Journal of Hospitality, Leisure, Sport & Tourism Education xxx (xxxx) xxx

Contents lists available at ScienceDirect

Journal of Hospitality, Leisure, Sport & Tourism Education

journal homepage: www.elsevier.com/locate/jhlste

Nature-based experiential learning as a framework for preparing responsible tourism practitioners

Kun Zhang (张坤), Hongyu Wang (王红玉)*, Jingyue Wang (王婧悦), Chunlin Li (李春林), Jinyi Zhang (张津沂)

College of Tourism and Service Management, Nankai University, No.38 Tongyan Road, Haihe Education Park, Jinnan District, Tianjin, 300350, People's Republic of China

ARTICLE INFO

Keywords:
Ethical tourism
Responsible capacity
Sustainable tourism
Tourism practitioners

ABSTRACT

Responsible tourism is an essential issue of considerable concern to multiple stakeholders. Few studies focus on how specific academic courses increase future practitioners' responsibility in tourism. This study employs nature-based experiential learning to inspire and enhance tourism students' awareness of and capacity for responsible tourism. We apply mixed methods (i.e. pre-test–posttest, observations and reflection memos) to justify the overall learning process. Findings demonstrate that the undergraduates' responsible tourism-associated perception and capacity are improved. A nature-based experiential learning framework is proposed to provide insights into high-quality education for responsible tourism.

1. Introduction

Experiential learning is considered as an excellent means for promoting practice and application. Moreover, the teaching effect of experiential learning on tourism practitioners is proven in terms of their ability, practical action and future competitiveness. Responsible tourism, which is defined as 'making better places for people to live and better places for people to visit', is a framework and set of practices; however, the challenge is how to promote adequate responsible practices among key stakeholders (Burrai, Buda, & Stanford, 2019). The role of tourism education in changing responsible tourism behaviour is investigated but not with experiential learning (Ruhanen & Bowles, 2019). Considering the strength of experiential learning in combining theory and practice, this study aims to explore the effectiveness of a framework to implement responsible tourism education with an experiential learning approach.

Several concerns about the application of experiential learning to responsible tourism education exist. In the educational context, experiential learning is an action-oriented initiative, and a valid design is necessary to perform expected behaviours. Based on philosophic practitioner education (PPE), education in expected behavioural changes should be a practice-driven agenda enabling participants to act in the real world with a developed sense of critical thinking and tacit knowledge in action (Jamal & Tazim, 2004; Tribe & John, 2002). In the context of educational strategy, experiential learning is an effective and general teaching method for bridging the divide between theory and practice (Duerden, 2010; Čavlek & Nevenka, 2015). In addition, the effectiveness of experiential learning can be measured with students' obtained practical knowledge and skills, which can be transferred to future careers. Experiential learning is essential for developing responsibility among tourism majors (Kim & Jeong, 2018).

* Corresponding author.
E-mail addresses: zxzhangkun@163.com (K. Zhang), 8225741@nankai.edu.cn (H. Wang), wangjingyuew@163.com (J. Wang), lichunlinx@163.com (C. Li), zhangjinyic@163.com (J. Zhang).

https://doi.org/10.1016/j.jhlste.2020.100297
Received 18 May 2020; Received in revised form 10 November 2020; Accepted 16 November 2020
Available online 3 December 2020

Please cite this article as: Kun Zhang, *Journal of Hospitality, Leisure, Sport & Tourism Education*, https://doi.org/10.1016/j.jhlste.2020.100297

Based on the above discussion, exploring whether and how experiential learning can promote responsible tourism behaviours is practical and necessary. This study aims to determine how education can be used to promote responsible tourism by designing an experiential learning teaching approach for a nature education and nature recreation module. The results of this study can help develop a highly applicable pedagogical approach for responsible tourism education and provide insights into strategies for teaching responsible practices for experiential learning programmes.

The rest of this paper is organised as follows. Section 2 presents related works by reviewing the literature. The research method is described in Section 3, and Section 4 explains the findings on the three objectives. A conceptual framework for experiential learning implementation in responsible tourism education is presented and illustrated in Section 5. Finally, Section 6 concludes the study and identifies future research directions.

2. Literature review

2.1. Responsible tourism and importance of practical knowledge

Responsible tourism is a 'sustainable approach to the practice of tourism'. This term was first used in the early 1990s to describe alternative (to mass) forms of tourism and understood as broadly synonymous with sustainable tourism (Mihalic, 2016). Responsible tourism was extensively examined over time, encompassing numerous tourism issues (Goodwin & Francis, 2003; Caruana, Glozer, Crane, & McCabe, 2014). In responsible tourism, tourists, governments, employees, employers, unions and local communities must assume responsibility. However, the attitude–behaviour gap in responsible tourism is wide (Juvan & Dolnicar, 2014; Lin, Kim, Qiu, & Ren, 2017).

Thus, the growing importance of practical knowledge for tourism students should be considered, which was described by Tribe (2002) as the 'philosophic practitioner' and Dredge et al. (2012) as 'phronesis'. In the early 20th century, scholars became aware of the tourism education burden. The tourism industry can generate employment and wealth and influence consumer satisfaction and profound changes in social and economic relationship patterns. As future practitioners, students should become not only employees working passively to adapt to the world 'as it is' but also potential stewards to enact changes and creatively lead sustainable tourism. PPE, which requires curricula promoting balance between vocational and professional skills and abilities associated with social sciences and the humanities, was proposed by Tribe (2002) and developed by Dredge et al. (2012) and became an influential framework for curriculum planners. Ruhanen and Bowles (2019) employed an education for sustainability approach in a course to foster stewardship towards responsible and sustainable tourism. However, the present study emphasises reflection and practice in the real world.

2.2. Experiential learning process and important conditions

Experiential learning is a means for developing philosophic practitioners or phronesis. Experiential learning is defined as 'challenge and experience followed by reflection leading to learning and growth' (Chapman, Mcphee, & Proudman, 1992). As a practice, research topic and educational philosophy, experiential learning was applied to a variety of settings, including outdoor education, afterschool programmes, business trainings and hospitality and tourism education (Duerden, 2010).

Kolb is perhaps the most influential theorist in the experiential learning domain. Kolb defined experiential learning as a process in which knowledge is created through the transformation of experiences, and a learning cycle model is utilised to articulate four stages, namely, concrete experiences, reflective observations, abstract conceptualisation and active experimentation (Kolb & Kolb, 2005). This model illustrates the process of knowledge generation from experiences. However, the learning cycle indicates that though experiences may be the foundation of learning, they may not necessarily lead to it, and participants must engage actively with the experiences (Minnaert, 2012).

Based on previous studies, the necessary learning conditions to ensure experiential learning outcomes can be achieved via three ways. (1) The value of reflection: Leaners must reflect on lived experiences through certain types of reflective exercises to attain self-development understanding (Bower, 2014; Cronin & Lowes, 2016; Guachalla & Gledhill, 2019). (2) The value of motivation: Intrinsic, extrinsic or combined motivations are the basic conditions for learning. In the experiential learning process, motivation can help students overcome difficult tasks and challenges, guarantee learning proceedings and enhance involvement in learning activities (Guachalla & Gledhill, 2019; Monteiro & Almeida, 2015). (3) The value of assessment: Assessment is a necessary tool for facilitating self-verified temporary learning outcomes, a valid instrument for focusing on specific learning objectives and a guidance strategy for leading students to perform well in the overall learning process (Schreck, Weilbach, & Reitsma, 2020; Sheptak & Menaker, 2016).

Foster and Dollar proposed a well-known experiential learning model called the five-step experiential learning process model (Sattler, 2018). The steps in this model include volunteer exploration, apprenticeship, classroom learning, elective styles and culminating internship. In contrast to the model developed by Kolb, this framework pays attention to classroom learning and provides a link between on-campus learning activities and off-campus experiential activities. With its close connection with school teaching circumstances, this model was adopted in recent years and became more universal than that of Kolb. In this model, learning conditions are correlated in two aspects. (1) Apprenticeship: According to Sattler (2018), apprenticeship involves faculty members' observations and instructions and enables students to perform tasks independently (Kahler et al, 2014, 2014; Sommerhoff et al., 2018). (2) A combination of principles and practices: Jamal (2004) believed that doing the right thing needs the right reason. Thus, practice-oriented curricula likewise require general principles. This condition can empower participants to take ownership of their learning and experiences (Arcodia, Abreu Novais, Cavlek, & Humpe, 2020; Sheptak & Menaker, 2016; Čavlek & Nevenka, 2015).

2.3. Experiential learning implementation in tourism education

Experiential learning is widely used and an important research topic in tourism education (Kim, Kim, Lee, Lee, & Andrada, 2019; King & Zhang, 2020; Mak, Lau, & Wong, 2017). Experiential learning can bridge the gap between the classroom and the real world. Hospitality and tourism educators strive to combine experiential learning techniques to cultivate tourism talents (Schreck et al., 2020). In the field of tourism, the most accessible experiential learning methods are case studies, service and community learning projects, field trips, job shadowing, industry internships, virtual field trips and so on (Kim et al., 2019; Schott & Christian, 2017; Stansbie, Nash, & Chang, 2016).

The application of experiential learning to tourism education was conducted in two periods. The leading proponents in the first period, which was from the 1970s to the 2000s, were Jafari and Ritchie (1981), Cooper and Shepherd (1997) and Tribe (2002). Given the complex relationship between tourism education and the tourism industry, developing highly cooperative subjects to satisfy academic and industry stakeholders was the dominant issue in tourism education during this period (Cooper & Shepherd, 1997). Owing to its practical pedagogical philosophy, experiential learning was discussed and examined to address this need. Furthermore, because of the research focus during this period, experiential learning was employed in tourism education for teaching, which became known as experiential learning.

In the second period, which was from the 2000s to the present, numerous empirical studies emerged. The mainstream practice during this period was applying experiential learning to specific courses to achieve specific objectives, such as ethical tourism education (Jamal, 2004), hospitality education (Čavlek & Nevenka, 2015), sports management education (Sattler, 2018), responsible tourism education (Ruhanen & Bowles, 2019), ecotourism education (Sotiriadis, 2017), cultural competence (Earnest, Rosenbusch, Wallace-Williams, & Keim, 2016) and career employability (Guachalla & Gledhill, 2019). The common objective of these studies is to assist students' vocational, personal and social development. The findings revealed that experiential learning can enhance students' interest in the tourism discipline (Čavlek & Nevenka, 2015), promote after-class study sessions (Moorhouse, Dieck, & Jung, 2017), improve students' ability to solve practical problems (Kim & Jeong, 2018), enable students to gain a deep understanding of tourism destinations (Croy & Glen, 2009), improve students' teamwork ability and social responsibility (Mak et al., 2017) and so on.

However, a serious gap exists between the two periods. Compared with the first period, research in the second period focused on specific curriculum objectives and separate pedagogical perspective application, thereby ignoring existing conceptual framework adoption and innovation. In this regard, the PPE framework did not receive adequate attention and undergo further development in specific curricula. Owing to this gap, we obtained abundant knowledge on how experiential learning can promote practical knowledge in specific areas but limited insights into how critical engagement and mindful roles can be enhanced in the tourism industry with tourism curricula.

In summary, experiential learning is an excellent means for promoting practical knowledge. However, discussions on how to deliver experiential learning approaches to enhance future tourism practitioners' responsibility awareness and capacity are scarce. In the present study, we try to determine how nature-based experiential learning impacts tourism students' sense of responsibility and professional abilities for responsible tourism. In addition, we develop an experiential learning framework in the context of responsible tourism.

3. Method

3.1. Research context

In the undergraduate Tourism Management programme of the University of Nankai, sophomore students are required to take a course in nature recreation and nature education. The course was designed to improve preservation awareness and the responsible use of natural resources. As a response to sustainable and responsible initiatives, this course trains students as future practitioners in responsible tourism in terms of theoretical knowledge and responsible action to manage changes in positive, creative ways. Based on the theoretical foundation of experiential learning, the course includes a nature recreational planning project as a teaching objective. The project was selected as the experiential learning method owing to its effectiveness in improving generic competencies, sense of responsibility and awareness of identified social needs (Azar, Albattat, & Kamaruddin, 2020; Lin et al., 2017). To guarantee the effectiveness of the course, a four-step procedure guided by experiential learning conditions was implemented. The details of the course implementation are provided in the Appendix.

The course was conducted at the Haihe Educational Park and Bridge Park in Tianjin, China, as excellent ecological and seminatural environments. Bridge Park won the 2010 American Association Honour Award for landscape architecture and the 2009 Global Best Landscape Award for its outstanding ecological design for ecosystem recovery. Meanwhile, 46.81% of Haihe Educational Park is covered by trees or rivers, making it an excellent ecological and seminatural environment. Natural parks in a community have core environmental, community and industry requirements. The learning objectives of responsible tourism include responsibility awareness of nature, communities and tourists for nature-based recreational project planning.

The teaching team consisted of six instructors. Two instructors are tourism practitioners in nature-based education (Teachers A and B), one is an ecological planner knowledgeable in natural environments (Teacher C), two are tourism management professionals (Teachers D and E) and one is the chief coordinator of the course, who is a professional with expertise in tourism management and landscape ecology (Teacher F). In addition, 10 families with children participated in the implementation of the nature-based project, and 30 tourism students were enrolled in the course. Based on their demographic characteristics, the students' age ranged from 17 to 22 years, and eight are male, whilst the remaining are female. Furthermore, 23 of the students are Chinese, and seven are international students.

An introduction was given at the beginning of the course, and the students were informed that the final assignment involved the implementation of the nature-based project. This nature-based experiential learning course is short, with a duration of six weeks. The 'experiencing', 'learning' and 'planning' and 'implementing' parts lasted three weeks, and the 'planning' part, which was the most essential step, lasted another three weeks.

3.2. Method selection

We designed an integrated data collection approach to achieve the objectives of this study, which included a pretest–posttest design, observations and reflection memos (e.g. diaries and videos). Pre–post surveys are useful for examining attitudes that participants may not be consciously aware of or unwilling to express (Cohen, 2014). We distributed the same questionnaire to the students before and after the course and compared the self-reported learning outcomes to determine course effectiveness. Reflection data are appropriate in experiential learning, as individuals' learning benefits and engagement cannot be observed (Hew, 2016). Participant observation is a universally accepted qualitative method to supplement useful information about participants and important research memos for qualitative analysis (Gao, Lin, & Zhang, 2021). To cross validate the data, the faculty members kept a teaching diary to record their observations.

3.3. Method design

Using a scale from the attitudes, skills and knowledge (ASK) model, we employed a pretest–posttest design to quantitatively compare 'what' changes occurred in the students in terms of responsible tourism (Bakarman, 2004). Moreover, we utilised the teachers' observations and students' reflections to qualitatively analyse 'how' and 'why' the changes occurred.

The ASK model derives from Vinke's definition of competency as 'the ability of an individual to select and use the knowledge, skills, and attitudes that are necessary for effective behaviour in a specific professional, social or learning situation' (Mak et al., 2017). The ADK model is a universally accepted model in professional education. We adopted a scale from Mak et al. (2017) for our learning objectives. The scale included two questions answered with a Likert-type scale and one open-ended word correlation. The questions answered with the Likert-type scale were about attitudes, knowledge and skills. Both questions were measured by nine points ranging from 'highly disagree' to 'highly agree'. The word correlation question asked the students to provide three to five terms illustrating their understanding of each question.

The teaching group observed and recorded the students' performance, engagement and interactions in their teaching diary. In addition, they took photos throughout the entire process. The critical indices related to the three issues and students' questions during the course were likewise recorded.

3.4. Ethics

To address and avoid sensitive or privacy concerns, ethical approval was sought for the survey questions and reflection instructions. The participants, including the students and families, were well informed of the procedure and concrete research objectives. The families invited to join the project were given a registration letter with the project details and information on their voluntarily participation. In addition, they were informed that children must be accompanied by at least one parent during the project implementation and about the implementation principles.

3.5. Data collection

We distributed the questionnaire to the students before and after the course.

Two faculty members took teaching notes at the end of each session, and the teaching group discussed their observations and reflected on the students' performance during the learning process.

The students were given reflection assignments after each teaching step. The first three rounds required a reflection diary, with semistructured instructions. The students' reflections should include impressive learning experiences, learning outcomes and obtained knowledge and/or skills. The last round required a video in which the students could freely reflect on the overall learning process and evaluate their learning outcomes and performance in the course.

3.6. Data analysis

An integrated procedure was used to analyse the data. Specifically, the quantitative data were analysed with ANOVA to reflect pre and post changes. The open-ended word correlation data were convert to frequent numbers for a t-test. The qualitative data were coded into meaning units to identify meaning themes related to the explanations and illustrations of the changes. The 'what', 'how' and 'why' logic was applied to integrate the multisource data.

Following the aforementioned procedure, we interpreted the learning outcomes and developed a conceptual framework. In the interpretation, we described the changes in ASK based on the quantitative analysis results. We conducted further examinations on the qualitative analysis results. To link the learning steps and outcomes, the framework analysis process consisted of the following considerations: (1) key learning procedures, (2) essential learning conditions, (3) dominant learning outcomes and 4) correlations between the aforementioned factors.

4. Findings

4.1. Attitudes towards responsible tourism in nature-based experiential learning

In the pretest and posttest questionnaires, attitudes towards responsible tourism did not exert a significant effect ($M_{pre} = 6.07$, $M_{post} = 6.53$, $F = 5.371$, $Sig = 0.017$) but reflected differences between the pre-learning and post-learning stages. The results of the word correlation further revealed the changes in attitudes. After the course, a substantial number of words and phrases describing nature preservation were obtained, such as 'protected species', 'reverence for life' and 'sustainable future', and the ecology-related semantic terms between the pre-learning and post-learning stages were significant ($Num_{pre} = 10$, $Num_{post} = 14$, $t = 13.713$, $Sig = 0.000$). The words provided by the students indicated their increased understanding of the natural environment. Increased desire to improve the environment and be close to nature, which was mentioned in the reflection diaries, served as robust evidence for changes in attitudes.

The changes in attitudes occurred through two ways. The first way was through direct immersion in the natural environment. According to observation notes on the students' feelings:

> When experiencing nature-based activities in Bridge Park, a smile appeared on everyone's face, and they enjoyed the nature experience. All the students felt a friendly and trusting relationship in such a natural environment. They discovered the beauty of nature and revealed their deeply buried abilities for empathic connection. Some students said, 'Today, I touched nature with multisenses; it helps me relax and recover; nature is a treasure' and 'Nature is a curial resource for recreation and tourism'(-student-7).

The second way was through observation of the real world and critical thinking. During the planning step, the students identified problems in tourism consumption and realised the gap between awareness and action. The attitude–behaviour gap they identified in the real world motivated them to consider industry development. For instance, one reflection memo stated the following:

> The purpose of nature education is to address children's natural deficiencies and develop their love for nature. Nature and children are friends. All we have to do is melt the ice of urbanisation and build a bridge between nature and children (student-13).

However, in their reflection on the course after the completion of the steps, many of the students mentioned factors related to the future and actions that directly reflected the changes in their attitudes. They raised other critical-thinking issues about people and nature. The students reflected on how to address the isolation between urban children and nature, including issues such as 'modern lifestyle', 'parents' weak consciousness about nature' and 'the characteristics of urban children.' In the case of the last issue, the students asserted that they should launch responsible tourism in the future, as follows:

> For myself, and hopefully, in the future, I would like to work with nature (student-11).

> By educating the new generation about nature, thereby creating green tourism and a green world, the tourism industry can greatly contribute to sustainable development (student-22).

Aside from reflecting on real situations in the tourism industry, experiential learning enables students to recognise the gap in their own attitudes and behaviours. This recognition was reflected in the planning step. Although the application of theoretical principles in actual practice is taught and demonstrated, many environmentally unfriendly habits remain, such as wasting water. One group of students claimed the following:

> It is important for us to have an opportunity to enhance our awareness and responsibility of nature (student-17).

Thus, experiential learning plays a role in changing attitudes by enabling students to identify problems and the attitude–behaviour gap in the real world.

4.2. Responsible tourism skills and activities

After completing the pedagogical steps, the students developed skills for implementing responsible tourism planning.

Firstly, the pretest–posttest reflected a significant increase in the students' skills ($M_{pre} = 5.278$, $M_{post} = 6.793$, $F = 5.371$, $Sig = 0.001$). The words describing skills related to responsible tourism were also significant ($Num_{pre} = 5$, $Num_{post} = 16$, $t = 15.256$, $Sig = 0.000$). The most frequently stated skills related to responsible tourism were 'cooperation', 'targeted guidance' and 'activity design'. Descriptions of interpersonal communication were the most remarkable, which included 'cultural exchange', 'humanistic concern', 'enhance communication' and so on. Additionally, considerable attention was given to community-based tourism activities, including related terms such as 'community civilisation construction', 'collective consciousness', 'community influence', 'residents' participation' and so on.

In terms of professional skills, many of the students identified specific educational interventions that left a deep impression, which may contribute directly to their ability improvement. In the expertise-gaining and skills-learning step for planning and implementing nature-based recreation projects, Teacher B introduced the core concepts of nature-based education in tourism 'in nature, about nature and for nature', which left a deep impression on the students. The feedback of one of the students is as follows:

> What impressed me so much was the three English phrases 'about nature', 'for nature' and 'in nature'. I think, in the natural environment, every participant learns from nature (student-8).

In accordance with previous studies, through apprenticeships, the students were able to improve their capacity for planning and

engaging in responsible tourism.

Regarding the students' reflections on the overall learning process, comprehensive thinking, tourism programme implementation and social communication were identified as the most important acquired skills. The planning and implementing step enabled the students to utilise effective communication skills to achieve the project objectives.

Given that the students must practice responsible tourism planning and implementation independently, the successful execution of this course reflected their mastery of the necessary skills, which was confirmed by certain details in the children-instructing step. A teacher's observation notes described the following details:

> The five groups did a great job accompanying the children. The students and children had close interactions, and the parents were liberated from keeping an eye on their kids (teacher-1).

4.3. Knowledge on responsible tourism in nature-based experiential learning

After the practice and application phases, we observed an increase in the relevant knowledge of the students. In the questionnaire, knowledge obtained from the course changed remarkably based on the mean value but was not statistically significant ($M_{pre} = 5.97$, $M_{post} = 6.52$, $F = 5.571$, $Sig = 0.002$). In the subjective section, the most significant changes were observed in 'knowledge about nature-based responsible tourism activity', but overall knowledge on nature-based tourism and the tourism industry was insignificant ($Num_{pre} = 11$, $Num_{post} = 17$, $t = 16.113$, $Sig = 0.043$). However, the students reflected considerably on the importance of nature education in the tourism industry in the posttest, including 'increasing tourism attraction', 'new direction of tourism development' and 'extended industry chain'. Regarding professional knowledge, the students gained extensive and enriched knowledge, thereby improving their nature protection, natural education and social communication abilities.

The reason behind the limited knowledge obtained from the course may be related to critical thinking regarding the gap between theory and practice. Through experiential practice, the students obtained rich cognition and personal experience in planning a nature-based activity from not only experiencing nature but also planning and implementing a nature-based project. The students reflected that applying professional knowledge to the implementation of a nature-based project was crucial and provided them with an opportunity to discover the gap between theory and practice.

Knowledge on social responsibility reflects changes in the perception of meaning. Before the learning stage, we collected only eight sematic terms about social responsibility. Surprisingly, we obtained 20 semantic terms after the learning stage. Many of the students realised that nature education could become a branch of the tourism industry and catalyse economic development in a healthy and

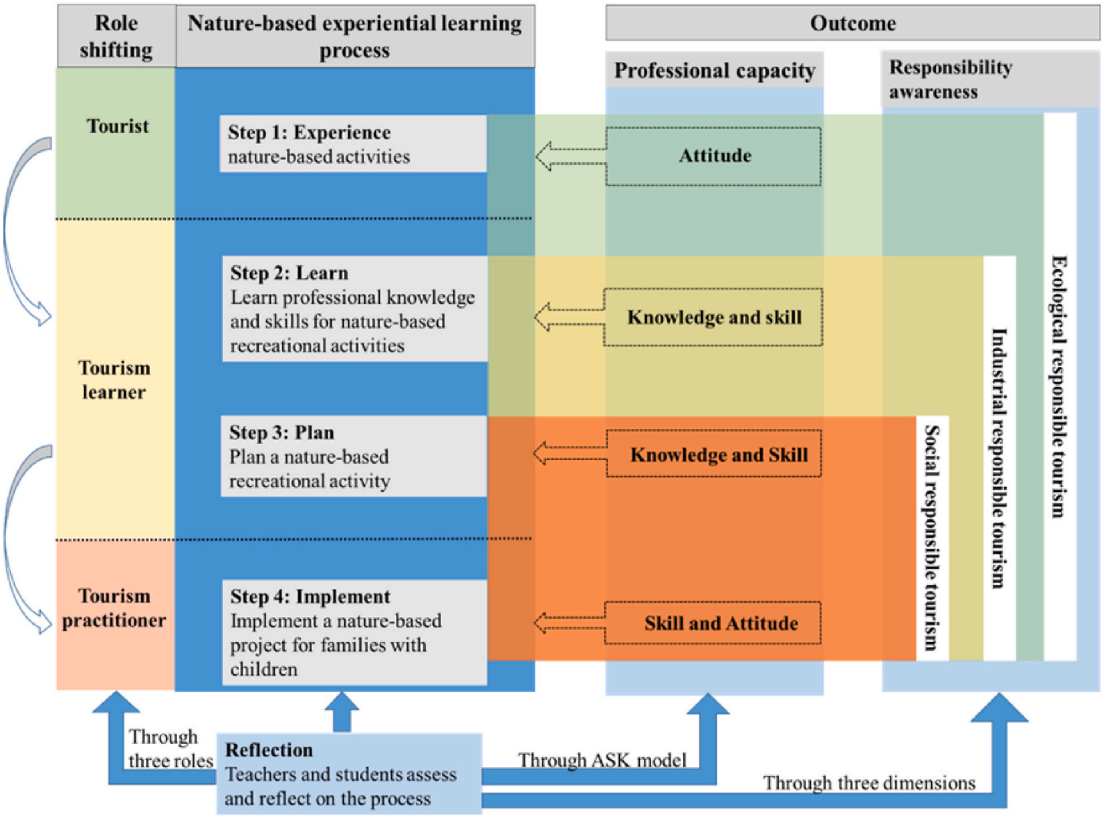

Fig. 1. Nature-based experiential learning framework.

sustainable way.

5. Nature-based experiential learning framework

In this section, we summarise the characteristics of the qualitatively informed conceptual nature-based experiential learning framework (Fig. 1), which we generated based on the teaching case, and enhance understanding on tourism education promotion. In the framework, the learning step occurs concurrently with role shifting. Specifically, in the 'experiencing' stage, the students play the role of a tourist to experience nature-based activities. 'Learning' means obtaining professional knowledge and skills to plan and implement a nature-based recreational project, and 'planning' means organising a nature-based recreational project. In these two stages, the students play the role of a tourism learner. Meanwhile, 'implementing' means executing a nature-based recreational project for children, in which the students play the role of a tourism practitioner. The nature-based experiential learning outcomes enable the students to acquire specific attitudes, knowledge and skills related to responsible tourism and general aspects of responsibility requirements. In the course, the overall responsibility aspects are ecological responsibility, industrial responsibility and social responsibility owing to the characteristics of the case. Reflection can be linked with the four learning steps by integrating role shifting, the ASK model and the responsibility dimensions.

Given that this nature-based experiential education programme aims to enable participants to gain beneficial abilities, experiential learning must expose students to actual situations to obtain opportunities to become critical thinkers, collaborators and practitioners in nature-based tourism projects. Thus, this teaching programme's outcomes can inform the development of a conceptual framework for course-embedded experiential learning programmes in tourism education. This framework would allow educators to design experiential courses to develop responsible and competitive tourism practitioners. Furthermore, the framework emphasises that experiential learning programmes should include three learning aspects, which are described below.

5.1. Role shifting

In general, role playing in experiential learning allows participants to immerse themselves in semireal scenes and encourages them to engage in critical thinking (Ruhanen, 2006). In our nature-based experiential learning framework, we advocate providing opportunities for embodiment. Participants' embodied cognition emerges during the role-shifting process. Firstly, in experiencing nature-based tourism activities, the students' interest in, curiosity about and positive cognition towards the natural environment were inspired. Moreover, we take implementation as an embodied way to spur the students to obtain the most significant abilities for organising nature-based tourism projects.

5.2. Five procedures in the learning process

Kolb (1984) stated that the core value of experiential learning is to enable participants to involve themselves completely in new experiences. Next, participants could integrate their observations and cognition with their professional knowledge and theories and apply ethical theories to make decisions and solve practical problems. In this study, we employ Kolb's concept of experiential learning and innovatively establish a five-step learning process involving 'experiencing', 'learning', 'planning', 'implementing' and 'reflecting'. Specifically, we emphasise the participants' self-reflection and provide them with opportunities to review and assess their performance.

5.3. Outcomes: professional capacity and responsibility awareness

Based on the definition of responsible tourism, except for tourists, governments, employees, employers, unions and local communities should assume responsibility (Burrai, Buda, & Stanford, 2019). In this study, we innovatively take nature-based experiential learning to catalyse students' responsibility awareness and capacity as future tourism practitioners. Regarding the outcomes, we realise that the students' attitudes are gained through their interactions. Moreover, the students' responsibility awareness can be promoted gradually. For example, in the first step, they perceive the tranquillity and beauty of the natural environment and thus believe that they should engage in nature protection (responsible ecological/environmental awareness). In the learning step, after studying the background, developmental history and mission of nature-based tourism, they are compelled to reflect on industrial responsibility. Whilst working with the families in the implementation step, they begin to consider social benefits for the children and their families.

6. Conclusion and discussion

In this study, we implement an experiential learning approach for responsible tourism education, illustrating how the approach can facilitate the attainment of responsible tourism attitudes, responsible tourism skills and responsible tourism knowledge. By providing a five-step experiential learning framework and discussing important implementing aspects to ensure learning effectiveness, we expect our study to contribute to curriculum innovation and pedagogical integration in tourism education.

Our proposed framework employs basic experiential learning but makes innovations on the PPE framework and empirical investigation. The fist innovation concerns the students' role shifting during the entire learning process. As discussed in PPE, a curriculum should be designed to satisfy the labour market, respond to consumer demands and promote economic welfare (Dredge et al.,

2012). However, these achievements require subjective awareness and experiences. In our research, the students' role shifting enables them to obtain immersion experiences for each demand. Thus, the role that students must adopt or play should be prepared prior to experiential learning implementation. Results of the study show that multirole experiences can help enhance experiential learning and develop practical wisdom (Hawkins & Weiss, 2005). The second innovation concerns the adaptation of the universal experiential learning framework into a specific responsible tourism curriculum. We integrate learning objectives and responsibility capacity into the learning process and clearly reflect on the role of each step in improving effectiveness. This approach of curriculum effectiveness is believed to be worthwhile to adopt responsible management practices (Dredge et al., 2012). Monitoring the overall process when implementing a responsible tourism curriculum with this framework would be straightforward.

Tourism students are future practitioners and thus can play an essential role in leading responsible tourism (Mihalic, 2016; Sattler, 2018). Based on the outcomes of the course, we assert that nature-based experiential learning is crucial in tourism education, as the course can enhance students' professional abilities for responsible tourism. Firstly, the course enriches the students' fundamental knowledge on nature-based tourism projects and responsible tourism. Secondly, the students' attitudes towards and awareness of responsible nature-based tourism are improved. Notably, they pay considerable attention to the social responsibility of tourism activities. Lastly, we observe a gap between the students' responsibility awareness and capacity during the experiential learning process. This gap compels the students to hone their abilities and apply their newly acquired skills to develop a nature-based project. Overall, we advocate the use of nature-based experiential learning in tourism education, as tourism practitioners with strong responsibility awareness and capacity can positively influence the entire tourism industry (Del Chiappa, Grappi, & Romani, 2016; Venu, 2008).

However, our study has limitations. Tourism is a complex field related to not only the natural environment but also the economic and social sectors (He, He, & Xu, 2018). Nature-based experiential learning emphasises ecological and social aspects but largely ignores economic aspects (Kim et al., 2019; Mihalic, 2016; Sotiriadis, 2017). Moreover, tourism education exerts a significant impact on future tourism development (Leung, 2003). In this study, all the tourism students were first-year students with limited professional knowledge. Tourism students in different year levels should be compared in future studies, which could provide an overall assessment of practical pedagogy in tourism.

Learning by doing is a valued teaching strategy embodied in most parts of teaching actions (Lin et al., 2017). Despite the widespread application of experiential learning in tourism and hospitality education, the link between experiential learning and responsible tourism is not adequately discussed. Moreover, the action-oriented character of responsible tourism should explore the integration of theory and practice into curriculum design to develop positive educational outcomes (Dredge et al., 2012; Tribe, 2002). The role of tourism education in improving students' ethical and moral responsibilities to change future tourism consumption and contribute to sustainable development is indisputable. Experiencing the real world can not only empower students to adopt responsible practices but also motivate them to engage in classroom learning.

Author Statement

Kun Zhang: Conceptualization, Investigation, Resources, Writing-Original Draft, Supervision,
Hongyu Wang: Conceptualization, Methodology, Formal analysis, Writing-Review & Editing, Project administration
Jingyue Wang: Data curation, Investigation, Formal analysis, Writing-Review & Editing
Chunlin Li: Investigation, Writing-Original Draft
Jinyi Zhang: Investigation, Writing-Original Draft

Declaration of competing interest

This research is supported by the following Grant: OAMAS Approach Effective Teaching (NKET) in Nankai University, China, NKJG2020260; The Fundamental Research Funds for the Central Universities, China, 63202071.

Acknowledgments

We all authors will thank the reviewer's helpful suggestions; also we all authors will thank Professor Hanqin Qiu for her great help in the revise manuscript.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jhlste.2020.100297.

References

Arcodia, C., Abreu Novais, M., Cavlek, N., & Humpe, A. (2020). Educational tourism and experiential learning: Students' perceptions of field trips. *Tourism Review*, (November).

Azar, A. S., Albattat, A., & Kamaruddin, A. Y. (2020). The effectiveness of hospitality experiential learning from academic and industry perspectives. *Journal of Critical Reviews, 7*(12), 296–301.

Bakarman, A. A. (2004). *Attitude, skill, and knowledge: (ASK) a new model for design education*. King Saud University.
Bower, G. G. (2014). Theory and practice: Utilizing Dewey's experiential learning theory to implement a 5k road race. *Journal of Hospitality, Leisure, Sports and Tourism Education, 15*(1), 61–67.
Burrai, E., Buda, D. M., & Stanford, D. (2019). Rethinking the ideology of responsible tourism. *Journal of Sustainable Tourism, 27*(7), 992–1007.
Burrai, E., Buda, D. M., & Stanford, D. (2019). Rethinking the ideology of responsible tourism. *Journal of Sustainable Tourism, 27*(7), 992–1007.
Caruana, R., Glozer, S., Crane, A., & McCabe, S. (2014). Tourists' accounts of responsible tourism. *Annals of Tourism Research, 46*, 115–129.
Čavlek, & Nevenka. (2015). Experiential learning in tourism education: The case of ITHAS. *Tourism Social Science Series*, (21), 101–113.
Chapman, S., Mcphee, P., & Proudman, B. (1992). *What is experiential education ? experiential education as emotionally-engaged learning*.
Cohen, E. H. (2014). Self-assessing the benefits of educational tours. *Journal of Travel Research, 55*(3), 353–361.
Cooper, C., & Shepherd, R. (1997). The relationship between tourism education and the tourism industry: Implications for tourism education. *Tourism Recreation Research, 22*(1), 34–47.
Cronin, C. J., & Lowes, J. (2016). Embedding experiential learning in HE sport coaching courses: An action research study. *Journal of Hospitality, Leisure, Sports and Tourism Education, 18*, 1–8.
Croy, & Glen, W. (2009). Location-based learning: Considerations for developing and implementing destination-partnered authentic-experiential learning. *Journal of Hospitality and Tourism Education, 21*(1), 17–23.
Del Chiappa, G., Grappi, S., & Romani, S. (2016). Attitudes toward responsible tourism and behavioral change to practice it: A demand-side perspective in the context of Italy. *Journal of Quality Assurance in Hospitality & Tourism, 17*(2), 191–208.
Dredge, D., Benckendorff, P., Day, M., Gross, M. J., Walo, M., Weeks, P., et al. (2012). The philosophic practitioner and the curriculum space. *Annals of Tourism Research, 39*(4), 2154–2176.
Duerden, M. D. (2010). Theory and practice of experiential educationK. Warren, D. Mitten, & T. A. Loeffler (Eds.). *Journal of Leisure Research, 42*(4), 653–654.
Earnest, D. R., Rosenbusch, K., Wallace-Williams, D., & Keim, A. C. (2016). Study abroad in psychology: Increasing cultural competencies through experiential learning. *Teaching of Psychology, 43*(1), 75–79.
Gao, J., Lin, H., & Zhang, C. (2021). Locally situated rights and the "doing" of responsibility for heritage conservation and tourism development at the cultural landscape of Honghe Hani Rice Terraces, China. *Journal of Sustainable Tourism, 29*(2–3), 193–213.
Goodwin, H., & Francis, F. (2003). Ethical and responsible tourism: Consumer trends in the UK. *Journal of Vacation Marketing, 9*(3), 271–284.
Guachalla, A., & Gledhill, M. (2019). Co-creating learning experiences to support student employability in travel and tourism. *Journal of Hospitality, Leisure, Sports and Tourism Education, 25*(July), 100210.
Hawkins, D. E., & Weiss, B. L. (2005). Experiential education in graduate tourism studies: An international consulting practicum. *Journal of Teaching in Travel & Tourism, 4*(3), 1–29.
He, P., He, Y., & Xu, F. (2018). Evolutionary analysis of sustainable tourism. *Annals of Tourism Research, 69*(January), 76–89.
Hew, K. F. (2016). Promoting engagement in online courses: What strategies can we learn from three highly rated MOOCS. *British Journal of Educational Technology, 47*(2), 320–341.
Jafari, J., & Ritchie, J. R. B. (1981). Toward a framework for tourism education: Problems and prospects. *Annals of Tourism Research, 8*(1), 13–34.
Jamal, T. B. (2004). Virtue ethics and sustainable tourism pedagogy: Phronesis, principles and practice. *Journal of Sustainable Tourism, 12*(6), 530–545.
Juvan, E., & Dolnicar, S. (2014). The attitude-behaviour gap in sustainable tourism. *Annals of Tourism Research, 48*, 76–95.
Kahler, C. W., Spillane, N. S., Day, A., Clerkin, E. M., & Parks, A. (2014). The journal of positive psychology : Dedicated to furthering research and promoting good practice. *The Journal of Positive Psychology, 9*(4), 19–29.
Kim, H. J., & Jeong, M. (2018). Research on hospitality and tourism education: Now and future. *Tourism Management Perspectives, 25*(October 2017), 119–122.
Kim, Y., Kim, C., Lee, D. K., Lee, H., & Andrada, R. I. T. (2019). Quantifying nature-based tourism in protected areas in developing countries by using social big data. *Tourism Management, 72*(JUN), 249–256.
King, B., & Zhang, H. Q. (2020). *Experiential tourism and hospitality learning: Principles and practice*.
Kolb, D. A. (1984). *Experiential learning*. Experience As The Source Of Learning And Development.
Kolb, Y. A., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *The Academy of Management Learning and Education, 4*(2), 193–212.
Leung, B. P. C. (2003). Education for sustainable development in Hong Kong: Experience of a green school. In *New directions in environmental education for Hong Kong* (pp. 44–58). May.
Lin, P. M. C., Kim, Y. H., Qiu, H., & Ren, L. (2017). Experiential learning in hospitality education through a service-learning project. *Journal of Hospitality and Tourism Education, 29*(2), 71–81.
Mak, B., Lau, C., & Wong, A. (2017). Effects of experiential learning on students: An ecotourism service-learning course. *Journal of Teaching in Travel & Tourism, 17*(2), 85–100.
Mihalic, H. (2016). Sustainable-responsible tourism discourse - Towards "responsustable" tourism. *Journal of Cleaner Production, 111*, 461–470.
Mihalic, T. (2016). Sustainable-responsible tourism discourse - towards "responsustable" tourism. *Journal of Cleaner Production, 111*, 461–470.
Minnaert, L. (2012). Social tourism as opportunity for unplanned learning and behavior change. *Journal of Travel Research, 51*(5), 607–616.
Monteiro, S., & Almeida, L. S. (2015). The relation of career adaptability to work experience, extracurricular activities, and work transition in Portuguese graduate students. *Journal of Vocational Behavior, 91*, 106–112.
Moorhouse, N., Dieck, M. C. T., & Jung, T. (2017). *Augmented reality to enhance the learning experience in cultural heritage tourism: An experiential learning cycle perspective*. e-Review of Tourism Research.
Ruhanen, L. (2006). Bridging the divide between theory and practice: Experiential learning approaches for tourism and hospitality management education. *Journal of Teaching in Travel & Tourism, 5*(4), 33–51.
Ruhanen, L., & Bowles, L. (2019). Student perspectives of responsible tourism behaviour: The role of tourism education. *Journal of Hospitality and Tourism Education*, 1–11, 00(00).
Sattler, L. A. (2018). From classroom to courtside: An examination of the experiential learning practices of sport management faculty. *Journal of Hospitality, Leisure, Sports and Tourism Education, 22*(November 2017), 52–62.
Schott, & Christian. (2017). Virtual fieldtrips and climate change education for tourism students. *Journal of Hospitality, Leisure, Sports and Tourism Education*, 13–22.
Schreck, C. M., Weilbach, J. T., & Reitsma, G. M. (2020). Improving graduate attributes by implementing an experiential learning teaching approach: A case study in recreation education. *Journal of Hospitality, Leisure, Sports and Tourism Education, 26*(October 2019), 100214.
Sheptak, R. D., & Menaker, B. E. (2016). Learning and working with the pros: Student perspectives on an embedded experiential learning project. *Journal of Hospitality, Leisure, Sports and Tourism Education, 19*(January), 104–114.
Sommerhoff, D., Szameitat, A., Vogel, F., Chernikova, O., Loderer, K., & Fischer, F. (2018). What do we teach when we teach the learning sciences? A document analysis of 75 graduate programs. *The Journal of the Learning Sciences*, 10502018–10508406.
Sotiriadis, M. (2017). Experiential dimensions and their influence on behavioral intentions within the context of nature-based tourism. *Tourism and Hospitality Management, 23*(1), 35–50.
Stansbie, P., Nash, R., & Chang, S. (2016). Linking internships and classroom learning: A case study examination of hospitality and tourism management students. *Journal of Hospitality, Leisure, Sports and Tourism Education, 19*, 19–29.
Tribe, J. (2002). Education for ethical tourism action. *Journal of Sustainable Tourism, 10*(4), 309–324.
Venu, V. (2008). Responsible tourism in destinations. *Tourism Recreation Research, 33*(3), 365–367.