A Review of Sustainable Tourism Curriculum on Higher Education
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Abstract
Global researchers have widely carried out publications on the tourism curriculum. The issue of sustainable tourism has been agreed upon as a platform for the development of world tourism. This study was conducted by studying reputable scientific articles on the tourism curriculum by connecting the two perspectives. Using the Systematic Literature Review (SLR) approach in the 2017-2022 scientific article, it was found that there are various pedagogical approaches to delivering sustainable tourism materials in universities. Student-based learning techniques were the determining factors for learning success, supported by the strategic partnership of higher education institutions with the tourism industry. Sustainable tourism learning in higher education was a long-term investment in tourism’s human resources to realize tourism that can balance business, ecological and social benefits in the present and future.

Keywords: sustainable tourism, pedagogic, higher education, tourism, industry

INTRODUCTION
Tourism education was initially carried out partially based on the work needs of the hospitality sector, including lodging management training and food and beverage processing (Fidgeon, 2010). More broadly, the development of tourism education occurred in 1960-1970, when travel mobility for travel motifs increased during the economic-socio-political recovery after World War II. This era is marked by expanding tourism education studies with a comprehensive discussion of destination management, travel management, and hospitality. (Airey & Middleton, 1984). In addition, awareness of tourism stakeholders regarding providing human resources from the structured educational process spurs the global development of tourism higher education (Hyasat, 2022).

The development of the global tourism industry is an important part of the world economy, driving the country's initiatives to realize sustainable tourism (Hall, 2019; UNWTO, Centre of Expertise Leisure, Sciences, & Sciences, 2018). Instilling the values of sustainable tourism in the learning process is the moral responsibility of tourism higher education institutions to the environment (Moreno-Luna, Robina-Ramírez, Sánchez-Oro, & Serrano, 2021). Therefore, tourism higher education develops curriculum designs according to sustainability principles (Thapa, 2019).

On the other hand, the supply of skilled human resources produced by the tourism higher education process must be in line with the needs of the industry. The modern era of competition motivates business organizations to gain a competitive advantage sourced mainly from their internal resources (Hyasat,
The tourism industry is a labor-intensive service industry, depending on the availability of qualified staff to produce, run, and maintain tourism products (Shen, Luo, & Lam, 2015). The success of the higher education process is one of the antecedents of competitive advantages of the tourism industry that is in line with the concept of sustainability.

The curriculum must be continuously developed according to its goals as formal education, teaching, and training program design. The tourism curriculum refers to producing human resources that understand tourism conceptually and practically, grouped by classification of its output, globally known as academic and vocational (Oktadiana & Chon, 2016; Yusuf, Samsura, & Yuwono, 2018). However, the two groups have similar patterns in the tourism curriculum, namely providing human resources supply that can contribute to the tourism industry (Daniel, Costa, Pita, & Costa, 2017).

Various studies have found that human resources knowledge, skills, and attitudes contribute greatly to sustainable tourism (Chou, 2014; Siyambalapitiya, Zhang, & Liu, 2018; Susanto, Rofaida, & Senen, 2022; Yusoff, Nejati, Kee, & Amran, 2020). Furthermore, tourism human resources widely obtain this knowledge and attitude in the educational programs they live in universities. At this level, the relationship between the tourism education curriculum becomes closely related to the practice of sustainable tourism in human resources. Thus, a tourism curriculum that provides a portion of sustainability support will greatly impact improving the quality of tourism in the future.

This article seeks to answer how curriculum-themed sustainable tourism is implemented in universities. Many studies pay attention to the weakness of human resources in the tourism industry, but not many have reviewed their relationship with the curriculum in higher education. In more detail, this article is 1) to provide an overview of the sustainable tourism-themed curriculum in various regions; 2) to review the strengths and weaknesses of the sustainable tourism-themed curriculum; 3) to formulate a sustainable tourism curriculum framework in universities. A systematic approach to literature review was used in this study by utilizing data sources from Scopus indexed journals. The discussion will be presented sequentially in the next section: literature review, methods and procedures, discussions, and conclusions.

**LITERATURE REVIEW**

The concept of sustainability was known after World War II (Keeble, 1988). It is a condition of meeting current needs by not eliminating the opportunity for future generations to meet their needs. In tourism, sustainability shows that tourism development does not necessarily mean physical development, changing, and engineering resources, but rather using resources as needed and adding value (Darwance, Yokotani, & Anggita, 2020; Hall, 2019). Emphasis on added value and breeding resources continuously distinguishes the concept of sustainability in the tourism industry from other industries.

Such rapid tourism development globally has given the sector a boost to industrialization into the rapid flow, financial-oriented and smart technology (Femenia-Serra, Neuhofer, & Ivars-Baidal, 2019; Leiper, 1979; Page, 2009; Verma, Shukla, & Sharma, 2021). The economic development of the world community and the rapid flow of information has encouraged tourist travel to be more widespread, with the quantity increasing rapidly in the last decade (Hall, 2019; World Travel & Tourism Council, 2020). On the positive side, this condition has given birth to many job opportunities, economic growth, increased access to technology, and improved quality of life in tourist destinations. On the negative side, the rapid development of tourism has caused overtourism, disruption to the values and norms of community hosts, health problems, and the biggest is environmental damage. Increasing the benefits of tourism and minimizing its negative impact is a function of sustainable tourism (Higgins-Desbiolles, 2018).

Furthermore, sustainability has become an important part of forming the character of human tourism resources in universities. Applied as a core course and delivered theoretical and practical materials to students on various occasions. Tourism education’s role is to support the provision of human resources with creative character, have a sense of business, and are capable of technology (Abu Bakar, 2016; Morellato, 2014). Thus,
tourism education should balance the needs of industries motivated by profit-seeking with a sustainability load that protects natural, social, and cultural sustainability.

METHODS

This article presents a Systematic Literature Review (SLR) focusing on studying the sustainable tourism curriculum in higher education through research gap studies, trends, and state-of-the-art. A Systematic Literature Review (SLR) is a method of formulating information based on certain topics and characteristics. This method is a scientific approach derived from a literature study (Adams, Smart, & Huff, 2017).

SLR is carried out by applying Prisma (Preferred Reporting Items for Systematic Review and Meta-Analyses) approach (Benevene & Buonomo, 2020; Pati & Lorusso, 2018) consists of 1) SLR goal setting; 2) identifying concepts; 3) determination of search terminology; 4) determination of data sources; 5) search and data collection; 6) select data; 7) establish inclusion and exclusion criteria; 8) Analyse the selected data.

Figure 1. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow diagram

Figure 1 presents the first stage of identifying the source from the Scopus indexed database published in 2012-2022. There are 3,782 articles related to the tourism curriculum, of which 1,037 articles are found on Science Direct outlets, 1,085 articles on Sage outlets, and 1,660 articles on Emerald Insight. The selection was made by adding a “tourism curriculum” filter to the search technique and producing 72 articles. Furthermore, the second selection was carried out using only research articles, so 58 articles were obtained from all three outlets. In the next stage, extraction is carried out by examining qualitatively and quantitatively by providing options for articles that discuss the curriculum with sustainable tourism studies so that 21 articles are obtained for analysis, as presented in Table 1.
Table 1. Summary of Systematic Review measures, keywords used, and results

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Emerald</th>
<th>Sage Journal</th>
<th>Science Direct</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All articles containing at least one keyword in the abstract or title are Tourism curriculum “AND” tourism curricula.</td>
<td>1660</td>
<td>1085</td>
<td>1037</td>
<td>3782</td>
</tr>
<tr>
<td>2</td>
<td>Entire articles that contain syntax: “tourism curriculum.”</td>
<td>39</td>
<td>1</td>
<td>32</td>
<td>72</td>
</tr>
<tr>
<td>3</td>
<td>Select research article only.</td>
<td>29</td>
<td>1</td>
<td>28</td>
<td>58</td>
</tr>
<tr>
<td>4</td>
<td>According to the selected “fit for purpose” method, all articles whose abstract content is substantially relevant</td>
<td>11</td>
<td>1</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>According to the selected “fit for purpose” method, all articles whose text is effectively relevant</td>
<td>11</td>
<td>1</td>
<td>10</td>
<td>22</td>
</tr>
</tbody>
</table>

Source: processed data, 2021

RESULT AND DISCUSSION

Metadata Analysis

The study of the tourism curriculum has been a global researcher’s concern from 1970 to 2022. Using Publish or Perish software recorded by Google Scholar, we found 330 articles, 3285 citations with 63.17 citations per year, or 9.95 citations per article. The H-index on this database was 26, with 1.85 authors per article. Furthermore, database processing is carried out using Vos-Viewer. As a result, it is found that the relationship of tourism curriculum research themes with various main themes, as presented in Figure 2 is found.

![Figure 2. Distribution of research topics related to the tourism curriculum](image)

State of the Art Sustainable Tourism Curriculum Study

The development of sustainable tourism is primarily characterized by a focus of activity on improving the quality of life of the host community that balances economic and ecological interests to be utilized today and in the future (Torres Valdés, Lorenzo Álvarez, Castro Spila, & Santa Soriano, 2019). The sustainable tourism perspective grows to mediate two opposing anthropocentric and ecocentric concepts (Castro-Spila, Torres,
Lorenzo, & Santa, 2018). Furthermore, the principle of sustainable tourism rests on the consistency of actions taken by stakeholders in the long term (Seraphin, Yallop, Smith, & Modica, 2021). Thus, the investment of sustainable tourism content in tourism education becomes a strategic and tactical effort in building a tourism community that is sensitive to sustainability.

(Camargo & Gretzel, 2017) provide a component of sustainable tourism literacy for learners: 1) Technical literacy: refers to fundamental theories, concepts, and frameworks as well as technical knowledge of tourism development management tools and strategies following sustainable principles; 2) Analytical literacy refers to technical skills, as well as personal qualities needed to find solutions to problems analytically and critically; 3) Ecological literacy refers to the awareness of ecological and social interrelationships and an understanding of the impact on both aspects in development decisions; 4) Multicultural literacy, which includes the ability to reward the values, equality, culture, and authority of different stakeholders in the development of tourism; 5) Policy and political literacy, namely mastery of the process of formulation and implementation of policies; and 6) Ethical literacy, referring to the values and ethics of development under general theory and logic.

Considering the above concept, there are 21 breakthroughs offered by researchers regarding the sustainable tourism curriculum, as presented in Table 2.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Seraphin et al., 2021)</td>
<td>The principle of Responsible Management Education (PRME) applied ambidextrously in higher education tourism can provide long-term benefits for implementing sustainable tourism. <em>Stricto sensu</em> implementation is needed in education to produce a wider cadre of tourism stakeholders.</td>
</tr>
<tr>
<td>(Tuna &amp; Başdal, 2021)</td>
<td>Students have responded to tourism learning with Context, Input, Process, and Product (CIPP) Models as a satisfactory educational method. The learning process with this model provides a more comprehensive understanding of the tourism work system.</td>
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<td>(Espinoza-Figueroa, Vanneste, Alvarado-Vanegas, Farfán-Pacheco, &amp; Rodríguez-Giron, 2021)</td>
<td>Applying Research-Based Learning (RBL) in the tourism curriculum provides a better sustainable tourism learning output in understanding the principles, theories, and practices of sustainable tourism. The RBL approach's success requirements are using real cases, scientific methods consistency, and territoriality mastery.</td>
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<tr>
<td>(Zhang, Wang, Wang, Li, &amp; Zhang, 2021)</td>
<td>Nature-based experiential learning has been shown to increase students' awareness of the issue of responsible tourism. In addition, learning methods are carried out in the open by providing role-shifting to improve critical-thinking tourism development.</td>
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<tr>
<td>(Abu Bakar, 2016)</td>
<td>The role of spirituality for tourism educators relates to connectedness, transcendence, and a personal quest for meaning-making. Integrating spirituality in learning can increase critical power regarding tourism's current social and cultural problems.</td>
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<tr>
<td>(Adéyinka-Ojo, Lee, Abdullah, &amp; Teo, 2020)</td>
<td>Changes to the digital tourism curriculum are needed to improve learners' employability. Three aspects were found, namely: 1) the curriculum needs to be designed to produce tourism education graduates who have digital literacy; 2) the industry has a high preference for digital capabilities in the form of employability skills, operational skills, strategic skills, basic work skills and soft skills; and 3) digital tourism curriculum must be sensitive to the concept of experiences economy and disruptive digital innovation.</td>
</tr>
<tr>
<td>(Aguir-Aguir, Hernández-López, De Saá-Pérez, &amp; Pérez-Jiménez, 2020)</td>
<td>Gamification can effectively provide added value in tourism learning in higher education. Social and hedonic encouragement became significant factors in motivating the utilization of gamification among learners.</td>
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<tr>
<td>(Allu &amp; Aigbavboa, 2020)</td>
<td>University and industry collaboration (UIC) significantly influences industry acceptance of tourism education graduates. Student mentoring, training and</td>
</tr>
<tr>
<td>Authors</td>
<td>Findings</td>
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<tr>
<td>(Ferreras-Garcia, Sales-Zaguirre, &amp; Serradell-López, 2020)</td>
<td>Internship activities become an industrial means to assess the labor market they face, while for learners, it is an opportunity to improve the industry’s competence. Therefore, the tourism education curriculum needs to be improved on aspects of entrepreneurial mastery and operational skills.</td>
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<tr>
<td>(Kasa, Kho, Yong, Hussain, &amp; Lau, 2020)</td>
<td>Work-based learning models align industry needs and educational program design in tourism higher education curricula.</td>
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<td>(Joppe, Shen, &amp; Veltri, 2020)</td>
<td>Partisanship towards indigenous peoples in a destination can be done with an indigenous learning outcomes approach in the tourism curriculum. This method is carried out by prioritizing respect and inclusion of tourism, especially towards indigenous peoples and host communities.</td>
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<td>(Horng, Hsu, &amp; Tsai, 2019)</td>
<td>Curriculum with ethics and corporate social responsibility (EnCSR) enriches the process of higher education tourism. In addition, this content can encourage the process of awareness, reflection, and transformation of learners regarding sustainable tourism business ethics.</td>
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<td>(Boluk &amp; Carnicelli, 2019)</td>
<td>The emancipatory approach to tourism curriculum provides flexibility in the process of co-learning tourism. This approach requires equal rights of students to criticise, create value, and mutual understanding of tourism issues.</td>
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<td>(Torres Valdés et al., 2019)</td>
<td>Tourism higher education institutions must align with the strategic environment to create a sustainable entrepreneurial ecosystem. Learning simulations in the entrepreneurial ecosystem can better understand and prepare learners for real situations.</td>
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<td>(Thapa, 2019)</td>
<td>Partnerships between universities at the international level benefit the parties and accelerate sustainable tourism education.</td>
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<tr>
<td>(Castro-Spila et al., 2018)</td>
<td>The successful development of the Laboratory of Social Innovation and sustainable Tourism (Sistour-Lab) in tourism higher education institutions impacts learning progress for educators and learners.</td>
</tr>
<tr>
<td>(Yusuf et al., 2018)</td>
<td>Curriculum policies imposed by the government on tourism education can be added value by forming unique programs following the needs of stakeholders and resources of higher education institutions.</td>
</tr>
<tr>
<td>(Barkathunnisha, Lee, &amp; Price, 2017)</td>
<td>A spiritual approach to tourism learning can better understand sustainable tourism. In addition, this approach provides a comprehensive understanding of the philosophy of tourism for human life.</td>
</tr>
<tr>
<td>(Daniel et al., 2017)</td>
<td>Project-based learning is one of the solutions to improving tourism learning outcomes, especially in the entrepreneurial aspect. Through learning-to-be methods, learners are guided to solve problems from a practitioner’s perspective.</td>
</tr>
<tr>
<td>(Engelbrecht, Spencer, &amp; van Der Bijl, 2017)</td>
<td>Practical knowledge of tourism vocational education has a stronger role in improving the employability of graduates.</td>
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<tr>
<td>(Rouzrokh, Muldoon, Torabian, &amp; Mair, 2017)</td>
<td>Five themes of pedagogical approaches in tourism education were found: building safe spaces and developing trust, creating empathy, engaging tourism literature in ‘real life, opening doors for ongoing reflection, and decentring power and knowledge.</td>
</tr>
</tbody>
</table>

Based on Table 2, it is known that sustainable tourism education has been developed from various perspectives. In this study, on pedagogical and technical aspects, sustainable tourism learning can be achieved by methods: Context, Input, Process, and Product (CIPP) models (Tuna & Başdal, 2021), Research-Based Learning (Espinoza-Figueroa et al., 2021), Nature-based Experiential Learning (Zhang et al., 2021), Gamification (Aguiar-Castillo et al., 2020), Work-based Learning Model (Kasa et al., 2020), indigenous learning outcomes (Joppe et al., 2020), Project-based learning (Daniel et al., 2017) and internship (Ferreras-Garcia et al., 2020). Furthermore, this whole approach creates a safe learning climate, fosters trust and empathy, connects theory with the real world, and empowers learning (Rouzrokh et al., 2017).
At the meso-strategic level, sustainable tourism education can be achieved by providing materials in the form of digital tourism (Adeyinka-Ojo et al., 2020), development of social competence (Torres Valdés et al., 2019), Ethics and Corporate Social Responsibility (EnCSR) (Horng et al., 2019), and emancipatory approach for tourism curriculum (Boluk & Carnicelli, 2019). This approach is synergized with understanding tourism from a spiritual perspective (Abu Bakar, 2016, 2020) to achieve optimal learning outcomes. While at the strategic level, developing a sustainable tourism curriculum can be achieved through partnerships with industry (Aliu & Aigbavboa, 2020; Castro-Spila et al., 2018).

Most studies prove that tourism education is important to understand the importance of balancing business and socio-ecological interests for its learners. This is a source of solutions from implementing sustainable tourism invested in long-term education. The success of the sustainable tourism education content has been agreed to impact tourism development in the future. This encourages all stakeholders to support the development of a sustainable tourism curriculum in higher education.

The strategic role of the partnership of higher education institutions with industry has been consistently realized in exchanging knowledge between the parties. Internship activities become a bridge for the parties to evaluate each other’s business activities. This is related to the history that tourism education initially started from technical training activities carried out by the industry. The development of tourism higher education is an extended interest in the industry towards providing skilled human resources. Knowledge communication then develops into a mutually beneficial relationship that, in the perspective of this study, is realized in the exchange of values in campus and industry relations.

The challenge of developing a sustainable and technical pedagogical tourism curriculum is the disparity in resources owned by higher education institutions. Investment in learning facilities and infrastructure required to match industry conditions is a weakness for low-cost higher education institutions. More creative innovation is needed to realize a sustainable tourism ecosystem on campus, including expanding campus financing potential through commercializing campus products, joint lab development, and industry involvement in regular learning.

**CONCLUSION**

Sustainable tourism is an important global issue for developing this sector amid climate change and the challenges of disasters that hit the world community. Balancing business, ecological, and host-community interests is the goal of implementing the principle of sustainable tourism. Stakeholders have understood that sustainable tourism education is an effort to ‘break the chain of problems from its roots.’ Tourism learners who successfully internalize sustainability principles through good curriculum design will become leaders of change over the weaknesses of traditional tourism.

This study has found that the creativity of delivering sustainable tourism materials has been carried out by tourism higher education academics. Student-centered learning, as a term representing various pedagogical approaches in the presentation of sustainable tourism in this study, was found to accelerate learning output. Interestingly, there is an awareness of involving aspects of spirituality in learning sustainable tourism in higher education. This suggests that tourism is no longer considered a young discipline but has involved philosophical thinking in understanding why humans travel.

This study has limitations where the execution is carried out on a limited basis to three outlets of scientific journals. Nevertheless, it is believed that there are still various perspectives and interesting metadata in the study of sustainable tourism in higher education.

**REFERENCES**


