of sustainability in the curricula.

4.1 Inclusion of topics on sustainability

Three subthemes emerged from this thematic area. The first was that, for some training institutions, no content on sustainability was integrated in the curricula. The second was that topics on sustainability existed in the curricula but were not given enough prominence compared with other topics. The third one was about which components needed to be included in the curricula.

In some institutions, lecturers indicated that there were no topics on sustainability in the curricula. This absence of the topics was blamed on managements which did not consider teaching green concepts and practices as very important to training tourism and hospitality students as compared to other typical hospitality content. This finding is corroborated by statement made by a head of department that,

As things stand, [green concepts and practice] have not been included in the curriculum. But I must say that it is important and if included it will yield good results. So, we are looking forward to including that one. I think the

problem is with management. Management has not looked at that issue. Of course, the keeping environment clean campaign is there but it is not enough. So, it is about authority. So, we have to incorporate it into the curriculum.

However, most of the participants felt that green concepts and practices were integrated in the curricula but in a latent or subordinate manner. A head of department explained that,

We have taught green concepts and practices in this institution for some time because in my training I was exposed to them. However, I should state that the topics do not come out clearly as green concepts and practices, but we teach them in line with other practices in the institution.

Another head of department stated that:

We do teach green concepts and practices but we need to emphasise the matter during our curriculum review meetings.

The study concluded that topics on sustainability were not given the prominence that they required in the curricula. In order to give the topics prominence, the participants proposed the inclusion of the following several topics.

(a) Conservation of natural resources.

A head of department stated that:

There is need to conserve our resources like wildlife and trees to discourage deforestation. I think, sometimes we damage our own resources and that in turn affects the ecosystems. We need to have specific topics in our syllabus that emphasise positive attitudes of our students towards environmental protection and sustainability.

A principal at one of the institutions had this to say**:**

I would suggest aquatic conservation. If hospitality industries can have fishponds and have water conservation mechanisms, that would need to start with our students of hotel management. If I was to be involved, I would emphasise this because I think it is an important green practice.

The study concluded that participants wanted topics on wildlife conservation, conservation of trees, soil conservation, aquatic conservation, sustainability, mineral conservation and environmental air conservation to be included in the curricula.

(b) The 'Keep Zambia Clean, Green and Healthy' Campaign

Participants proposed that the 'Keep Zambia Clean, Green and Healthy' campaign should be integrated as a special topic or course in the curricula. According to the participants, this would help to inculcate good values and attitudes in the minds of the students. One of the principals observed that:

The first thing to do is to inculcate the values of the Keep Zambia Clean, Green and Healthy in our young professionals in the industry. If this can start right from first year to final year, it would sink better because I know for sure that some students can forget after graduation if they only learn once.

A head of department also stated the following:

Yes, at this institution, we have institutionalised the Keep Zambia Clean, Green and Healthy Campaign. All the students are involved in the weekly cleaning of the surrounds every Friday. But if this was part of what students are going to learn in class, it would be taken seriously.

(c) Waste Management

The participants suggested that a topic on waste management should be explicitly included in the curricula, to cover green concepts and practices such as garbage disposal, maintaining cleanliness, safe disposal of waste, avoidance of littering and control of sewerage. Further, the participants proposed that a topic on recycling clearly showing its functions in environmental sustainability should be included. A head of department stated that:

If I was to be a consultant on the curriculum development process, I would encourage topics such as recycling to explicitly be taught in relation to green practices. In fact, I would suggest encouraging research projects, practical and recycling projects at the end of the programme.

A principal stated the following:

In the tourism sector, I think everything we do all practices must be associated with the accumulation of things that add to climate change. For example, practices like restaurant leftovers, garbage disposal. So, there is need that we come up with ways that will help us to have an effective way of waste disposal. So, in general things that would not harm the environment.

(d) Use of Technology

A topic on the use of technology was proposed by many participants. The topic was in relation to waste reduction and the use of energy efficient gadgets. Although the theme appears to be closely related to recycling, this case was about usage of digital and electronic gadgets to avoid using wasteful methods of resource use. This is reflected in the following statement by a head of department:

I would include technology as a topic in the curriculum so that there is a reduction on the use of paper. So, we would introduce a topic on e-learning.

A principal stated the following:

Very important because you will see that people leave a tap without closing it. I remember when I was in India, they were recycling water. So, we can be doing that as

well. So, they would even tell you that we are using the same water. But here in Zambia they can say ummmm same water…. No.

The Generic Integration Model

To integrate sustainability education in the curricula, it is necessary to address how the integration should be implemented. Based on the findings of this study, the generic model in Figure 1 has been proposed. The model shows what content area could be added to the curricula at different levels of study in the institutions of learning.

Fig 1: Sustainability Education Training Model.
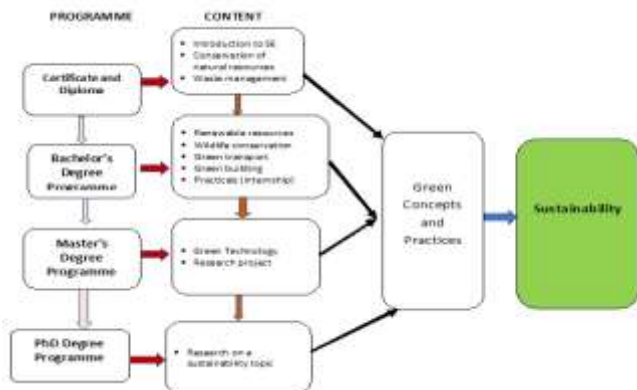
In addition to what was already being offered, therefore, the topics that could be integrated in the curricula are introduction to sustainable education, conservation of natural resources, Keep Zambia Clean Green and Health, and waste management in the manner explained in the discussion section.

V. DISCUSSION

Green concepts and practices green practices can be categorised as reducing or eliminating the negative impacts on the environment by incorporating many green approaches during operations, such as reducing energy consumption, reducing waste, utilising existing resources more efficiently, and recycling (Yi et al., 2016).

This study has established that the curricula being used to train the human resource for the tourism and hospitality industry in Zambia currently either lack topics on green concepts and practices or the topics that carry this content are indistinct. The curricula therefore need to undergo significant transformation if they are to produce graduates who have skills in sustainability and are prepared for their roles in their workplaces after graduation. Ramraj and Marimuthu (2020) have cited the misalignment between mandatory workplace skills and those possessed by graduates as the reason why most graduates are not employed. Additionally, graduates employed with obsolete skills may not be productive in their workplaces. This paper proposes a model that the curricula for certificate and diploma programmes should include green topics like introduction to sustainability education, conservation of natural resources and

waste management as compulsory courses appearing in each semester. Inclusion of these topics can result in a significant outcome (Chawla & Manhas, 2015). The study therefore calls for considering innovative methods of integrating sustainability education with traditional tourism and hospitality curricula. This will make the curricula stand the test of time and remain effective and adaptive to the current needs of the tourism and hospitality industry.

For a bachelor's degree, the curricula should go further to include practical work in green transport, green building, and recycling processes so that graduates can implement such practices from a practical point of view in their workplaces. This may require that the training institutions invest in human resource development at lecturer level, as well as the acquisition of equipment required for practical work. The inclusion of such 21st century courses and learning content will not only make the learners to be practically vested with the knowledge of green concepts and practices but it will also make training institutions reach the needed level in the provision of education in this new era.

The model also suggests incorporating wildlife conservation components of green concepts and practices at various levels of the curricula. This component is important because the knowledge and skills gained by students can be utilised in the industry and ensure that the students help to protect the environment and respond to climate change issues. Spenceley and Rozga's (2007) are of the view that the top three reasons for undertaking training in the tourism sector are to increase efficiency; improve performance; and to become more professional. The wildlife components will be the best way to also promote the African biodiversity in the industry through education.

The model also proposes a topic on green building. Today, green buildings are leading the way to more sustainable and efficient urban planning. For example, better buildings can help to fight climate change and improve human life. To make buildings more climate-friendly, there is need to build better new structures and also renovate those already standing. Bohdanowicz (2015) asserts that, among many issues, sustainability among hotels should include matters related to maintenance of physical buildings. Therefore, including the green building concept into the tourism and hospitality training curricula will make the tourism and hospitality industry become more relevant and productive as issues such as pollution and its costs with energy use will reduce. These aspects in the curriculum will enable the new curriculum to meet the international aspirations of the tourism and hospitality industry and make the human resource more knowledgeable than the products of current curricula.

The other aspect which the model has proposed to enhance in the curricula is that of teaching better practices of water treatment and renewable resources. These are key green aspects which are community changing and also conservating impacting in the industry. When such knowledge is imparted into the students, they can help provide clean water and

renewable energy to the tourism and hospitality industry. In addition to attracting 'green consumers,' green hotel initiatives also have the potential to save hotels a lot of money through recycling and better environmental management practices which will make them serve more money when they employ such well-trained individuals (Bohdanowicz, 2015). These trained workers with the knowledge of water treatment and renewable resources will enable the industry become climate adaptive and its quality of service will improve unlike the current trend. On the other hand, lack of trained human resources, particularly specialists and expert, can prevent the implementation of green concepts and practices in industry.

Governmental polices and regulations are important external factors that can affect the responsiveness of enterprises to implementing green concepts and practices (Kasim & Ismail, 2012). Zambia has both policy and strategic frameworks that put emphasis on teaching sustainability in learning institutions. However, these good policies must be accompanied by compliance if they are going to serve the purpose they were intended for. OECD (2013), cited in Chileshe (2018), explains that ensuring effective compliance with rules and regulations is an important factor in creating a well-functioning society. Among other things, it is a key element in safeguarding environmental protection and delivering other essential public goals. Therefore, it is important that institutions of learning begin to be guided by these policy frameworks to implement the inclusion of green concepts and practices in their curricula. Nevertheless, compliance comes with a cost; it requires resources (human, financial or material), satisfactory or efficient systems within institutions and ability on the part of staff (insufficient knowledge and skills) to execute new innovations.

Additionally, apathy on the part of principals in some institutions of learning (the thinking that traditional content was more important than green concepts and practices) tended to contribute to the complete exclusion or trivialising of green concepts and practices in institutional curricula. The will, interest or intention of the decision-makers, who are the principals in institutions of learning, has a very strong influence on the execution of programmes. Principals influence policy and have the ability to marshal finances for a programme. Therefore, administrative apathy can hamper or derail institutional programmes while their involvement can lead to successful integration of sustainability issues in curricula.

VI. CONCLUSION

The paper has explained that the growth of the tourism and hospitality industry is associated with environmental issues, such as air pollution, waste generation, energy consumption, water pollution, and noise pollution. It is, therefore, imperative that students in tourism and hospitality are trained in sustainable tourism and hospitality management. To achieve this, curricula in training institutions should contain topics that teach students in matters of sustainability. The study has shown that the current curricula

in Zambian tourism and hospitality training institutions either lack green concepts and practices or the topics are included only surreptitiously. The paper therefore proposes a model that can be used to integrate sustainability content in the curricula. These topics include introduction to sustainable education, Keep Zambia Clean and Healthy, natural resources conservation, waste management, green transport and recycling at various levels of learning. Other topics proposed are wildlife conservation, green building, water treatment and renewable resources. The inclusion of such 21st century courses and learning content will make the learners to be practically vested with the green practices knowledge and also to make the institutions reach the needed level in the provision of education in this new era. It will also be in line with the policy direction that Environment and sustainability education should be taught at all levels of education in Zambia.

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