



INN@ *Tourism*

**Transnational Report on skills demand and gaps of
hospitality and tourism workforce and
recommendations for the development of the new
curricula**

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List of abbreviations

Acronym	Description
HEI	Higher Education Institution
Lao PDR	Lao People's Democratic Republic
NGO	Non-Governmental Organisation
SDGs	Sustainable Development Goals
STP	Sustainable Tourism Pedagogy
UBC	University-Business Cooperation
UNWTO	United Nations World Tourism Organization

Executive summary

The present Report was developed in the framework of the “INNO4Tourism - Innovative Curricula for Lifelong Learning of Sustainable Tourism Workforce” project. INNO4Tourism aims to contribute to the alignment of Higher Education Institutions (from now on HEIs) in Thailand and Lao PDR with the rapidly changing hospitality and tourism labour market, in an effort to enhance students' employability, and, therefore, the professional rehabilitation of the graduates of the relevant HEIs.

This Transnational Report provides a current situation overview based on a two-fold analysis, i.e., of the current situation which concerns the situation in Lao PDR's and Thailand's tourism and hospitality sector labour markets and this of the related comparative analysis, that highlights the existing national tourism and hospitality sector skills' needs and gaps between the countries. It is based on the findings of the two **National Reports on skills demand and gaps in current hospitality and tourism workforce** in **Lao PDR** and in **Thailand**, and the primary and secondary research findings collected in the two countries in April and early May 2024.

The analysis of the findings of the two National Reports has revealed that many skills gaps exist in the tourism & hospitality workforce in Lao PDR and Thailand, which are in demand by the industry. These include, among other, understanding of sustainable tourism concepts & practices, green, entrepreneurship, management and soft skills, as well as digital skills and foreign language proficiency.

At the same time, the analysis reveals that training initiatives on some of the aforementioned topics are often restricted. A series of further obstacles that may impede the acquisition and/or enhancement of the tourism and hospitality workforce's relevant skills were also identified, such as lack of interest due to limited awareness, financial costs and scarce resources, lack of management motivation or governmental incentives and support.

Finally, the Report proposes a series of recommendations to HEIs for the development of sustainable tourism curricula that are adaptable to the ongoing technological, cultural



and social evolutions, and effectively address tourism & hospitality sector workforce needs.

1. Introduction

1.1. The INNO4Tourism project

“INNO4Tourism - Innovative Curricula for Lifelong Learning of Sustainable Tourism Workforce” is a Capacity Building for Higher Education Project, funded under the ERASMUS-EDU-2023-CBHE Call. The general objective of the INNO4Tourism project is to contribute to the alignment of HEIs in Thailand and Lao PDR with the rapidly changing hospitality and tourism labour market, in an effort to enhance the employability of students and recent graduates, along with the skills and knowledge of current employees.

Through cooperation with universities and relevant organizations from Europe, INNO4Tourism aims to enable expertise and European good practices and policies to be transferred and adapted, benefitting the Asian HEIs and systems in general. It proposes an international cooperation mechanism in order to update, modernize and improve higher education in Asia, aiming at the partner countries’ socio-economic recovery, growth and prosperity in the context of the current economic globalization, decline in human development, fragility and rising socio-economic and environmental inequalities which came about as a result of the recent Covid-19 pandemic crisis.

The project proposes effective solutions for global challenges, externalizing relevant EU policies and initiatives that promote inclusive sustainable growth and a green economy, thus demonstrating the EU added value. In view of the above, the project aims to achieve the following objectives:

1. Improve the academic offer of HEIs and students’ access to innovative curricula on sustainable tourism in the form of online, non-degree courses.
2. Improve the skills of current and future students of hospitality and tourism programmes according to the labour market needs.
3. Upskill/reskill the hospitality and tourism workforce and recent graduates, addressing market gaps/needs to boost their employability.
4. Strengthen the skills of HEIs’ academic/ teaching staff on developing innovative curricula and introducing innovative elements in existing curricula on sustainable tourism.

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5. Enhance teaching skills of academic/ teaching staff in hospitality and tourism programmes (including learner centred and problem-based teaching and learning).
 6. Increase the capacities of HEIs' administrative staff on active cooperation with the hospitality and tourism sector and/or other relevant stakeholders and provision of holistic career services to hospitality and tourism students and graduates.
 7. Enhance students' and graduates' students access to modern and holistic career services.
 8. Enhance the active engagement of HEIs with the business world to address mismatches between the requirements of employers and the offer of HEIs in the hospitality and tourism sector.

To address its objectives, the project will implement a series of activities, organized across five main axes. The first step involves primary and secondary research to map the current skills demand and gaps in hospitality and identify the respective required skills and knowledge. On the basis of the research results, the project's Capacity building programme for the staff of HEIs' will be designed and implemented through (a) a Training Programme on setting up UBC mechanisms and holistic career services; (b) a Curriculum Development course (Training of Trainers programme); and (c) the Training of teaching staff on the new Curricula on Sustainable Tourism.

The next phases of the project will focus on the actual establishment and piloting of University-Business Cooperation (UBC) mechanisms and the development and piloting of new curricula on sustainable tourism (on themes such as sustainable tourism, inclusive and accessible tourism, tourism entrepreneurship and management, digital skills, soft skills, etc.). Finally, the promotion of the importance of UBC mechanisms and of innovative curricula on sustainable tourism will be the focus of the final phase of INNO4Tourism.

1.2. Aims and scope of the report

The present **“Transnational Report on skills demand and gaps of hospitality and tourism workforce and recommendations for the development of the new curricula”** aims to depict the existing situation Lao PDR and Thailand on the topic, offering a comparative overview and useful suggestions.

The results of the present Report will be guiding the next phases of the project, namely the development of the capacity building programme for HEIs’ staff, the establishment of the University-Business Cooperation mechanisms, and especially the development of the new curricula on sustainable tourism.

This Transnational Report is based on the data collected and analyzed by the National University of Laos and Savannakhet University in Lao PDR, and by Prince of Songkhla University and Chiang Mai University in Thailand and presented in two respective National Reports.

More specifically, the four HEIs carried out primary and secondary research on skills demand and gaps of the hospitality and tourism workforce in April and early May 2024. The relevant research activities included:

- A. Secondary research review of studies, research, and/or other literature/data on skills demand and gaps of hospitality and tourism workforce of Lao PDR and Thailand;
- B. Online survey of key stakeholders in the hospitality and tourism sector to explore their knowledge and views on the current demand and gaps regarding the knowledge and skills needed in the hospitality and tourism sector in Lao PDR and Thailand. The relevant sample comprised of 54 respondents in Lao PDR and 51 respondents in Thailand, including representatives from government agencies, private enterprises, non-governmental organization (NGO), freelance professionals etc.); and



C. Interviews with key informants of the hospitality and tourism sector to verify and complement the results of the literature review and the surveys, gaining better insight into the issues under investigation. Overall, 22 stakeholders were interviewed (11 in Lao PDR and 11 in Thailand), including experts/representatives from tourism organizations, NGOs, tourism industry and/or governing structures associated with the tourism industry, education professionals etc.

The next section provides an overview of the current situation in the tourism and hospitality sector and workforce of the two countries. Subsequently, a comparative analysis of skills' needs and gaps in the hospitality and tourism sector is presented, drawing on the survey data and information collected during the interviews with key stakeholders. The report concludes with a series of recommendations to HEIs for the development of sustainable tourism curricula that are adaptable to the ongoing technological, cultural and social evolutions, and effectively address tourism & hospitality sector workforce needs.

2. Overview of the current situation in the tourism and hospitality sector and workforce in Lao PDR and Thailand

Over the past decade, the Asia-Pacific region has succeeded in establishing itself as a favoured destination for different types of travellers from across the globe.

Both in Lao PDR and Thailand, tourism and hospitality are a growing industry that plays a significant role in the countries' economies. And despite the various socio-economic consequences of the Covid-19 pandemic, the sector, in both countries, has managed to recover to a large extent.

In terms of **employment**, the tourism and hospitality industry is the largest employer In **Lao PDR**. Travel & Tourism generated 80,208 jobs directly¹ in 2022 (4.4% of total employment), while the total contribution of Travel & Tourism to employment (including wider effects from investment, the supply chain and induced income impacts), was 325,227 jobs (17.8% of total employment) (World Travel & Tourism Council, 2023a).

According to Statista (2022), **Thailand** was in the 7th position globally with the highest total contribution of travel and tourism to employment. Travel & Tourism generated 4,626,528 jobs directly² in 2022 (11.8% of total employment), while the total contribution of Travel & Tourism to employment (including wider effects from investment, the supply chain and induced income impacts), was 6,993,462 jobs (17.9% of total employment). By 2033, it is forecasted to account for 6,706,209 jobs directly (18.1% of total employment), an increase

¹ Includes employment by hotels, travel agents, and leisure industries directly supported by tourists.

² Includes employment by hotels, travel agents, airlines and other passenger transportation services (excluding commuter services), as well as restaurant and leisure industries activities directly supported by tourists.



of 3.3% pa since 2023, and to support 10,632,398 jobs (28.7% of total employment), an increase of 3.8% pa since 2023 (World Travel & Tourism Council, 2023b).

However, the literature review has revealed that the tourism and hospitality industry in Lao PDR and Thailand is still facing a number of shortcomings and challenges relating to financing, education, qualified personnel shortage, regulatory frameworks etc. that hinder its sustainable growth.

Especially in relation to **human resources**, many enterprises in **Lao PDR**, including hospitality and tourism ones, face challenges in recruiting qualified staff due to the low quality of tourism graduates. Studies also have shown that “Lao student learning outcomes are among the lowest in Southeast Asia due to limited spending in education sector” (Sisavath et al, 2024). Employers believe that local graduates are insufficiently equipped with soft and hard skills, including foreign languages (esp. English), ICT skills, communication, customer service, teamwork, problem-solving, ability to learn, independence, and timeliness. The shortage of qualified professionals especially in information and communication technology (ICT), is partly explained by the limited number of academic institutions training graduates on ICT (Sisavath et al, 2024).

In addition, post-Covid increases to the cost of living, has forced many young people, especially from low-income families, to drop out of school, thus contributing to the shortage of quality human resources. It is therefore necessary to improve education quality and to attract more people to it, in order to meet the increasing needs of the hospitality and tourism sector for qualified staff.

In **Thailand** various surveys, including a survey on labour shortages by the Ministry of Labour, indicate significant need for qualified workforce in the tourism industry in various provinces, with Phuket, Chiang Mai, Chon Buri, Phang Nga, and Surat Thani being the top five provinces facing shortage of workers (Thinnukool et al, 2024).

The Ministry of Tourism and Sports of Thailand has also highlighted the evolving work patterns in the tourism and services sector, with businesses adopting partnership models to adapt to changing consumer behaviours and technological advancements.



The evolving nature of the tourism industry requires a workforce with a diverse skill set, including foreign languages, communication and social skills, digital and technology skills, creativity, adaptability, strong service-oriented mindset, and industry-specific knowledge.

Therefore, the education sector needs to be in a position to align its offer with the demands of the tourism industry, and to provide targeted educational and training programs. Adjustments to curriculum content, teaching methods, and assessment methods may be necessary to ensure that graduates are equipped with practical skills and industry-relevant knowledge. Additionally, enhancing language and specialized knowledge, including digital literacy and Thai culture, are considered very important.

In parallel with the findings of the literature review, the analysis of interviews held with experienced representatives from tourism and hospitality sector governmental agencies, private enterprises, higher education institutions in Lao PDR and Thailand, highlight a number of strengths and weaknesses in the tourism & hospitality sectors in general, and especially concerning the workforce in the two countries.

In terms of strengths of **Lao PDR**, the interviews highlighted the unique cultural, historical, and natural tourism resources, and the Lao government having a clear sustainable tourism development policy and green growth strategy, including the Lao green hotel, and green tourism city standard. However, Lao PDR had not yet fully developed its potential, due to lack of knowledge and experience in managing the tourism industry. Most services in tourist destinations are family-managed, resulting in the management not being very systematic, except at famous tourist destinations with foreign investments, such as Vientiane and Luang Prabang.

In addition, the implementation of the sustainable tourism policy remains not comprehensive, due to the lack of a clear and wide understanding of the term “sustainable”, among tourism and hospitality business operators and local residents, as most believe that the term “sustainable” only relates to the sustainability of natural resources and the environment, and do not understand its connection to economic, social, cultural, and heritage sustainability. Moreover, some tourism officers are less aware of the sustainable tourism concept, which creates gaps in translating Sustainable



Development Goals knowledge into practical application. Furthermore, as more natural and environmental resources are utilized for tourism purposes, environmental sustainability is likely to worsen.

Most informants believe that the Lao PDR tourism and hospitality workforce are trained at a certain level, particularly in the hotel sector. Such training has been supported by the creation of 26 technical vocational training courses aiming to train human resources for the tourism and hospitality industry nationwide, the development of tourism and hospitality courses at university level, as well as technical and financial assistance from international organizations and donors.

However, it is believed that about 30% of the tourism and hospitality workforce has undergone training, mostly at Vientiane, Luang Prabang, and some provinces/tourist sites where foreign investments have been made. The rest of the workforce is considered unskilled, especially in other provinces, including Savannakhet. Therefore, training for the Lao workforce in the tourism & hospitality sector is required, especially for business owners. This is because they are the people who will use and manage the workforce. In terms of skills demand, important skills for the workforce include foreign languages, communication skills, and tourism business management.

In **Thailand**, sustainable tourism is a growing trend, with many hotels implementing sustainable projects and collaborating with local communities to integrate sustainability into their operations. However, despite efforts to promote sustainability, barriers to widespread adoption persist and the popularity of sustainable tourism varies by location. Sustainability is often adopted as a marketing strategy or to meet regulatory standards rather than an actual commitment.

The situation in Chiang Mai and Phuket, gives a mixed picture. Chiang Mai and Phuket both offer Thailand's famous hospitality. Chiang Mai has a rich cultural heritage and a variety of tourist attractions, including vibrant festivals showcasing local traditions, while Phuket attracts visitors with its beautiful beaches. Thailand's cuisine, culture, and natural landscape contribute to the country's appeal.



However, both destinations face unique challenges in terms of infrastructure, environmental sustainability, and tourism experience. Chiang Mai faces challenges such as a lack of infrastructure, especially transport systems, and air pollution, which affect tourist numbers and the overall visitor experience. Additionally, it is facing a shortage of skilled staff, especially in high-skilled positions.

Phuket also faces infrastructure and budgetary problems, with insufficient funding for environmental protection and transport infrastructure, as well as overcrowding, all leading to traffic congestion and environmental degradation. Limited awareness among entrepreneurs, coupled with policy implementation challenges, conflicting tourism interests and varying levels of involvement between businesses hinder the sustainability efforts in both regions. Although sustainable practices are promoted, there is still a need to further raise awareness and educate service providers on these issues.

The industry stakeholders acknowledge the existence of standard training courses, especially in hotels, but several express concern about the general lack of training, especially at the national level. Limited communication between different business and industry groups, as well as the need for additional training on topics such as climate change and environmental management to enhance competitiveness and sustainability are also mentioned, as well as a gap in entrepreneurship and leadership skills, along with difficulties in organizing training sessions during working hours. All stakeholders believe in the importance of continuous learning and skills development to maintain industry standards and competitiveness, in this fast-paced industry.

Addressing the shortage of qualified workers/staff, and skills and professionalism gap, specialized training at every level is necessary, starting with local initiatives. Additionally, collaborative efforts between government agencies, the industry, and educational institutions are considered critical in bridging the training gap and ensuring the sustainability of the tourism and hospitality industry. The skills and knowledge required for the tourism & hospitality workforce in Thailand require the combination of technical expertise, communication skills, and adaptability.

While some employees demonstrate skills in areas such as environmental management, and waste sorting, others lack awareness of sustainability concepts. There are gaps in



translating Sustainable Development Goals (SDGs) knowledge into practical application. Additional challenges that arise from lack of training include specific knowledge on certain aspects that are important for sustainable tourism, such as wastewater treatment. Moreover, the challenges of understanding and complying with sustainability regulations highlight the ongoing need for education and application. The focus in Chiang Mai and Phuket is on a strong service-oriented mindset to effectively interact and engage with customers.

Honesty, integrity, and hospitality are considered essential, while skills such as environmental management and crisis management are increasingly recognized as necessary. Problem-solving and language proficiency is also important and raising awareness of and nurturing a spirit of sustainability among all tourism workers. Ongoing training and development initiatives are considered necessary at both locations to address skills gaps and improve performance, despite challenges such as a lack of qualified instructors, especially in areas such as food and beverage management.

3. Comparative analysis of skills' needs and gaps in the hospitality and tourism sector

3.1 Sustainable tourism skills

The World Tourism Organization defines sustainable tourism as “tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities” (UNWTO, 2024). Skills in sustainable tourism involve the understanding, design and implementation of practice and strategies that conserve natural resources, protect cultural heritage, and support local communities.

As far as the degree of tourism development in Lao PDR and Thailand is concerned, participants in the national surveys of Inno4Tourism were asked to assess the development in their area(s), considering factors such as infrastructure, environmental sustainability, visitor experience (see Table 1).

Table 1 Degree of tourism development

Degree of tourism development	Lao PDR	Thailand
Not Developed: Limited tourist infrastructure, minimal visitor amenities, and low tourist traffic.	18.5%	7.8%
Developing: Basic tourist infrastructure in place, moderate environmental impact, and increasing visitor numbers.	46.3%	35.3%
Moderately Developed: Well-established tourist facilities, moderate environmental management, and steady visitor flow.	27.8%	35.3%
Developed: Extensive tourist infrastructure, sustainable environmental practices, and high visitor satisfaction.	3.7%	0%
Overtourism: Overwhelmed infrastructure, significant environmental degradation, and negative impacts on local communities and culture.	3.7%	21.6%

Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce



The majority of the respondents in Lao PDR (64.8%) assessed the degree of tourism development as very low, due to limited tourist infrastructure, minimal visitor amenities, and low tourist traffic, while in Thailand, about 70% of the respondents consider that tourism in their area(s) is at the developing or moderately developed stages. It is therefore crucial to support further the sustainable development of tourism in the two countries. The fact that more than 20% of the respondents in Thailand have assessed tourism development at their locality as having reached the level of overtourism raises further issues about effective sustainability management.

In terms of integration of sustainable tourism in professional activities (see Figure 1), the analysis in the two countries showed that the industry professionals do incorporate a number of practices to a moderate, however, extent. In Thailand the most popular practice is the procurement of goods and services locally with 9.6% (7.7% in Lao PDR), while in Lao PDR participating in initiatives to reduce, recycle, and reuse materials within the office, and adhering to governmental regulations concerning tourism activities are most popular with 8.9% (also popular in Thailand at 8.19% and 8.47% respectively).

Establishing strategic partnerships with suppliers to advance sustainable tourism objectives is another practice more commonly integrated in professional activities in Lao PDR (8.5%), although not as much in Thailand (5.37%). Cultivating mutually beneficial business relationships with local communities. Providing guidance to customers regarding local activities available at their destination is more common in Thailand (8.76%), but less in Lao PDR (5.5%).

Providing tailored facilities for individuals with disabilities (with 3% in Lao PDR and 4.8% in Thailand) and supporting wildlife conservation efforts in destinations offered by the company (with 4.7% in Lao PDR and 3.67% in Thailand) are among the least implemented practices in both countries. Offering wages that surpass the minimum standards mandated by the government is also a less common practice, especially in Thailand with 3.67%.

Figure 1 Sustainable tourism practices incorporated into professional activities



Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce



The main obstacles that the respondents in Lao PDR and Thailand identified for the wider implementation of sustainable tourism practices in their professional activities, include:

- Low level of information, awareness, and understanding among sustainable tourism sector stakeholders (e.g. local community, services, staff, related institutions)
- Human resources not sufficiently equipped with skills and knowledge of the concept of sustainable development in tourism
- High cost of implementation/Lack of funding
- Lack of access to suitable equipment and materials
- Lack of government incentives, support and policy enforcement

Considering the availability and provision of training on sustainable tourism, 74,1% of stakeholders in Lao PDR responded that training is available, and nearly half (46,3%) have received such training, mainly conducted by the government and NGOs. Some of the relevant topics referenced by the respondents included: basic knowledge about green tourism, green hotel standards, energy management, and encouraging and promoting local skills and products; cognitive behavioural therapy; national heritage sustainable tourism; saving energy; wastewater treatment; business outreach; food safety; waste management to enter the zero-waste process; nature conservation etc. They believe though that more training is needed, and that it should be made accessible to different stakeholders both on-site and online.

In Thailand only about 40% of respondents believe that necessary training programs on sustainable tourism practices are available, while 17.7% believe that no training programs are on offer, and 43.1% do not know. Less than half (43.1%) have received such training through local universities, industry associations such as Thai Hotel Association and Phuket Tourist Association, the Ministry of Tourism on topics such as: tourism and environment management; wildlife and forest care; environmentally friendly products training; green hotels and green leaf operations; food waste management/waste reduction management/recycling; carbon neutral, energy saving and water saving; sustainable operations and management; eco-lodging standards etc.

The staff of academic institutions in Lao PDR and Thailand were asked to prioritize the most important factors for the successful development of curriculum in sustainable tourism in HEIs (see Table 2). The two most prominent factors in both countries are efficient administration (with 21.4% and 23% respectively), and community engagement (with 17.9% and 23% respectively).

Continuous Improvement, i.e. implementing mechanisms for ongoing evaluation, feedback, and curriculum enhancement to ensure relevance and adaptability to changing industry trends and academic standards is also considered important in both countries (with 10.7% and 15.4% respectively), as well as innovation and technology, i.e. embracing advancements in technology, promoting innovation in teaching methods, and integrating digital tools for enhanced learning experiences (with 7.1% and 15.4% respectively).

It is important to note, however, that environmental sustainability, i.e. integrating principles of environmental conservation, promoting eco-friendly practices, and addressing sustainability challenges within the tourism sector, is not prioritized by any respondent in the two countries.

Table 2 Factors for the successful development of curriculum in sustainable tourism in higher education institutions

Factors	Lao PDR	Thailand
Internationalization: Incorporating global perspectives, cross-cultural understanding, and international collaboration into the curriculum.	7.1%	7.7%
Efficient Administration: Streamlining administrative processes, optimizing resource allocation, and enhancing organizational effectiveness.	21.5%	23%
High-Level Professors: Recruiting experienced faculty with expertise in sustainable tourism, research acumen, and teaching excellence.	10.7%	0%
Industry Linkages: Establishing strong connections with the tourism industry, fostering partnerships, and integrating real-world practices into the curriculum.	10.7%	0%
Innovation and Technology: Embracing advancements in technology, promoting innovation in teaching methods, and integrating digital tools	7.1%	15.4%

Factors	Lao PDR	Thailand
for enhanced learning experiences.		
Community Engagement: Engaging with local communities, promoting social responsibility, and incorporating community perspectives into the curriculum.	17.9%	23.1%
Environmental Sustainability: Integrating principles of environmental conservation, promoting eco-friendly practices, and addressing sustainability challenges within the tourism sector.	0%	0%
Interdisciplinary Approach: Emphasizing interdisciplinary learning, integrating diverse fields of study, and fostering holistic understanding of sustainable tourism issues.	0%	15.4%
Student-Centered Learning: Prioritizing student needs, fostering active participation, and promoting personalized learning experiences tailored to individual interests and career goals.	3.6%	0%
Continuous Improvement: Implementing mechanisms for ongoing evaluation, feedback, and curriculum enhancement to ensure relevance and adaptability to changing industry trends and academic standards.	10.7%	15.4%
New Teaching Methods and Approaches: Exploring and implementing innovative teaching methodologies, such as experiential learning, flipped classrooms, and project-based approaches, to enhance student engagement and learning outcomes.	10.7%	0%

Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce

3.2 Digital skills

Digital skills are considered completely necessary by the majority of tourism and hospitality industry stakeholders who participated in the online survey in Lao PDR (63%) and Thailand (74%). Survey respondents were also asked to identify the digital skills required for their professional activities (see Figure 2).

Figure 2 Necessary digital skills for professional activities



Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce

'Browsing, searching and filtering data, information and digital content' is deemed as the most necessary skill in the two countries (with 11.9% in Lao PDR and 7.6% in Thailand). 'Sharing through digital technologies' (7.5%), 'Managing data, information, and digital content' (7.2%), 'Collaborating through digital technology' (6%), and 'Digital skill for accounting and payments' (5.7%) are the next most important skills in Lao PDR; while 'Collaborating through digital technologies' (7%), 'Evaluating data, information and digital content' (6.8%), and 'Managing data, information and digital content' (6.8%) are the next most important in Thailand.

The survey respondents also identified a variety of digital skills training programmes and courses available in Lao PDR and Thailand, presented in the table below (see Table 3).

Table 3 *Main digital skills training programmes available*

Lao PDR	Thailand
- Online booking - Computer/IT training - Website promotion / Online promotion - Data collection - Data management - Database creation - Developing booking website and online payment - Selling and promotion; Content creation for tourism promotion, digital storytelling - Sharing information - Information management, design, programming, and modern digital applications - Use of information management systems such as hotel reservation system, program check in, check out, accounting system program etc.	- Digital tools such as Power BI, Google Sheet, Chat GPT and AI - Digital tourism, social marketing operations and content creation - Personal Data Protection Act - Online and new forms of payment - Hotel operations specific software

Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce

Furthermore, 44.4% of survey participants in Lao PDR and 50.98% in Thailand confirmed having attended at least one of these digital skills training programs. They highlighted the following main obstacles that hinder the acquisition of digital skills by the tourism and hospitality workforce (see Table 4).

Table 4 Key obstacles for acquisition of digital skills by tourism and hospitality workforce

Area	Lao PDR	Thailand
Training and Skills	- Short training duration with delayed application in work - Advanced techniques not suitable for professional life - Technology and skills becoming obsolete quickly - Lack of basic knowledge and training opportunities - Time availability	- Topics not interesting - Too theoretical workshops - Time availability and timing of the training - Technology and skills becoming obsolete very quickly - Inconvenient location of the training venues
Technology Infrastructure and Resources	- Inconvenient travel for training - Unstable Internet connectivity and slow speeds - Electricity problems - Limited access to modern technology, infrastructure, tools and equipment - Limited content in Lao language and outdated information - Internet booking and computer education not yet developed	- Lack of IT tools
Human Resources	- Lack of knowledgeable advisors and skilled instructors - Lack of cooperation among staff - Language barriers	- Lack of experienced speakers - Lack of background knowledge and skills for training - Lack of employee motivation
Financial	- Lack of budget/funding for training and equipment	- High cost of training and equipment/tools



Area	Lao PDR	Thailand
	- Limited access to social media, advertising and travel information - Expensive software	

Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce

The results of interviews with key informants from the tourism & hospitality sector confirm the increasing importance of digital skills for the workforce, entrepreneurs, and middle and high-level managers in the sector in the two countries.

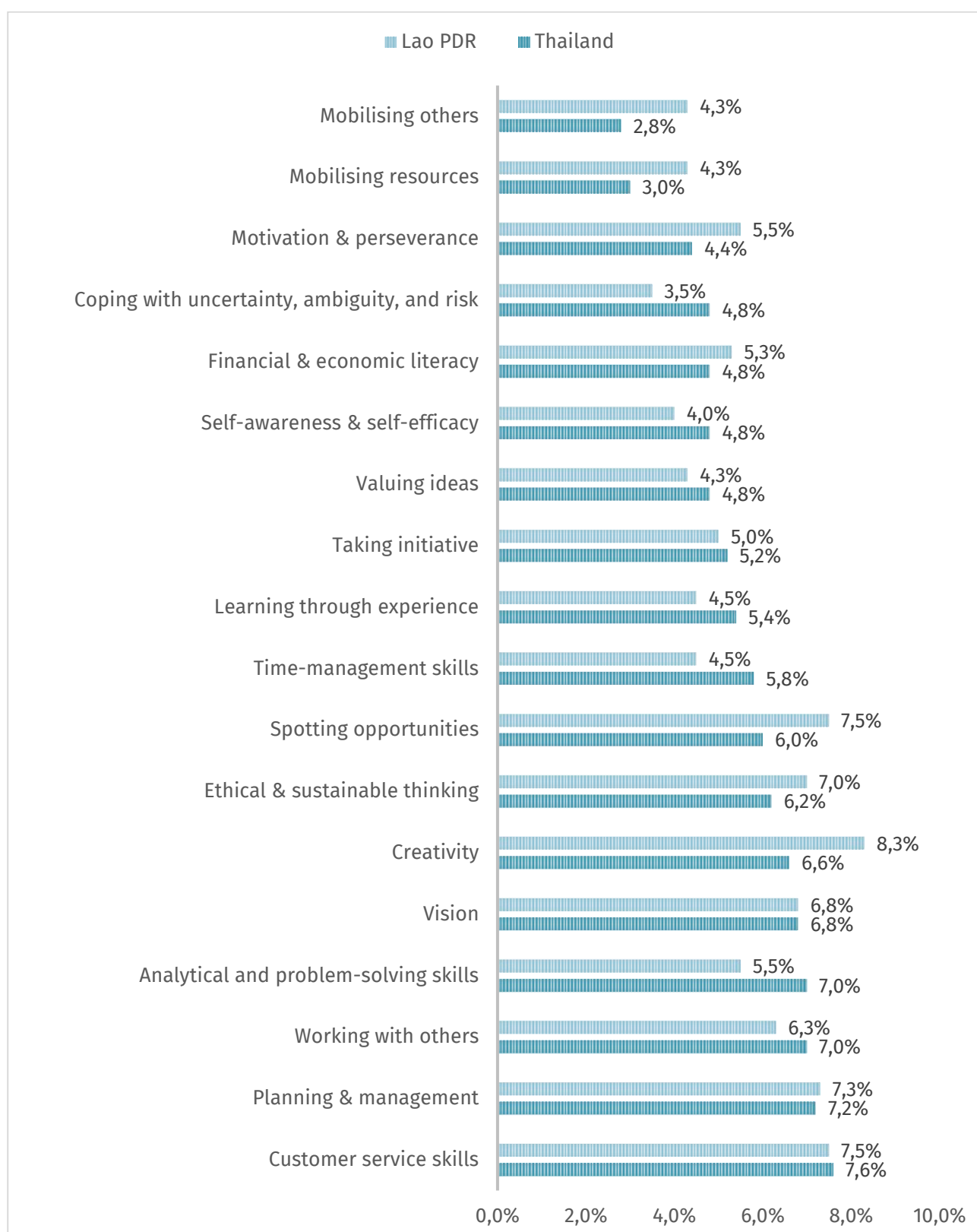
Lao PDR informants focused on specific aspects such as direct marketing. They also confirmed insufficient knowledge, budget, reluctance to invest in digital technology, and language as the main constraints hindering the adoption of digital technology.

Key informants in Chiang Mai and Phuket emphasized the importance of digital marketing skills, especially in direct sales and promotions. Additionally, expertise in data analytics is emphasized to derive practical insights essential for informed decision-making and effective marketing campaigns. The interviewees also confirmed the main barriers hindering the adoption of digital technology (accessibility issues, including in device access and Internet connectivity, employees' resistance to learning new digital skills, lack of training in advanced skills beyond basic social media usage, language barriers).

3.3 Entrepreneurship, management and soft skills

Business entrepreneurship is relatively new in Lao PDR. It has gradually been introduced as a teaching subject in private schools and some fields in public colleges and universities, as highlighted by industry key informants interviewed. The key informants also highlighted the significance of soft skills for the tourism and hospitality workforce.

Figure 3 Awareness of entrepreneurship and management skills



Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce



Sector key informants interviewed in Thailand highlighted the important role of improving business and management skills for modernizing Thailand's tourism industry. Chiang Mai and Phuket recognize the importance of nurturing an entrepreneurial spirit and effective management practices to adapt to the changing tourism landscape. Persisting challenges such as lack of product differentiation, point to the need for business skills to drive innovation and competitiveness. Soft skills are also widely recognized as vital, as they are integral to delivering exceptional service and customer satisfaction. These skills include problem-solving, teamwork, and communication, as well as time management skills and critical thinking.

The online survey (see Figure 3) revealed that the sector stakeholders in Lao PDR consider that the top five entrepreneurship and management skills are 'Creativity' (8.3%), 'Spotting opportunities' (7.5%), 'Planning & management' (7.3%), 'Ethical & sustainable thinking' (7.0%), and Vision (6.3%); whereas in Thailand the stakeholders consider the top five skills to be 'Customer service skills' (7.58%), 'Planning & management' (7.19%), 'Working with others' (6.99%), 'Analytical and problem-solving skills' (6.99%) and 'Vision' (6.79%). So, 'Planning & management' appears to be among the top-rated skills in both countries.

Moreover, 57.4% of the survey participants in Lao PDR believe that the tourism & hospitality workforce possess entrepreneurial and management skills only to some extent, although 72.2% do believe that the workforce in the country receives proper training to enhance their entrepreneurship & management skills (see Table 5).

In Thailand 54.90% of the respondents believe that the tourism and hospitality workforce possess necessary entrepreneurial and management skills. This is also consistent with 50.98% of the respondents believing that the hospitality and tourism workforce in Thailand do not receive proper training to enhance their entrepreneurship and management skills.

Table 5 Entrepreneurial and management skills of tourism and hospitality workforce

Question	Country	Yes	To some extent	No	I don't know
In your opinion, does the tourism & hospitality workforce in your country possess entrepreneurial and management skills?	Lao PDR	31.5%	57.4%	7.4%	3.7%
	Thailand	54.9%	5.9%	25.5%	13.7%
Does the tourism & hospitality workforce in your country receive proper training to enhance their entrepreneurship & management skills?	Lao PDR	72.2%	n/a	14.8%	13.0%
	Thailand	31.4%	n/a	51.0%	17.6%
According to you, should entrepreneurship and management skills be taught and acquired at university?	Lao PDR	83.3%	n/a	7.4%	9.3%
	Thailand	82.4%	n/a	11.8%	5.8%

Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce

The majority of the stakeholders in both Lao PDR and Thailand (83.3% and 82.35% respectively) believe that entrepreneurship and management skills should be taught and acquired at university level, and the reasons for this are common among the countries:

- entrepreneurship and management skills are essential for the workforce in hospitality and tourism, which should be equipped before starting their career.
- it is essential for students' skills to be developed and nurtured in a more learning focused environment and well-designed learning system.
- teaching and learning offered by the university can be collaborative between the university and the industry through work integrated learning and internships.

- training students in entrepreneurship and management will enhance graduates career advancement and life-long learning.

In addition, the stakeholders in Lao PDR and Thailand believe that the following obstacles may impede the acquisition and/or enhancement of the tourism and hospitality workforce's entrepreneurship and management skills:

- High costs and time consuming
- Lack of training programs available both internally and externally/ programs are not up to date or relevant
- Lack of interest due to unawareness of its significance and benefits
- Lack of top management's motivation and support.
- Employees' lack of confidence in their ability to learn new courses/skills.

3.4 Green skills

Green skills are deemed important or completely important in the tourism and hospitality industry by over 90% of the stakeholders that participated in the online survey in Lao PDR. However, they face challenges in continuing to upgrade the green skills of the Lao workforce and entrepreneurs in the tourism and hospitality sector. Tourism and hospitality industry stakeholders in Thailand also perceive green skills as vital for hospitality and tourism operations with 91% of the respondents in the survey rating green skills as important or completely important.

As far as the green skills of the workforce is concerned (see Table 6), more than half of the respondents (51.9%) in Lao PDR believe that the workforce possesses green skills, but only to some extent. Another 33.33% believe that the workforce has acquired green skills. In Thailand 76.47% of the stakeholders believe that the hospitality and tourism workforce possess green skills to some extent. Only 7.84% believe that the workforce has acquired the required green skills.

At the same time 61.1% of respondents in Lao PDR confirm that the hospitality and tourism workforce have received sufficient training on green skills. An 11.1% believes that the workforce does not receive adequate training to develop green skills, while 27.8%

have no information to make a conclusion on this issue. In Thailand 35.29% of the respondents believe that the hospitality and tourism workforce have received sufficient training on green skills. However, the same percentage (35.29%) believe that the workforce does not receive adequate training, while 29.41% have no information to make conclusion on this issue. The aforementioned observations may lead to the inference that a gap exists in the awareness of and understanding of green skills related to the hospitality and tourism sector.

Table 6 Green skills of tourism and hospitality workforce & university training

Question	Country	Yes	Yes, to a small extent	No	I don't know
Do you believe that the tourism & hospitality workforce in your country possesses green skills?	Lao PDR	33.3%	51.9%	7.4%	7.4%
	Thailand	7.8%	76.6%	7.8%	7.8%
Does the tourism & hospitality workforce in your country receive training to acquire and/or enhance its green skills?	Lao PDR	61.1%	n/a	11.1%	27.8%
	Thailand	35.3%	n/a	35.3%	29.4%

Source: Inno4 Tourism National Reports on skills demand and gaps in current hospitality and tourism workforce

In relation to the issue of whether green skills should be taught at universities and/or once someone has entered the tourism and hospitality workforce, it is interesting to note that 55.6% of the survey participants in Lao PDR responded "I don't know", and 42.5% agreed that the skills should be taught at universities and/or once someone has entered the tourism and hospitality workforce. In Thailand the majority of the respondents (90.20%) believe that green skills should be taught during university studies and that skills development should continue once employees enter the hospitality and tourism workforce.



Among the main obstacles that the stakeholders in Lao PDR and Thailand identified, which may impede the acquisition and/or enhancement of the tourism & hospitality workforce's green skills are the:

- lack of interest and green mindset both among the management and operational staff
- lack of incentives and support from the government
- lack of resources including budget, equipment, and time
- lack of suitable training programmes.

4. Recommendations for HEIs

The tourism & hospitality sector in Lao PDR and Thailand (as well as across the globe), is witnessing rapid change due to economic, social, and environmental factors. This dictates the need for a flexible workforce. Therefore, the tourism & hospitality education and training need to reflect the ongoing transitions in the tourism industry landscape and be in a position to prepare “well-rounded” graduates who are knowledgeable and capable of taking part in tourism development.

To this end, higher education institutions in the two countries should put emphasis on achieving the following:

1. raising awareness and understanding of sustainable development, sustainable tourism concepts & practices among the public and private sector.
2. improving education quality by upskilling teaching/academic staff.
3. further developing sustainability skills, green skills, entrepreneurship, management and soft skills, as well as digital skills and foreign language proficiency of future and current tourism & hospitality sector workforce, with the integration of the work-based learning approach. Curricula and programmes should be developed for students and sector employees that focus on:
 - Sustainability concept and sustainability management principles, environmental and socioeconomic impacts of tourism, tourism as a driver for achieving the Sustainable Development Goals (SDGs), understanding and complying with national and international sustainability regulations and standards
 - Green skills (e.g. energy and water saving practices, waste management, recycling and composting, conservation of biodiversity, environmentally friendly activities and products, green/sustainability certification etc.)
 - Entrepreneurship, business management and marketing skills that incorporate sustainability concepts

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- English and other foreign languages
 - Soft skills, incl. problem-solving, crisis management, effective planning, service-oriented mindset and ethics, teamwork, communication and negotiation skills, leadership skills, time management.
 - Digital technologies, information management, incl. online marketing/promotion, data analytics.
4. Enhancing their collaboration with the public sector and the tourism & hospitality industry on human resources development. Training/capacity building should be offered in collaboration between HEIs and the industry.
 5. Promoting research and innovation in sustainable tourism practices to develop new solutions and strategies for the sector.
 6. Incorporating more best, good and promising sustainability-focused practices into the curriculum, as well as sustainability-focused internships to provide practical experience and real-world implementation of sustainable tourism principles.
 7. Establishing international partnerships and exchange programmes to facilitate the sharing of good practices and knowledge in sustainable tourism.

It is very also very important that new higher education curricula and programmes are flexible so that they are adaptable to the ongoing technological, cultural and social evolutions.

Many tourism scholars agree that higher education programmes should have a critical dimension in pedagogically addressing the major social, economic and environmental problems, so as to produce more critically reflexive tourism practitioners that are not just work ready graduates (Jamal et al 2011; Belhassen and Caton, 2011; Canziani, Sönmez, Hsieh, & Byrd 2012; Hales & Jennings 2017; Camargo & Gretzel 2017).

A progressive, experiential and collaborative approach, the sustainable tourism pedagogy (STP), has been proposed by Jamal et al., which can be incorporated into conventional educational programs to provide students with real-world experiences

(Jamal et al. 2011; Seraphin et al. 2021; Septyandi & Prawira 2022). According to Jamal et al (2011), STP is an action- and change-oriented pedagogy that should address real world environmental and social issues, and not only theoretical, as well as promote the well-being of tourists and tourism-related businesses, and a lasting sustainable mindset among future leaders.

STP moves away from the theoretical self-oriented liberal education model towards one that produces a progressive learner who is oriented towards social action, has practical knowledge and problem-solving skills and is especially sensitive to marginalized groups and power structures. STP based on six core literacies (technical, analytical, ecological, multicultural, ethical and political), defined as the integration of different types of knowledge embracing the processes through which it is accumulated, processed, and applied (Jamal et al., 2011; Camargo & Gretzel, 2017; Seraphin et al., 2021), as described in the table below.

Table 7 STP six core literacies

Core literacy	Description
1) Technical literacy	Theories, concepts and frameworks that provide foundational, technical knowledge related to the sustainable development of tourism, inclusive of planning, management and marketing techniques (including community involvement and conflict management)
2) Analytical literacy	Skills, techniques and personal qualities necessary to engage in problem-solving, issue identification and critical inquiry, for example, to be able to critically examine the content and values related to various sustainability discourses in addressing sustainable tourism development
3) Ecological literacy	Awareness of the connections between people and their environment, and the consequences that decisions and actions have on these relationships, extending to community, social and cultural connections
4) Multicultural literacy	Appreciation of the different cultures, values, interests and power relations that exist between stakeholders with an interest in sustainable tourism. Of particular consideration are the voices, values, and

	knowledge of ethnic minorities, marginalized groups or individuals who are discriminated against for reasons of ethnicity, gender or other
5) Policy and political literacy	Understanding of the decision-making chain in tourism planning and management
6) Ethical literacy	Development of values and ethical positions within students' thinking, and how these values may be gained not only through theoretical learning, but also as practical wisdom [phronesis], through experience and collaborative learning in a community service-learning context

According to Camargo & Gretzel (2017), effective sustainable tourism curricula should include the six core elements.

This pedagogical approach has the potential to turn individuals into sustainability 'transformers' i.e. persons wishing to actively engage in transformational learning, so as to transform other people's/the community's worldview, through discussing/promoting the sustainability worldview'; and/or sustainability 'actioners' i.e. persons wishing to incite change through interacting with their community and 'learning by doing' (Kemper, Ballantine & Hall 2021).

Theoretical learning, although important, is therefore not considered sufficient in STP (Jamal et al., 2011). "The aim of a pedagogy for sustainability (including sustainable tourism) should be to educate students in a transformative learning approach such that they can become not only capable professionals but also active citizens, ready to take responsibility for meaningful, ethical action to change the world for a sustainable future" (Farsari, 2022).

Farsari (2022) argues that the tourism curriculum is a dynamic field, continually adapting to both internal and external influences. The curriculum's interpretation and implementation are also influenced by the personal values, ontologies, and epistemologies of educators. Tourism educators should, therefore, constantly reflect on and evolve their own and others' pedagogical approaches and educational practices. As knowledge advances, the conceptualization of pedagogy for sustainability must evolve accordingly. Furthermore, the perspectives of students are very important, and should be



comprehensively integrated (Farsari, 2022), along with those of the industry stakeholders and communities.

One way of achieving curricula that include space for innovation and creativity, and ensure relevance to students, is by providing opportunities for students to co-create curricula with the educators. According to Cook-Sather & Matthews (2021), in order to effectively engage students in successful co-creation through partnership, one should take into consideration the “when” (before, during, or after the term), “who” (all enrolled students, chosen enrolled students, or students not enrolled), and “what” (co-creating learning and teaching, redesigning curriculum, research). Examples of what co-creation of curricula and courses include:

- a) participating in co-creation with all of the students enrolled in the course to promote student agency and ownership of learning (the partnership classroom);
- b) interacting with a small number of students as the course develops to improve instruction and learning processes immediately (pedagogical consultation);
- c) collaborating with a small number of students before, during, or following a subject in order to co-design a new course or revamp the curriculum (curriculum co-design);
- d) involving students in research projects and analyses that advance discipline knowledge, especially instructional knowledge (knowledge co-creation).

Great clarity is important to build a deeper understanding of curriculum co-creation and transparency with students about what they are invited to be part of. Educators who aim to support collaborative approaches to curriculum development should:

- Carefully consider the academic context and collaborate with and support other academic staff to design suitable co-creation opportunities.
- Create environments where students feel respected and treated as peers.
- Ensure that participation is voluntary and meaningful for both academic staff and students.
- Encourage both academic staff and students to appreciate the processes of co-creation/design, not just the end products.
- Recognise that this work is on-going.

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- Evaluate co-created curricula and methods to build a robust evidence-base for the impact of these processes and their outcomes.

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