








## Environmental Literacy and Social-Emotional Learning Skills Influencing Sustainable Gastronomy Tourism Behavior

Pavit Tansakul <sup>1</sup>, Narinthon Imjai <sup>2</sup>, Aniwat Kaewjomnong <sup>3</sup>, Surianto Surianto <sup>4</sup>,  
Somnuk Aujirapongpan <sup>5\*</sup>

<sup>1</sup> School of Management, Walailak University, Nakhon Si Thammarat 80160, Thailand.

<sup>2</sup> Faculty of Management Science, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand.

<sup>3</sup> Faculty of Economics and Business Administration, Thaksin University, Songkhla 90000, Thailand.

<sup>4</sup> Communication Science Study Program, University of Bunda Mulia, North Jakarta 14430, Indonesia.

<sup>5</sup> Faculty of Management Science, Silpakorn University, Phetchaburi 76,120, Thailand.

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### Abstract

This study investigates the factors influencing sustainable gastronomy tourism behavior among Thai Generation Z tourists by examining both direct and indirect roles of Environmental Literacy and Social and Emotional Learning Skills (SEL Skills) within an integrated behavioral framework. Based on the Theory of Planned Behavior (TPB), the Value–Belief–Norm (VBN) Theory, and Social Cognitive Theory (SCT), this research adopts a quantitative approach using Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze data collected from 431 Generation Z tourists with gastronomy tourism experience in Thailand. The findings reveal that Environmental Literacy serves as the strongest predictor of sustainable gastronomy tourism behavior, while SEL Skills also exert a significant positive effect, partially mediating the relationship between Environmental Literacy and sustainable behavior. These results highlight the interconnected mechanisms of environmental knowledge, value-based judgment, and socio-emotional competencies that shape responsible gastronomy-related tourism practices. The novelty of this study lies in its empirical integration of Environmental Literacy and SEL Skills within a single explanatory model of sustainable gastronomy tourism behavior, an area that remains underexplored in existing tourism literature. By extending TPB, VBN, and SCT into the gastronomy tourism context, this study offers both theoretical advancement and implications, providing practical insights for policymakers, tourism planners, and food-related businesses in designing educational interventions and experience-based strategies to foster more sustainable tourist behavior.

*Keywords:* Environmental Literacy; Learning Skills; Gastronomy Tourism; Gen Z Tourists; Cleaner Consumption.

### 1. Introduction

Tourism has long been recognized as a key sector contributing to global economic growth, cultural exchange, and community development [1]. Among its various forms, gastronomy tourism - defined as travel centered on local cuisine, culinary traditions, and cultural food experiences, as gained substantial momentum in both global and regional markets. This form of tourism not only enhances visitor experiences but also strengthens local economies by

\* Corresponding author: [aujirapongpan\\_s@su.ac.th](mailto:aujirapongpan_s@su.ac.th)

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reinforcing cultural identity, promoting culinary heritage, and supporting small-scale entrepreneurs [2]. In Thailand, gastronomy tourism has become a major driver of the hospitality and tourism industries, with Thai cuisine serving as an important cultural asset that shapes the nation's tourism brand [3]. In addition to economic and cultural significance, the rapid expansion of gastronomy tourism has raised concerns regarding its environmental and socio-cultural sustainability, particularly in destinations where food-related consumption is overwhelmingly commercialized.

Sustainable gastronomy tourism emphasizes environmentally responsible practices, cultural preservation, and social inclusiveness, aiming to minimize the negative impacts of food-related tourism activities on ecosystems and local communities [4]. In Thailand - where food plays as one of focal roles in the national tourism identity - a key challenge lies in balancing rising tourist demand with long-term sustainability considerations such as reducing food waste, promoting responsible consumption, and adopting eco-friendly service practices [5]. Despite an awareness of tourism sustainability has increased, empirical evidence suggests that unsustainable consumption patterns remain prevalent, especially in gastronomy and related context where convenience and experiential considerations often overshadow an environmental concern [6].

Within this context, Thai Generation Z travelers, born in 1995 to 2010 [7], are becoming an increasingly influential consumer group. Their explicit characteristics – including digital connectivity, social consciousness, and the pursuit of novel experiences, outstandingly exhibit a crucial demographic segment for advancing sustainable tourism [8]. In addition to a relatively high awareness of environmental and social concerns, their daily consumption and travel behaviors frequently fail to align with sustainability principles, revealing a persistent gap between values and practice [9]. For example, many have acknowledged the importance of environmental protection yet continue to overconsume food, prioritize convenience over eco-friendly practices, or overlook cultural and social impacts [10]. As was noticed by Seyfi et al. [11], this intention–behavior gap highlights the urgent need to move beyond attitudinal explanations and examine the underlying mechanisms that translate awareness into actual sustainable behavior, particularly in gastronomy tourism settings.

Generation Z increasingly adopts ecotourism and sustainability-oriented trends amplified through social media campaigns and digital platforms [12]. The diffusion of global sustainability narratives through digital media, however might simultaneously weaken engagement with local cultural wisdom and community-rooted gastronomic traditions, as global trends often overshadow traditional lifestyles and local communities [13]. Consequently, the consumption patterns of Generation Z are susceptible to cultural value shifts that distance them from traditional culinary practices and locally embedded food heritage.

Another important dimension concerns the socio-cultural dynamics embedded within gastronomy tourism. This form of tourism not only serves economic interests but also reflects community identity, cultural pride, and intangible heritage. Local food traditions and culinary knowledge face increasing risks due to globalization, fast-paced consumption, and commercialization, which might dilute cultural authenticity [14]. Ensuring the preservation of cultural value while meeting the evolving tastes of tourists presents an ongoing challenge [15]. Moreover, gastronomy tourism has significantly generated local income and employment, especially for small producers, farmers, and community businesses [16]. Without an understanding of tourist behavior grounded in sustainability-oriented decision-making, rapid growth might exacerbate problems such as unequal income distribution and decrease of long-term socio-economic vulnerability [17]. Understanding the behavioral mechanisms of the new generation - who possess purchasing power and shape market trends – is, therefore, essential for designing tourism practices that satisfy visitor demand while safeguarding local sustainability [18].

Although sustainable gastronomy tourism research has received growing attention, existing studies have largely examined Environmental Literacy and Social and Emotional Learning (SEL) Skills as separate predictors of pro-environmental or pro-social behavior. Empirical research that integrates these two constructs within a unified framework to explain sustainable gastronomy tourism behavior remains limited, particularly in the Thai context. Furthermore, much of the current literature emphasizes satisfaction, preference, or culinary experience, rather than behavioral transitions toward sustainability in food-related tourism. This theoretical and empirical gap restricts a deeper understanding of how environmental knowledge and socio-emotional competencies jointly shape sustainable tourist behavior.

Responding to the gap mentioned above, the present study proposes an integrated framework that examines the roles of Environmental Literacy and Social and Emotional Learning Skills in shaping sustainability of gastronomy tourism behavior. By focusing on the behavioral mechanisms of Generation Z tourists, this study aims to provide empirical evidence that advances theoretical understanding and offers practical insights for promoting environmentally responsible, culturally sensitive, and socially inclusive gastronomy tourism.

## 2. Literature Review

### 2.1. Theory of Planned Behavior

The Theory of Planned Behavior (TPB), proposed by Ajzen [19], has been widely adopted for investigating and explaining human behavior, particularly actions that require conscious deliberation and intentional decision-making. TPB posits that an individual's behavior is driven by their behavioral intention, usually shaped by three key components: attitude toward the behavior, subjective norms, and perceived behavioral control. In the context of sustainable gastronomy, Gen Z tourists tend to make consumption-related decisions - such as choosing local food or supporting environmentally responsible practices - based on their attitudes and perceptions toward sustainability. For example, when individuals believe that responsible consumption is beneficial for society and the environment, and feel confident in their ability to act accordingly; they are more likely to engage in sustainable food-related behaviors [20]. Thus, TPB aligns closely with the construct of sustainable tourist behavior in gastronomy, which reflects intention-driven choices and deliberate engagement in sustainable consumption practices.

### 2.2. Value–Belief–Norm Theory

The Value–Belief–Norm (VBN) Theory, introduced by Stern [21], provides an influential framework for explaining pro-environmental behavior by linking personal values, environmental beliefs, and moral norms. According to VBN, individuals with strong social or biospheric values tend to believe that human actions significantly impact the environment and instinctively activate personal moral obligations to behave responsibly. In this study, VBN theory offers a solid theoretical foundation for explaining how environmental literacy influences sustainable tourist behavior in gastronomy. Individuals with high levels of environmental literacy are more aware of the consequences of consumption-related behavior and often develop internal norms in considering environmentally responsible choices, such as selecting sustainable food options, supporting local communities, and appreciating cultural heritage [22].

### 2.3. Social Cognitive Theory

Social Cognitive Theory (SCT), developed by Bandura [23], emphasizes that human behavior results from the reciprocal interaction among personal factors, behavior, and the social environment – as referred to reciprocal determinism. SCT highlights the role of observational learning, outcome expectations, and self-efficacy in shaping behavior. SCT, therefore, provides a meaningful explanation for the influence of Social and Emotional Learning (SEL) Skills on sustainable tourist behavior in gastronomy. Key SEL competencies - such as self-awareness, emotional regulation, empathy, and responsible decision-making - shape individuals' ability to act socially and environmentally responsible. For Gen Z tourists, learning through experiences, social media, and role models can strengthen their motivation to engage in environmentally and socially responsible behaviors [24]. Nevertheless, SCT possibly underscores how socio-emotional competencies contribute to sustained engagement in sustainable consumption and tourism practices.

### 2.4. Environmental Literacy

Environmental Literacy refers to an individual's knowledge, understanding, and awareness of environmental issues, as well as the ability to use information and relevant skills to address environmental problems and make responsible decisions [25, 26]. This concept extends beyond scientific knowledge and encompasses one's appreciation of the value of nature, the interconnectedness between humans and the environment, and an integrated perspective essential for sustainable living [27]. Environmental Literacy also plays a crucial role for sustainable tourist behaviors. For instance, tourists with higher levels of environmental understanding tend to adopt behaviors that help preserve natural resources and minimize negative environmental impacts [28].

Environmental Literacy also serves as a foundation for fostering environmentally responsible citizens [27]. In an era marked by global challenges (such as climate change, marine pollution, and overexploitation of resources) individuals with strong environmental literacy often make a more rational, sustainability-oriented decision in their daily life. These include choosing eco-friendly products, managing waste responsibly, and supporting environmentally conscious activities [29]. Among younger generations, particularly Generation Z, Environmental Literacy is increasingly associated with sustainability-oriented values and responsible consumption patterns, influencing both their tourism choices and food-related decision-making [18].

From the reviewed literature, the core components of Environmental Literacy include four key dimensions: 1) knowledge of environmental issues, 2) understanding human-environmental interactions, 3) awareness of environmental importance, and 4) knowledge of environmental solutions. Knowledge of Environmental Issues represents the ability to understand factual information about major environmental problems such as climate change, plastic waste, water pollution, and resource depletion. Individuals who possess higher environmental literacy can clearly explain the causes and consequences of these issues [29]. Also, prior research by Baloch et al. [30] highlights that such knowledge forms the basis for developing long-term pro-environmental attitudes and responsible behaviors.

Understanding Human–Environment Interactions indicates the awareness of how human activities influence and are influenced by natural ecosystems. For instance, tourism that consumes large amounts of resources can disrupt ecological balance, while the resulting environmental degradation negatively affects human health, economic stability, and societal well-being [31]. Galvani et al. [32] also explain that intensified anthropogenic activities have accelerated ecological imbalances and extreme climate events, which directly impact food systems, public health, and livelihoods. Thus, understanding such interrelationships is essential for fostering sustainable behavior. Awareness of Environmental Importance illustrates the recognition that the environment is fundamental to human life, economic activity, and tourism quality. Individuals with a high level of environmental awareness perceive nature not merely as a resource for consumption but as a form of “natural capital” that must be preserved for future sustainability [33]. Ribeiro et al. [34] further indicate that such awareness directly shapes Gen Z’s preferences for responsible tourism and consumption. Finally, Knowledge of Environmental Solutions implies understanding ways to mitigate environmental impacts, such as waste separation, reducing single-use plastics, and adopting renewable energy sources [35]. Vukolić et al. [36] emphasize that individuals who possess such knowledge are more capable of choosing sustainable options, reducing food waste, and supporting the use of local resources - key practices that align with sustainable gastronomy tourism.

The conceptual framework of this study implies that Environmental Literacy is positioned as a foundational cognitive capability rather than a proximal attitudinal construct. While the Theory of Planned Behavior focusing on attitudes, subjective norms, and perceived behavioral control as direct antecedents of behavioral intention, this study adopts TPB as a guiding theoretical framework rather than an operational model. Environmental Literacy is assumed to shape attitudes, values, and perceptions of behavioral control implicitly through accumulated environmental knowledge and awareness. Indeed, Modeling Environmental Literacy directly allows the framework to remain parsimonious; while integrating insights from TPB, Value–Belief–Norm Theory, and Social Cognitive Theory, and avoiding conceptual redundancy among closely related cognitive and attitudinal variables.

## 2.5. Social and Emotional Learning Skills

Social and Emotional Learning (SEL Skills) refers to the set of abilities that enable individuals to understand and manage their emotions, build positive relationships, make responsible decisions, and demonstrate empathy toward others [37]. SEL has emerged as a core dimension of 21st-century human development skills, contributing not only to academic achievement but also to social cohesion and the formation of responsible citizenship [38]. In the context of tourism, SEL has played a vital role in shaping socially and environmentally responsible behaviors, especially among younger tourists who frequently encounter cultural diversity and social pressures [39].

SEL Skills are also essential for fostering healthy social development across several domains, including reducing risky behavior, enhancing collaboration, and cultivating a culture of mutual respect [40, 41]. In increasingly diverse societies, strong SEL Skills help individuals adapt effectively, communicate constructively, and regulate their emotions in situations involving conflict or stress [42]. For Generation Z, who have grown up amid rapid technological, social, and cultural transitions - SEL is particularly relevant, as it shapes attitudes and behaviors related to sustainability across education, business, and tourism [43].

As such, Social and Emotional Learning in this study encompasses four components. First, Self-awareness or the ability to recognize and understand one’s own emotions, thoughts, and personal values. This component includes awareness of how these internal states influence others, while individuals with high self-awareness often expressing themselves appropriately and establishing stronger social relationships [44, 45]. Second, Emotional Regulation, which refers to the capacity to effectively manage emotions and behaviors in stressful or complex situations, maintain emotional balance, and apply appropriate coping strategies; prior studies identify this skill as a significant predictor of well-being and adaptive functioning in social contexts [46, 47]. Third, Responsible Decision-making reflects the ability to evaluate ethical, social, and environmental consequences before taking action; and choose behaviors that promote the common good. Hence, individuals with a stronger decision-making skill are more likely to demonstrate sustainable, safe, and socially responsible behavior [48, 49]. Finally, Empathy, defined as the ability to understand, share, and respond to the emotions of others while demonstrating acceptance, care, and appreciation for diverse perspectives. This competent attribute has been shown to reduce interpersonal conflict and foster cooperation within socially diverse environments [50, 51].

## 2.6. Sustainable Gastronomy Tourism Behavior

Gastronomy tourism refers to travel activities centered on the consumption of local food and the experience of culinary and cultural practices, while playing a crucial role in integrating economic, cultural, and social dimensions [52]. The concept of Sustainable Gastronomy Tourism emphasizes tourist behaviors that go beyond seeking culinary experiences to include environmental preservation, community support, and cultural heritage conservation [53]. As such, Sustainable Gastronomy Tourism Behavior serves as one of key indicators of tourism development aligned with broader sustainable development goals.

Sustainable gastronomy tourism behavior, proposed in this study, contributes significantly to strengthening local economies, preserving cultural identity, and mitigating environmental impacts. Tourists who consume local food and support community-based businesses promote income distribution throughout the supply-chain and employment generation within the destination [54]. At the same time, environmentally responsible consumption - such as reducing food waste, choosing biodegradable materials, or selecting sustainable ingredients - helps reduce the ecological footprint of tourism activities [55]. Furthermore, appreciating cultural heritage through food enhances tourists’ understanding and respect for diverse local cultures, fostering positive host - visitor relationships and reinforcing social sustainability [56].

Based on the literature, there are four major indicators that define Sustainable Gastronomy Tourism Behavior in this study. First of all, local food consumption involves choosing food produced and prepared with local ingredients, thereby supporting local economies and reducing the carbon footprint associated with long-distance transportation [57]. Thus, Wan [58] emphasizes that local cuisine is a defining element that enhances tourism attractiveness and differentiation. Second, support for local communities includes spending on and engaging with locally owned businesses such as local restaurants, farmers, and small-scale vendors; and such supportive behavior promotes grassroots economic development, local employment, and the preservation of community identity [59, 60]. Third, environmentally responsible consumption includes choosing food and services that minimize environmental impact - for example, reducing food waste, using biodegradable materials, and selecting sustainably sourced ingredients [61, 62]. Finally, cultural appreciation through gastronomy involves using food experiences as a means to learn about and appreciate local culture, such as participating in culinary activities or choosing dishes that embody local cultural identity [52, 63].

Given theoretical constructs for this study, each provides insightful and explanatory linkage for sustainable gastronomy tourism behavior. The Theory of Planned Behavior [19] explains behavioral intention and perceived behavioral control; the Value–Belief–Norm Theory [21] emphasizes internal value systems and moral norms shaped by environmental literacy; and the Social Cognitive Theory [23] highlights socio-emotional learning processes and ethical decision-making among younger tourists. Integrating these three theories creates a comprehensive conceptual foundation linking knowledge, values, and socio-emotional learning to sustainable gastronomy tourism behavior. This integration is summarized in Table 1.

**Table 1. Theoretical linkages among key theories, Variables, and Explanatory dimensions**

No.	Theory	Author / Year	Related variables	Explanatory Linkage to the study
1	Theory of Planned Behavior (TPB)	Ajzen [19]	Sustainable Gastronomy Tourism Behavior	Explains the decision-making process underlying sustainable gastronomic practices; whereby attitude, subjective norms, and perceived behavioral control collectively shape “behavioral intention.” This intention drives tourists to engage in sustainable actions such as consuming local food, supporting community enterprises, and adopting environmentally responsible consumption behaviors.
2	Value–Belief–Norm Theory (VBN)	Stern [21]	Environmental Literacy → Sustainable Gastronomy Tourism Behavior	Describes how environmental literacy shapes individuals’ value systems and beliefs regarding human - environment relationships, leading to internal moral norms that promote pro-environmental behavior, including responsible food consumption, cultural appreciation, and support for local communities.
3	Social Cognitive Theory (SCT)	Bandura [23]	Social and Emotional Learning Skills → Sustainable Gastronomy Tourism Behavior	Explains how tourists learn and adjust their behaviors through observation, modeling, and social reinforcement. Internal factors - such as self-awareness, emotional regulation, empathy, and responsible decision-making - enhance self-efficacy, which in turn motivates sustained engagement in environmentally and socially responsible gastronomic tourism behaviors.

**2.7. Environmental Literacy and Social and Emotional Learning Skills**

Environmental Literacy refers to individuals’ knowledge, understanding, and awareness of environmental issues, together with the skills and attitudes that enable responsible environmental decision-making [64]. Higher levels of Environmental Literacy strengthen individuals’ ability to perceive the world through an integrated lens and enhance a range of social competencies - including communication, collaboration, and ethical decision-making [65] which form a critical foundation for adapting to societal and ecological challenges. Individuals with higher Environmental Literacy often develop stronger Social and Emotional Learning Skills because Environmental Literacy extends beyond theoretical knowledge, while encouraging an awareness of how personal behaviors affect society and the natural environment. This awareness fosters greater empathy, appreciation of diversity, and responsible decision-making [66]. Raman et al. [67] further indicate that young people with higher Environmental Literacy exhibit stronger socio-emotional competencies such as empathy and ethical judgment - core attributes that promote sustainable behavior. These insightful constructs lead to the following hypothesis:

**H1:** Environmental literacy has a positive effect on social and emotional learning skills.

### 2.8. Environmental Literacy and Sustainable Gastronomy Tourism Behavior

Environmental Literacy (EL) encompasses knowledge, comprehension, awareness, and the capacity to apply skills in addressing environmental problems and making responsible decisions toward nature and society [25, 68]. Individuals with higher Environmental Literacy are more likely to recognize the environmental consequences of consumption and tourism behaviors and to choose actions that reduce ecological damage [69]. Thus, Environmental Literacy forms an essential foundation influencing tourist behavior in an era marked by climate change and widespread environmental degradation [70] and has played a pivotal role in shaping Sustainable Gastronomy Tourism Behavior. Tourists who possess greater environmental knowledge and awareness tend to recognize the consequences of their culinary choices and travel activities; for instance, avoiding single-use plastics, reducing food waste, or supporting sustainable local ingredients [64]. D’Acunto et al. [71] found that young tourists, including a Gen Z segment, who exhibit high Environmental Literacy are more inclined to select gastronomy-related tourism activities that simultaneously support local economies and protect the environment. Therefore, the second hypothesis is formulated as:

**H2:** Environmental literacy has a positive effect on sustainable gastronomy tourism behavior.

### 2.9. Social and Emotional Learning Skills and Sustainable Gastronomy Tourism Behavior

Social and Emotional Learning Skills (SEL Skills) refer to the capabilities that enable individuals to recognize and understand their own and others’ emotions, regulate emotional responses, build positive relationships, and make responsible decisions [72]. These competencies contribute to resilience and adaptability in diverse social environments [73]. SEL Skills also underpin socially responsible conduct, encouraging individuals to adopt behaviors that benefit not only themselves but also communities and the environment [74]. SEL Skills are a key driver of sustainable gastronomic tourism behaviors. For instance, tourists with high levels of empathy are more likely to support local food producers and community-based businesses because they understand the associated social benefits for local residents [75]. Likewise, individuals with strong responsible decision-making skills consider environmental and social consequences prior to choosing tourism activities or consumption patterns [76]. D’Acunto et al. [71] further demonstrate that Generation Z tourists with well-developed SEL Skills tend to select environmentally friendly and sustainability-oriented gastronomy tourism practices. Accordingly, the third hypothesis is proposed:

**H3:** Social and emotional learning skills have a positive effect on sustainable gastronomy tourism behavior.

Based on the reviewed literature, Environmental Literacy and Social and Emotional Learning Skills play essential roles in shaping Sustainable Gastronomy Tourism Behavior among Thai Generation Z tourists. The proposed research framework therefore investigates the relationships among these three variables and formulates the above hypotheses, as illustrated in Figure 1.

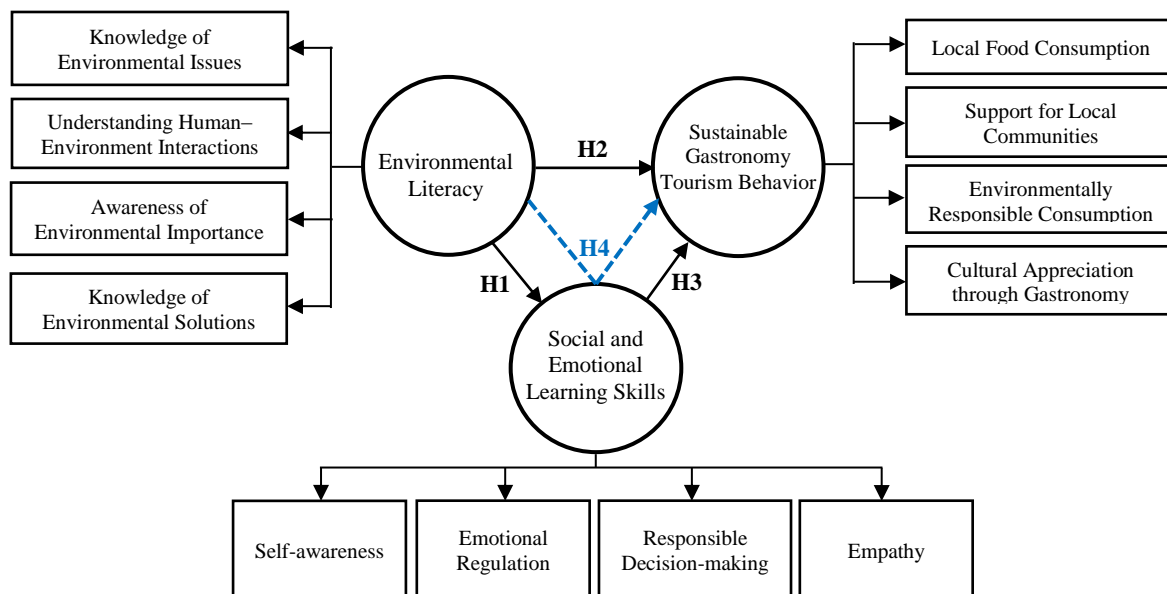


Figure 1. Conceptual Framework

## 3. Research Methodology

### 3.1. Research Design

This study employed a quantitative research design to examine the causal relationships among Environmental Literacy, Social and Emotional Learning Skills, and Sustainable Gastronomy Tourism Behavior among Thai

Generation Z tourists. A quantitative approach was deemed appropriate as it enables the testing of predefined hypotheses and the systematic examination of structural relationships among variables [77]. The target population consisted of Thai Generation Z tourists (aged approximately 18–27 years) who had experience with gastronomy-related tourism or participated in culinary cultural activities. This focus is justified because Generation Z represents a consumer group that places greater emphasis on sustainability than previous generations and has considerable influence on future tourism trends [78].

The sampling strategy followed a non-probability approach, combining convenience sampling to recruit respondents who met the study's specific criteria. This ensured that the data collected were relevant and sufficient for structural equation modeling (SEM), which requires an adequate sample size based on the recommendations of Hair et al. [79], who suggest a minimum of 10–20 times the number of parameters in the model.

However, the authors acknowledge that the use of convenience sampling may limit the generalizability of the findings to the broader Thai Generation Z population, particularly individuals with limited exposure to gastronomy tourism or lower engagement in tourism-related activities. Respondents in this study are more likely to represent sustainability-aware and experience-oriented tourists, which may result in relatively stronger observed relationships among the studied variables. Therefore, the findings should be interpreted as context-specific, reflecting behavioral patterns among Generation Z tourists with prior gastronomy tourism experience rather than the entire Generation Z population in Thailand. Despite this limitation, the sampling approach remains appropriate for theory testing and model development, which aligns with the predictive and exploratory nature of PLS-SEM. Accordingly, the research design centered on quantitative data collection through a structured questionnaire, followed by advanced statistical analyses particularly structural equation modeling (SEM) to evaluate the fit of the proposed theoretical model and to test the research hypotheses.

### 3.2. Data Collection Procedure

Data for this study were collected using a quantitative survey approach, employing a structured questionnaire as the primary instrument to gather responses from Thai Generation Z tourists who had prior experience in gastronomy tourism or food-related cultural activities. Prior to the main data collection, the questionnaire was tested for content validity by three experts, followed by a pilot test with 30 respondents to evaluate the clarity of the items and the reliability of the instrument using Cronbach's Alpha. Only when reliability values met the acceptable threshold ( $\alpha > 0.70$  (recommended by Hair et al. [79]) was the questionnaire finalized for full-scale distribution.

The main data collection involved both online surveys distributed via Google Forms and on-site surveys administered at well-known food and cultural tourism destinations, such as local markets, traditional restaurants, and food festivals. Convenience sampling technique with pre-screening questions about prior gastronomic experience was adopted to ensure that respondents met the required criteria for the study. To achieve an adequate sample size for structural equation modeling (SEM), the study followed the guideline of Hair et al. [79], which recommends at least 10–20 cases per estimated parameter. Therefore, a minimum sample size of 400 respondents was targeted to support advanced statistical analyses and strengthen the credibility of the findings. All data collection procedures adhered to research ethics principles. Participants were informed of the study's objectives, states of their prior gastronomic experience, their right to withdraw at any time, and the confidentiality of their personal information. Consent was obtained prior to participation, and all responses were handled with strict confidentiality.

### 3.3. Measurement Instruments

The primary instrument used in this study was a structured questionnaire developed from an extensive review of related literature and prior empirical research. The questionnaire was designed to measure three core latent variables aligned with the study's conceptual model: Environmental Literacy, Social and Emotional Learning Skills, and Sustainable Gastronomy Tourism Behavior. It consisted of two sections. The first section collected demographic information gender, age, education, occupation, monthly income, and gastronomy tourism experience to support descriptive statistical analysis. The second section comprised 24 items measuring the three key constructs, including eight items for Environmental Literacy, eight for Social and Emotional Learning Skills, and eight for Sustainable Gastronomy Tourism Behavior. All items were rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), allowing the assessment of respondents' perceptions and behavioral tendencies in a standardized manner. To ensure the quality of the measurement instrument, the questionnaire underwent rigorous validation procedures. Content validity was examined by three experts who assessed each item's clarity, representativeness, and alignment with the intended construct, supported by the calculation of the Index of Item-Objective Congruence (IOC). A pilot test with 30 respondents was then conducted to evaluate item comprehension and reliability. Cronbach's Alpha values were used to confirm internal consistency, with  $\alpha \geq 0.70$  adopted as the acceptable threshold in accordance with Hair et al. [79]. A detailed summary of the constructs, their dimensions, and corresponding indicators is presented in the subsequent Table 2.

**Table 2 .Summary of research variables**

Main variables	Component variables	Indicators (Definition)	References
Environmental Literacy	1. Knowledge of Environmental Issues	<ul style="list-style-type: none"> <li>Understanding key causes of environmental problems such as pollution, deforestation, and global warming.</li> <li>Ability to explain the impacts of environmental problems on health, quality of life, and society.</li> </ul>	[29, 30]
	2. Understanding Human–Environment Interactions	<ul style="list-style-type: none"> <li>Awareness that daily human activities (e.g., travel, food consumption) directly affect the environment.</li> <li>Understanding how economic activities (e.g., tourism, agriculture) can create both positive and negative ecological impacts.</li> </ul>	[31, 32]
	3. Awareness of Environmental Importance	<ul style="list-style-type: none"> <li>Recognizing that the environment is essential for human life, the economy, and tourism quality.</li> <li>Valuing environmentally friendly consumption, such as organic foods or biodegradable products.</li> </ul>	[33, 34]
	4. Knowledge of Environmental Solutions	<ul style="list-style-type: none"> <li>Knowledge of methods to reduce environmental pollution, such as recycling, reducing plastic use, and adopting renewable energy.</li> <li>Ability to identify community-level environmental solutions such as reforestation or proper waste management projects.</li> </ul>	[35, 36]
Social and Emotional Learning Skills	1. Self-awareness	<ul style="list-style-type: none"> <li>Ability to recognize one’s emotions and feelings in different situations, such as stress or success.</li> <li>Ability to identify personal strengths and areas for improvement for continuous development.</li> </ul>	[44, 45]
	2. Emotional Regulation	<ul style="list-style-type: none"> <li>Ability to manage emotions in stressful circumstances, such as time pressure at work.</li> <li>Ability to regulate negative emotions (anger, sadness, anxiety) through appropriate strategies such as communication, exercise, or rest.</li> </ul>	[46, 47]
	3. Responsible Decision-making	<ul style="list-style-type: none"> <li>Considering the impacts of decisions on others and society before acting.</li> <li>Choosing actions that benefit the common good rather than personal interests, promoting social safety and sustainability.</li> </ul>	[48, 49]
	4. Empathy	<ul style="list-style-type: none"> <li>Ability to understand and perceive others’ emotions even when not explicitly expressed.</li> <li>Considering others’ perspectives before judging or expressing opinions, promoting cooperation in diverse societies.</li> </ul>	[50, 51]
Sustainable Gastronomy Tourism Behavior	1. Local Food Consumption	<ul style="list-style-type: none"> <li>Choosing foods that are locally produced or prepared at the destination.</li> <li>Perceiving local foods as culturally meaningful and reflective of community lifestyles.</li> </ul>	[57, 58]
	2. Support for Local Communities	<ul style="list-style-type: none"> <li>Choosing to dine at or purchase from locally owned businesses rather than external operators.</li> <li>Recognizing that consuming local food contributes to income distribution and strengthens local economies.</li> </ul>	[59, 60]
	3. Environmentally Responsible Consumption	<ul style="list-style-type: none"> <li>Avoiding single-use plastics during food consumption by choosing reusable or biodegradable containers.</li> <li>Prioritizing vendors that implement environmental management practices such as waste separation or eco-friendly energy use.</li> </ul>	[61, 62]
	4. Cultural Appreciation through Gastronomy	<ul style="list-style-type: none"> <li>Viewing local cuisine as a key channel for learning community culture and traditions.</li> <li>Respecting local food customs, even when they differ from one’s own lifestyle.</li> </ul>	[52, 63]

**3.4. Data Analysis Methods**

The data analysis in this study comprised two main stages: descriptive statistics and inferential statistical analysis. In the first stage, descriptive statistics were used to summarize the demographic characteristics of the respondents, including gender, age, education level, monthly income, and gastronomy tourism experience. Fundamental statistical measures - frequency, percentage, mean, and standard deviation - were employed to present an overview of the sample profile and the distribution of responses. Following this, the quality of the measurement instrument was assessed through measurement model evaluation to ensure reliability and validity. Reliability was examined using Cronbach’s Alpha and Composite Reliability (CR), both of which were required to exceed the recommended threshold of 0.70 [79]. Convergent validity was assessed using the Average Variance Extracted (AVE), with values above 0.50 indicating adequate convergent validity. Discriminant validity was further verified using the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT), ensuring that each latent construct was empirically distinct.

In the second stage, inferential analysis was conducted using Structural Equation Modeling (SEM) via SmartPLS to examine the hypothesized causal relationships among the three latent variables: Environmental Literacy, Social and Emotional Learning Skills, and Sustainable Gastronomy Tourism Behavior. The analysis consisted of two components: (1) evaluation of the measurement model, assessing indicator reliability and construct validity, and (2) evaluation of the structural model, testing the hypothesized relationships (H1–H3). Key criteria included path coefficients, t-statistics, p-values, and confidence intervals, all of which determined the statistical significance of the

effects. Model fit was assessed using the Standardized Root Mean Square Residual (SRMR), with acceptable values below 0.08. Hypothesis testing employed the bootstrapping procedure with a significance level of 0.05, providing robust evidence regarding the direct and indirect effects among the constructs within the theoretical model.

#### 4. Results

The results of descriptive analysis, as shown in Table 3, consist of 431 respondents with diverse demographic characteristics and gastronomy-related travel behavior.

**Table 3. Demographic information**

Category	Subcategory	Frequency	Percent (%)
Gender	Male	190	44.10
	Female	240	0.20
	Prefer not to specify	1	55.70
Education level	Lower than Bachelor's degree	57	13.20
	Bachelor's degree	264	61.30
	Higher than Bachelor's degree	110	25.50
Current occupation	Student	89	20.60
	Private company employee	153	35.50
	Government officer employee	112	26.00
	Business owner	75	17.40
	Others	2	0.40
Average monthly income	Less than 20,000 THB	200	46.40
	20,001–30,000 THB	80	18.60
	30,001–40,000 THB	45	10.40
	40,001–50,000 THB	43	10.00
	More than 50,000 THB	63	14.60
Region of permanent residence	Bangkok and Metropolitan Area	127	29.50
	Central and Western Region	103	23.90
	Eastern Region	51	11.80
	Northeastern Region	78	18.10
	Southern Region	72	16.70
Type of food preferred the most	General Thai food	167	38.70
	Local/regional cuisine	184	42.70
	International cuisine	36	8.40
	Desserts and sweets	28	6.50
	Various types of fruits	16	3.70
Average number of gastronomy tourism trips per year	1–5 times	103	23.90
	6–10 times	163	37.80
	11–15 times	111	25.80
	More than 15 times	54	12.50
<b>Total</b>		<b>431</b>	<b>100.00</b>

The majority of respondents were female, while a small proportion chose not to disclose their gender. Regarding education, most participants held a bachelor's degree, followed by those with postgraduate qualifications. This indicates that the sample largely comprises individuals with relatively high educational backgrounds, suggesting strong potential for understanding sustainability-related issues. In terms of occupation, private-sector employees represented the largest group, followed by government officers, and university students. This diversity reflects a broad range of social contexts and lifestyles, which may influence respondents' food consumption patterns and gastronomy tourism behaviors. The result of monthly income distribution indicates substantial variation within the sample. For example, the largest proportion earned less than 20,000 THB per month, while a notable segment reported incomes above 50,000 THB.

Respondents were from different regions in Thailand. The highest proportion represented Bangkok and its metropolitan area. Local or regional cuisine was mostly favored by respondents, followed by general Thai cuisine - aligning well with the study’s focus on sustainable gastronomy tourism. Finally, annual gastronomy-related travel frequency showed that most respondents engaged in 6–10 trips per year, followed by 11–15 trips, indicating consistent and ongoing interest in gastronomy tourism. These characteristics provide a solid foundation supporting the credibility of the subsequent structural model analysis.

Table 4 presents the results of the model fit assessment, evaluating the adequacy of the research model based on fundamental indices commonly used in Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings indicate that the Standardized Root Mean Square Residual (SRMR) is 0.093. Although this value is slightly higher than the conventional threshold of 0.08, it remains within an acceptable range for behavioral science research, particularly in models of moderate complexity. Additionally, the d\_ULS and d\_G indices demonstrate identical values for both the Saturated and Estimated models, suggesting a reasonable degree of structural stability. The Chi-square value and the Normed Fit Index (NFI), which is 0.654, are lower than the typical cutoffs required for covariance-based structural models. However, these indices must be interpreted in line with the nature of PLS-SEM, which does not rely heavily on such fit statistics as primary indicators of model adequacy. The NFI value, being below 0.90, may imply that the model could still be refined for greater parsimony or improved explanatory power.

**Table 4. Model fit evaluation**

	Saturate Model	Estimate Model
<b>SRMR</b>	0.093	0.093
<b>d_ULS</b>	0.671	0.671
<b>d_G</b>	0.172	0.172
<b>Chi-Square</b>	411.977	411.977
<b>NFI</b>	0.654	0.654

Overall, the model demonstrates an acceptable level of quality within the context of exploratory modeling and human behavioral variables. Although certain fit indices fall slightly outside conventional thresholds, these deviations are not considered critical limitations for PLS-SEM, which prioritizes predictive capability over absolute model fit. Nevertheless, the results from Table 4 will be interpreted alongside the findings from both the measurement model and the structural model in subsequent sections to provide a more comprehensive and rigorous academic conclusion.

The results presented in Table 5 report the Factor Loadings, Outer Weights, and Variance Inflation Factor (VIF) values for all indicators across the three latent constructs: Environmental Literacy, Social and Emotional Learning Skills, and Sustainable Gastronomy Tourism Behavior. The overall result demonstrates strong alignment between most indicators and their corresponding latent variables, consistent with the conceptual framework. Several indicators display high Factor Loadings—such as Understanding Human–Environment Interactions (0.736), Awareness of Environmental Importance (0.746), Empathy (0.724), and Local Food Consumption (0.794)—indicating their effectiveness in representing the dimensions of each construct. Notably, Cultural Appreciation through Gastronomy shows the highest loading (0.811), underscoring the central role of cultural value appreciation in shaping gastronomy tourism behavior among Generation Z tourists.

**Table 5. Factor analysis results**

Indicator	Loadings	Weights	VIF
Knowledge of environmental issues	0.722	0.289	1.397
Understanding human–environment interactions	0.736	0.351	1.346
Awareness of environmental importance	0.746	0.445	1.235
Knowledge of environmental solutions	0.629	0.319	1.189
Self-awareness	0.510	0.255	1.139
Emotional regulation	0.500	0.181	1.159
Responsible decision-making	0.798	0.584	1.137
Empathy	0.724	0.433	1.191
Local food consumption	0.794	0.342	1.595
Support for local communities	0.695	0.271	1.362
Environmentally responsible consumption	0.682	0.324	1.241
Cultural appreciation through gastronomy	0.811	0.394	1.539

However, a few indicators exhibit loadings below the recommended threshold of 0.70, including Knowledge of Environmental Solutions (0.629), Self-awareness (0.510), and Emotional Regulation (0.500). These lower values identify certain limitations in the extent to which these indicators represent the underlying socio-emotional skill dimensions. Despite the relatively low loadings, the Outer Weights of these items—such as Emotional Regulation (0.181)—still reflect meaningful predictive relevance within the model. Therefore, these indicators remain conceptually justified for retention based on theoretical significance and the guidelines of PLS-SEM. Regarding linear relationships among indicators, all VIF values fall within an excellent range (1.13–1.59), well below both the strict threshold ( $VIF < 3$ ) and the general cut-off ( $VIF < 5$ ). This confirms the absence of multicollinearity among indicators and supports the overall structural stability of the model. Although a few indicators exhibit suboptimal loadings, the collective results indicate that the measurement model remains acceptable for PLS-SEM analysis, which prioritizes predictive capability over the strict measurement assumptions typical of covariance-based approaches.

Table 6 presents the assessment results for the reliability and validity of the measurement model, evaluated using standard indices including Cronbach’s alpha, rho\_A, Composite Reliability (CR), and Average Variance Extracted (AVE). Overall, the results indicate that the three latent constructs exhibit an acceptable level of reliability according to the guidelines of Partial Least Squares Structural Equation Modeling (PLS-SEM). Despite some coefficients fall slightly below recommended thresholds, they remain interpretable and acceptable when considered alongside theoretical justification and the inherent complexity of human behavioral variables. For Environmental Literacy, the Composite Reliability value of 0.802 exceeds the recommended benchmark of 0.70, and the AVE value of 0.504 demonstrates that the construct explains more than half of the variance of its indicators. While Cronbach’s alpha (0.675) falls marginally below the conventional threshold, it is still considered acceptable for constructs with conceptual complexity and a modest number of indicators. The rho\_A value (0.684), which is close to the recommended level, further supports the internal consistency of the construct.

**Table 6. Reliability and validity test**

Latent variables	Cronbach's alpha	rho_A	Composite reliability (CR)	Average variance extracted (AVE)
Environmental literacy	0.675	0.684	0.802	0.504
Social and emotional learning skills	0.571	0.623	0.734	0.418
Sustainable gastronomy tourism behavior	0.736	0.750	0.834	0.559

Regarding Social and Emotional Learning Skills, the CR value of 0.734 indicates an acceptable level of composite reliability. However, Cronbach’s alpha (0.571) and AVE (0.418) fall below standard cutoffs, suggesting that the indicators for this construct exhibit substantial heterogeneity and may not consistently represent a single unidimensional structure. Rather than indicating measurement deficiency, these results reflect the inherently multidimensional nature of Social and Emotional Learning Skills, which encompass diverse yet interrelated components - such as self-awareness, emotional regulation, empathy, and responsible decision-making. Such heterogeneity is particularly evident among Generation Z, whose socio-emotional development is shaped by varied digital, social, and experiential learning environments, leading to differentiated patterns across indicators. In this context, Cronbach’s alpha - which assumes tau-equivalence and unidimensionality - tends to underestimate internal consistency for complex psychological constructs. Nonetheless, the rho\_A value (0.623), which is higher than Cronbach’s alpha, indicates a moderate and acceptable level of internal consistency within the construct and supports its retention in the model.

For Sustainable Gastronomy Tourism Behavior, the results demonstrate the strongest psychometric performance among the three constructs. The CR value of 0.834 and AVE of 0.559 exceed all recommended thresholds, indicating strong indicator reliability and convergent validity. Both Cronbach’s alpha (0.736) and rho\_A (0.750) fall well within acceptable ranges, confirming that the indicators consistently represent the behavioral construct. In summary, although certain constructs (particularly Social and Emotional Learning Skills) exhibit reliability indices slightly below ideal thresholds, this pattern is theoretically consistent with the multidimensional and context-sensitive nature of socio-emotional competencies rather than a limitation of measurement quality, and the overall measurement model demonstrates acceptable quality for PLS-SEM applications. These results support the adequacy of the measurement properties and provide confidence for subsequent structural model analysis.

Table 7 presents the assessment of discriminant validity for the measurement model, using the Heterotrait–Monotrait Ratio of Correlations (HTMT) and the Fornell–Larcker Criterion to confirm that each latent construct is statistically distinct and not excessively overlapping in conceptual structure. The HTMT results indicate that the

correlation between Environmental Literacy and Social and Emotional Learning Skills is 0.431, and between Social and Emotional Learning Skills and Sustainable Gastronomy Tourism Behavior is 0.494—both below the recommended threshold of 0.85. These values confirm clear differentiation among these constructs. However, the HTMT value for the relationship between Environmental Literacy and Sustainable Gastronomy Tourism Behavior is 0.925, which exceeds the standard cutoff, suggesting a relatively high degree of similarity between these constructs. This result does not necessarily indicate conceptual redundancy, but rather reflects a strong theoretical proximity between environmental knowledge and behavior in sustainability-oriented tourism contexts. Environmental Literacy represents a cognitive and value-based capability - encompassing knowledge, awareness, and understanding of environmental issues - whereas Sustainable Gastronomy Tourism Behavior captures observable consumption and tourism-related actions derived from such knowledge.

**Table 7. Discriminant validity**

<b>Heterotrait-Monotrait Ratio of Correlations (HTMT)</b>			
<b>Construct</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
Environmental literacy (1)			
Social and emotional learning skills (2)	0.431		
Sustainable gastronomy tourism behavior (3)	0.925	0.494	
<b>Fornell-Larcker Criterion</b>			
<b>Construct</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
Environmental literacy (1)	0.710		
Social and emotional learning skills (2)	0.317	0.646	
Sustainable gastronomy tourism behavior (3)	0.680	0.356	0.748

The Fornell–Larcker analysis further supports these observations. The square root of AVE for each construct is generally higher than its correlations with other constructs. For example, Environmental Literacy has a square root of AVE of 0.710, which is higher than its correlation with Social and Emotional Learning Skills (0.317), but close to its correlation with Sustainable Gastronomy Tourism Behavior (0.680). This pattern indicates that Environmental Literacy and Sustainable Gastronomy Tourism Behavior may share deeper conceptual linkages in the context of sustainable food-related tourism, especially among Generation Z tourists who tend to integrate environmental considerations directly into their consumption and travel decisions. Indeed, this close alignment reflects a theoretically expected knowledge–behavior continuum rather than measurement overlap, as Environmental Literacy functions as an antecedent capability, while Sustainable Gastronomy Tourism Behavior represents its behavioral manifestation. Although the overall results confirm discriminant validity among the main constructs based on theoretical expectations, the elevated HTMT value highlights the need for careful theoretical interpretation rather than construct elimination, which is addressed in the subsequent discussion section.

The structural model analysis presented in Table 8 indicates that all hypotheses were statistically supported. Environmental Literacy demonstrated a strong and significant positive effect on Sustainable Gastronomy Tourism Behavior ( $\beta = 0.630, p < 0.001$ ), representing the largest effect size in the model ( $f^2 = 0.692$ ). This underscores Environmental Literacy as the primary driver of sustainable gastronomy tourism behavior among Gen Z tourists. The magnitude of this effect suggests that environmental knowledge, awareness of human–environment interactions, and understanding of environmental consequences play a decisive role in shaping food-related tourism decisions, such as choosing local food, reducing waste and supporting environmentally responsible food providers.

**Table 8. Summary results**

<b>Hypotheses</b>	<b>Effect</b>	<b>O</b>	<b>STDEV</b>	<b>T</b>	<b>P</b>	<b>f<sup>2</sup></b>	<b>CI</b>	<b>Result</b>
<b>Direct effects</b>								
H1	Environmental literacy → Social and emotional learning skills	0.317	0.061	5.193	0.000	0.111	[0.211, 0.434]	Supported
H2	Environmental literacy → sustainable gastronomy tourism behavior	0.630	0.038	16.713	0.000	0.692	[0.556, 0.709]	Supported
H3	Social and emotional learning skills → Sustainable gastronomy tourism behavior	0.156	0.047	3.329	0.001	0.043	[0.048, 0.230]	Supported
<b>Indirect effects</b>								
H4	Environmental literacy → Social and emotional learning skills → Sustainable gastronomy tourism behavior	0.049	0.020	2.460	0.014	-	[0.012, 0.092]	Supported

Note: \*\*Significant at 0.01

In addition, Environmental Literacy exerted a significant direct influence on Social and Emotional Learning Skills ( $\beta = 0.317, p < 0.001$ ). This result implies that individuals with higher environmental awareness tend to possess

stronger socio-emotional competencies. This relationship indicates that environmental knowledge is not only cognitive in nature but also contributes to the development of empathy, responsible decision-making, and social awareness, which are essential for navigating complex social and cultural contexts during tourism experiences.

Despite Social and Emotional Learning Skills exhibiting a more modest direct effect on Sustainable Gastronomy Tourism Behavior ( $\beta = 0.156, p = 0.001$ ), the effect remains meaningful and reinforces their role in supporting sustainable behavioral intentions. The relatively smaller effect size ( $f^2 = 0.043$ ) implies that SEL Skills function more as a supplement mechanism rather than a primary determinant, particularly in consumption-oriented contexts where knowledge-based evaluations may dominate decision-making. Furthermore, the analysis of indirect effects shows that Social and Emotional Learning Skills serve as a partial mediator between Environmental Literacy and Sustainable Gastronomy Tourism Behavior ( $\beta = 0.049, p = 0.014$ ). This finding confirms that socio-emotional competencies enhance the mechanism, which Environmental Literacy translates into sustainable gastronomy tourism behavior. Specifically, environmental knowledge appears to foster sustainability-oriented values, which are then reinforced and enacted through socio-emotional capacities such as empathy toward local communities and responsible judgment regarding environmental and cultural impacts. These relationships are further illustrated in Figure 2.

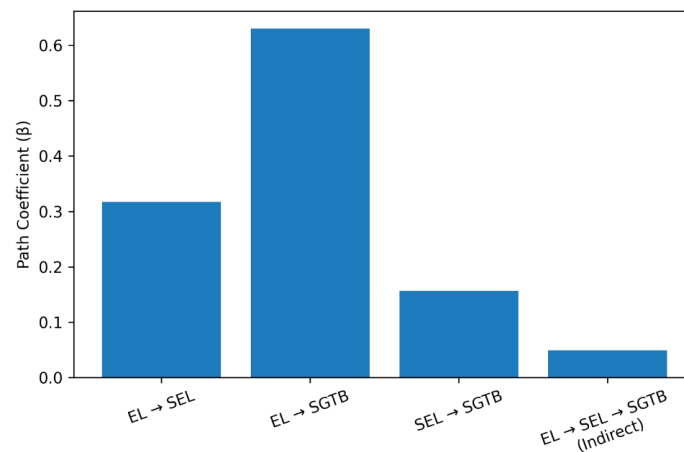


Figure 2. Structural Path Coefficients of the Research Model

Figure 3 illustrates the structural relationships among the three principal constructs - environmental Literacy, Social and Emotional Learning Skills, and Sustainable Gastronomy Tourism Behavior - along with detailed path coefficients and factor loadings for each indicator. The PLS-SEM results reveal that Environmental Literacy exerts the strongest positive influence on Sustainable Gastronomy Tourism Behavior (Environmental Literacy → SGTB = 0.630). Environmental Literacy also shows a significant positive effect on Social and Emotional Learning Skills (0.317), while Social and Emotional Learning Skills positively influence Sustainable Gastronomy Tourism Behavior as well (0.156), albeit with a smaller magnitude compared to the direct effect of Environmental Literacy. Collectively, these pathways reflect the critical role of environmental knowledge coupled with socio-emotional competencies in fostering sustainable gastronomy tourism practices among Gen Z tourists.

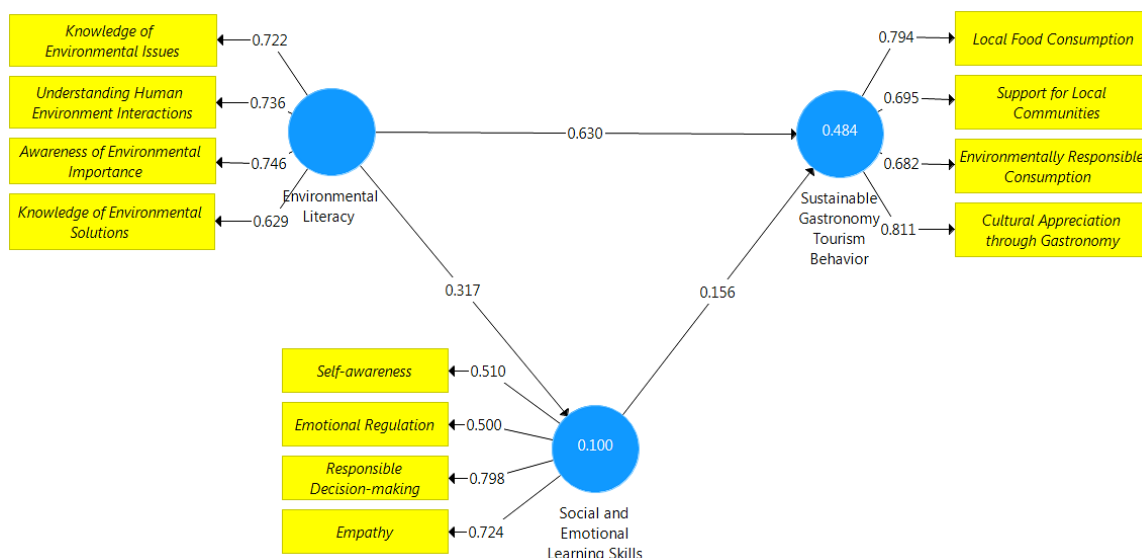


Figure 3. The Structural Model

## 5. Discussion

The findings of this study indicate that Environmental Literacy becomes the most influential factor that promotes Sustainable Gastronomy Tourism Behavior among Thai Gen Z tourists. This result strongly aligns with existing literature, which suggests that individuals who understand environmental problems, recognize the interdependence between humans and nature, and are aware of the social and economic consequences of environmental degradation are more likely to engage in eco-friendly consumption and tourism practices such as choosing local foods, reducing plastic use, and supporting community enterprises [29, 31, 32]. Similar patterns have been empirically reported in prior gastronomy and sustainable tourism studies in both European and Asian contexts, where environmental knowledge consistently emerged as a dominant predictor of responsible food-related tourism behavior, often exceeding the influence of attitudinal or experiential variables. These outcomes underscore that accurate environmental knowledge and awareness serve as a powerful “behavioral catalyst” for fostering sustainable tourism among younger generations.

Regarding the sub-dimensions of Environmental Literacy, all components were consistent with prior literature; however, some practical challenges emerged. Notably, the dimension relating to “knowledge of environmental solutions” demonstrated lower indicator strengths compared to other dimensions. This finding, consistent with previous studies, confirms a persistent discrepancy between environmental awareness and the ability to translate such awareness into concrete problem-solving actions, particularly among younger cohorts [29, 31]; and suggests that while Gen Z tourists possessing high awareness of environmental issues, their real-world experience in applying practical environmental actions remains limited. This aligns with the well-documented “knowledge–action gap,” frequently highlighted in environmental behavior studies. Another noteworthy finding was the relationship between Environmental Literacy and Social and Emotional Learning Skills. Previous studies have suggested that individuals who understand environmental impacts are likely to develop enhanced social-emotional competencies - such as empathy, communication, and responsibility toward others [64, 65, 67]. The present study extends these previous findings by empirically confirming this relationship within the specific context of gastronomy tourism, an area where such linkages have been relatively underexplored. However, in the present study, certain dimensions of SEL—particularly self-awareness and emotional regulation—demonstrated only moderate alignment with the model. This possibly reflects the unique characteristics of the younger generation, who face heightened pressures from digital media and rapid societal changes, potentially limiting the development of emotional competencies despite strong environmental awareness.

With regard to the influence of SEL Skills on Sustainable Gastronomy Tourism Behavior, the results showed a positive effect, consistent with extant literature demonstrating the role of empathy in supporting local economies and the role of responsible decision-making in reducing environmental impact [75, 76]. Comparable studies in sustainable tourism and pro-social consumption have similarly reported that socio-emotional competencies contribute to responsible behavior, albeit with smaller effect sizes than cognitive or knowledge-based factors. However, the magnitude of this effect was notably smaller compared to that of Environmental Literacy. This difference may stem from the behavioral nature of gastronomy-related tourism, which involves direct consumption choices; hence, environmental knowledge and attitudes may exert a more immediate influence than socio-emotional competencies. Additionally, prior research suggests that SEL-related constructs often operate more effectively when combined with mediating factors such as social awareness, moral norms, or pro-social motivation, which may explain the comparatively weaker direct effect observed in this study.

Overall, the findings reveal that Environmental Literacy, Social and Emotional Learning Skills, and Sustainable Gastronomy Tourism Behavior are highly aligned with the theoretical foundations and previous empirical research. Indeed, this study contributes a more nuanced comparison by demonstrating that, within the Thai Generation Z context, environmental cognition plays a more central role than socio-emotional factors in shaping gastronomy-related tourism behavior - an outcome that partially contrasts with studies conducted in a Western context, where emotional and value-based drivers are often more pronounced. This underscores the importance of strengthening both environmental education and socio-emotional competencies to support holistic sustainable tourism development for this generation.

### 5.1. Theoretical Discussion Through TPB, VBN, and SCT in the Contemporary Social Context

The findings of this study can be interpreted in greater depth through three foundational theories - Theory of Planned Behavior (TPB), Value–Belief–Norm (VBN) Theory, and Social Cognitive Theory (SCT). Together, these frameworks illuminate the internal mechanisms that drive sustainable gastronomy tourism behavior among Thai Gen Z tourists, offering a richer explanation than statistical outcomes alone. Importantly, these theories are not treated as competing perspectives but as complementary lenses that collectively explain how cognitive, normative, and social–emotional processes interact, embed and shape sustainability-oriented behavior in tourism contexts. Each theory also

provides a distinct perspective that aligns with the psychological tendencies of younger generations and the social conditions of post-COVID in Thailand.

Drawing from TPB [19], human behavior is shaped by behavioral intention, which in turn is determined by attitudes, subjective norms, and perceived behavioral control. The findings in this study closely reflect this theoretical structure. The gastronomy tourism behaviors of young travelers reveal a “positive sustainability-oriented intention,” manifested through choices such as consuming local foods and avoiding single-use plastics. Even when required to make quick decisions, Gen Z respondents consistently prioritized environmentally responsible options due to strong sustainability-oriented attitudes and a clear sense of personal behavioral control. In this study, Environmental Literacy can be theoretically positioned as a background cognitive resource that strengthens pro-sustainability attitudes and perceived behavioral control, thereby indirectly reinforcing intention formation without being explicitly modeled as a TPB antecedent. In the current social context, this generation is continually exposed to environmental information - such as climate crises, microplastics in food, and the degradation of marine destinations - mainly through social media. This repeated finding has shaped strong pro-environmental attitudes. Additionally, peer influence and sustainability-promoting influencers have contributed to making responsible tourism a “new social norm” among this age group. These dynamics naturally position the results of this study within the TPB framework.

The VBN theory [21] deepens this understanding by proposing that environmental behavior emerges from internal values, beliefs about human–environment consequences, and moral norms. The study’s finding that environmental literacy exerts the strongest influence on sustainable gastronomy tourism behavior is highly consistent with this model. When individuals possess knowledge about environmental problems, understand human–nature interdependence, and recognize the intrinsic value of environmental protection, they then develop a form of “moral obligation” to choose responsible behaviors—such as selecting low-waste meals, supporting local businesses, or minimizing food waste. Such a finding highlights that environmental literacy operates not merely as informational knowledge but as a value-activating mechanism that aligns beliefs with moral norms, which is a central assumption of VBN theory. In contemporary Thai society, the growth of environmental movements such as zero-waste cafés, organic markets, slow-life tourism, and anti-plastic campaigns in restaurants has strengthened the value system related to sustainability. With these emerging collective values, it is unsurprising that environmental literacy emerged as the most potent predictor of sustainable gastronomy tourism behavior in this study, reflecting a broader societal shift toward pro-environmental norms.

Bandura [23] provided another explanatory dimension by emphasizing the reciprocal interaction between personal factors, behavior, and the social environment. The finding that Social and Emotional Learning Skills (SEL Skills) significantly influence sustainable gastronomy tourism behavior aligns with SCT’s core propositions. Key SEL components - self-awareness, empathy, and responsible decision-making - play a critical role in shaping this behavior. Gen Z tourists learn many sustainability practices through social media, travel reviews, and observational learning from influencers or online communities. Examples include how to reduce waste while traveling or how to support local food businesses in ways that benefit the host community. Through repeated observation and social interaction, these learning processes enhance self-efficacy and internal motivation, enabling individuals to translate sustainability values into consistent behavioral action. Moreover, in the post-COVID era, young travelers increasingly seek “meaningful travel,” which includes respecting local cultures, supporting communities, and building connections with locals through food experiences. As a result, SEL Skills have gradually become an internal resource that facilitates the translation of sustainability values into actual behavior.

## 5.2. Theoretical Contributions and Practical Implications

The findings in this study also offer clear contributions to theoretical development across several dimensions, particularly through the integration of Theory of Planned Behavior (TPB), Value–Belief–Norm (VBN) Theory, and Social Cognitive Theory (SCT) into the context of Sustainable Gastronomy Tourism Behavior, a research area that remains relatively underexplored in Thailand. The strong influence of Environmental Literacy on sustainable gastronomy tourism behavior extends the application of the VBN framework into a more domain-specific area of “food-related and tourism-related decision-making,” whereas previous literature has predominantly focused on general environmental behaviors in daily life. Furthermore, the relationship found between Social and Emotional Learning Skills (SEL Skills) and sustainability-oriented behavior although moderate sheds light on a critical SCT mechanism related to “social learning through tourism experiences,” the only topic briefly addressed in prior studies. Thus, the findings fill theoretical gaps by demonstrating that sustainability behavior is not solely driven by knowledge or values but emerges from the combined effects of environmental understanding, social-emotional competencies, and interactive learning processes that reflect the lived experiences of Gen Z tourists in the digital age.

From an applied perspective, the findings hold substantial implications for tourism policymakers, gastronomy route developers, environmental agencies, and foodservice operators at varying levels of destinations. The results highlight that fostering sustainable gastronomy tourism behavior must begin with systematic development of Environmental Literacy, implemented through educational media, public communication, and tourism experiences that provide

accurate sustainability-related information. At the same time, enhancing tourists' Social and Emotional Learning Skills - such as empathy, cultural understanding, and responsible decision-making - is essential. These skills can be cultivated through experience-based tourism activities, including local cooking workshops, participatory culinary tours, and community engagement programs. Moreover, the results suggest that local food entrepreneurs should communicate environmental and community-related values more explicitly such as the use of local ingredients, waste management initiatives, or farmer support programs to strengthen the linkage between tourists' sustainability intentions and their actual tourism behaviors.

## 6. Conclusion

This study investigated the understanding of the mechanisms shaping Sustainable Gastronomy Tourism Behavior among Gen Z tourists by examining the roles of Environmental Literacy and Social and Emotional Learning Skills, interpreted through the theoretical lenses of the Theory of Planned Behavior (TPB), Value–Belief–Norm (VBN) Theory, and Social Cognitive Theory (SCT). Using a quantitative approach and structural equation modeling (PLS-SEM), the study empirically tested both direct and indirect relationships among these contextual constructs, providing a comprehensive explanation of how cognitive, value-based, and socio-emotional factors jointly influence sustainability-oriented tourism behavior.

The findings clearly indicated that Environmental Literacy is the most influential factor that drives sustainable gastronomy-related behaviors, including local food consumption, support for local communities, and environmentally responsible food practices. Its strong direct and indirect effects through Social and Emotional Learning Skills, highlight Environmental Literacy as a critical entry point for fostering sustainable tourism behavior among younger generations. Meanwhile, Social and Emotional Learning Skills, although exerting a comparatively smaller direct effect, play an important complementary role through decision-making competencies, empathy, and the ability to interact constructively with others - mechanisms consistent with the principles of social learning outlined in SCT. The partial mediating role of SEL Skills further suggests that socio-emotional competencies enhance the translation of environmental awareness into actual behavior, rather than acting as a standalone driver. Overall, the study confirms that sustainable gastronomy tourism behavior does not emerge from knowledge alone, but instead requires an integration of environmental understanding, internalized values, and social-emotional capacities that enable individuals to transform awareness and intention into concrete behavioral action.

From a theoretical perspective, this study extends existing sustainability and tourism literature by integrating TPB, VBN, and SCT within a single empirical framework, thereby offering a more holistic explanation of food-related sustainable tourism behavior. It demonstrates that sustainability-oriented tourism is shaped by both cognitive and socio-emotional mechanisms, particularly within the context of Generation Z in a rapidly digitalizing society. Finally, the findings provide important implications for tourism policymakers, destination managers, educators, and local foodservice entrepreneurs. Promoting sustainable gastronomy tourism should prioritize systematic development of Environmental Literacy through education, communication, and experience-based tourism design, while simultaneously nurturing socio-emotional skills such as empathy, cultural understanding, and responsible decision-making. By aligning environmental knowledge with meaningful tourism experiences, stakeholders can more effectively encourage sustainable consumption patterns and support long-term environmental, cultural, and community sustainability.

### 6.1. Limitations and Future Research Directions

Despite offering new scholarly insights, this study contains several limitations that warrant consideration. First, the use of self-reported questionnaires introduces the possibility of response bias, particularly social desirability bias, where respondents possibly overstate their sustainable behaviors. Additionally, some indicators - especially within the subdimensions of Social and Emotional Learning Skills exhibited reliability values below ideal thresholds, reflecting the inherent complexity of measuring emotional competencies among younger generations. Incorporating behavioral data or employing mixed-methods approaches may enhance accuracy in future research. Furthermore, as the sample consists primarily of Thai Gen Z tourists, cultural and economic factors unique to the Thai context may limit the generalizability of the findings to other regions. Future interpretations should therefore consider these contextual boundaries.

Future research can extend the current study in different directions. Qualitative inquiries could explore deeper motivations behind the sustainable gastronomy tourism behaviors of younger travelers. Behavioral data—derived from observation, mobile tracking, or digital footprints such as restaurant reviews, travel path selections, or social media activity—may offer richer insights into actual behavior beyond self-report measures. Additional mediators or moderators, such as social awareness, trust in local businesses, or the influence of digital technologies (e.g., food review platforms), could also be explored to enrich the behavioral model. Comparative studies across age groups or geographic regions may further expand understanding of diverse sustainability patterns among tourists, ultimately supporting more targeted and effective tourism development policies.

## 7. Declarations

### 7.1. Author Contributions

Conceptualization, P.T., N.I., A.K. and S.A.; data curation, P.T., N.I., and A.K.; methodology, P.T., N.I. and S.A.; investigation, P.T., A.K., S.S., and S.A.; formal analysis, P.T., N.I., and S.A.; resources, P.T., N.I., and A.W.; software, N.I.; validation, S.S. and S.A.; visualization, P.T., A.K., and S.A.; writing—original draft preparation, P.T., N.I., A.K., and S.S.; writing—review and editing, P.T., S.S., A.K., and S.A.; supervision, S.A. All authors have read and agreed to the published version of the manuscript.

### 7.2. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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The authors received no financial support for the research, authorship, and/or publication of this article.

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### 7.5. Institutional Review Board Statement

Authors further declared that the study complied with ethical guidelines set forth by the Institutional Review Board of the human research ethics committee of Walailak University (WUEC-25-412-01), Thailand.

### 7.6. Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

### 7.7. Declaration of Competing Interest

The authors declare that there are no conflicts of interest concerning the publication of this manuscript. Furthermore, all ethical considerations, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

## 8. References

- [1] Sun, Z., Liu, L., Pan, R., Wang, Y., & Zhang, B. (2025). Tourism and economic growth: The role of institutional quality. *International Review of Economics and Finance*, 98, 103913. doi:10.1016/j.iref.2025.103913.
- [2] Kalenjuk Pivarski, B., Tešanović, D., Šmugović, S., Ivanović, V., Paunić, M., Vuković Vojnović, D., Vujasinović, V., & Gagić Jaraković, S. (2024). Gastronomy as a Predictor of Tourism Development—Defining Food-Related Factors from the Perspective of Hospitality and Tourism Employees in Srem (A.P. Vojvodina, R. Serbia). *Sustainability (Switzerland)*, 16(24), 10834. doi:10.3390/su162410834.
- [3] Aphisavadh Sirivadhanawaravachara. (2025). Culinary tourism in Thailand: A sustainable approach to promoting Thai cuisine as a global attraction by 2030. *World Journal of Advanced Research and Reviews*, 26(2), 1512–1527. doi:10.30574/wjarr.2025.26.2.1655.
- [4] Worrachananun, M. (2025). Transforming Urban Tourism: Essential Conditions and Low-Carbon Attributes for Sustainable Tourist Behaviors. *ABAC Journal*, 45(3), 1–15. doi:10.59865/abacj.2025.12.
- [5] Sangnak, D. (2025). Sustainable tourism development in Thailand: The role of agricultural tourism and government support for SMEs. *Sustainable Futures*, 9. doi:10.1016/j.sftr.2025.100782.
- [6] Clark, M., Kang, B., & Calhoun, J. R. (2023). Green meets social media: young travelers' perceptions of hotel environmental sustainability. *Journal of Hospitality and Tourism Insights*, 6(1), 36–51. doi:10.1108/JHTI-03-2021-0062.
- [7] Popşa, R. E. (2024). Exploring the Generation Z Travel Trends and Behavior. *Studies in Business and Economics*, 19(1), 189–199. doi:10.2478/sbe-2024-0010.
- [8] Khuadthong, B., Rattanapong, T., Imjai, N., & Aujiरणongpan, S. (2025). Sustainable tourism awareness in Thai Gen Z tourists: Roles and themes associated with scientific literacy and sociological and critical thinking skills. *Journal of Hospitality and Tourism Management*, 64. doi:10.1016/j.jhtm.2025.101316.

- [9] Minazzi, R., & Grechi, D. (2025). Exploring Gen Z Sustainable Behavior in the Hospitality Industry. *Administrative Sciences*, 15(7), 266. doi:10.3390/admsci15070266.
- [10] Vermeir, I., Weijters, B., De Houwer, J., Geuens, M., Slabbinck, H., Spruyt, A., Van Kerckhove, A., Van Lippevelde, W., De Steur, H., & Verbeke, W. (2020). Environmentally Sustainable Food Consumption: A Review and Research Agenda from a Goal-Directed Perspective. *Frontiers in Psychology*, 11, 1603. doi:10.3389/fpsyg.2020.01603.
- [11] Seyfi, S., Michael Hall, C., & Strzelecka, M. (2025). Gen Z—pioneers or paradox in sustainable tourism? *Journal of Sustainable Tourism*, 33(6), 987–1015. doi:10.1080/09669582.2025.2491702.
- [12] Suryani, W., Lestari, I., & Afwina, R. (2025). From Scroll to Stroll: The Role of FOMO and Climate Advocacy in Shaping Gen Z's Travel Intentions for Sustainable Tourism Destination. *International Journal of Sustainable Development and Planning*, 20(9), 4041–4050. doi:10.18280/ijstdp.200933.
- [13] Krittayarungroj, K., Suriyankietkaew, S., & Hallinger, P. (2023). Research on sustainability in community-based tourism: a bibliometric review and future directions. *Asia Pacific Journal of Tourism Research*, 28(9), 1031–1051. doi:10.1080/10941665.2023.2276477.
- [14] Gupta, S., Sajani, M., & Gowreesunker, V. G. B. (2024). Investigating the Role of Food Tourism in Shaping Destination Branding: A Qualitative Research Perspective. *Prabandhan: Indian Journal of Management*, 17(4), 8–28. doi:10.17010/pijom/2024/v17i4/173425.
- [15] Luchaprasith, T., & Macleod, D. (2018). Food tourism and the use of authenticity in Thailand. *Tourism, Culture and Communication*, 18(2), 101–116. doi:10.3727/109830418X15230353469492.
- [16] Brozović, D., D'Auria, A., Tregua, M., & Camilleri, M. A. (2024). The Sustainability of Food Tourism for Small Enterprises: Conditions, Challenges, and Opportunities. *Tourism Planning and Destination Marketing*, 93–114. doi:10.1108/978-1-80455-888-120241005.
- [17] Alnafisah, N. (2025). The Role of Tourism Development in Promoting Income Equality: A Case Study of GCC Countries. *Sustainability (Switzerland)*, 17(10), 4272. doi:10.3390/su17104272.
- [18] Shuvo, M. I. M., & Ahmed, T. (2025). Sustainable clicks: exploring Gen Z's e-commerce engagement and value perceptions for sustainable tourism. *Sustainable Futures*, 10, 101147. doi:10.1016/j.sfr.2025.101147.
- [19] Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. doi:10.1016/0749-5978(91)90020-T.
- [20] Hoang, L. C., & Nguyen, H. D. (2025). Analyzing generation Z's intentions to support sustainable tourism development in Nha Trang. *Journal of Global Responsibility*, 16(3), 474–494. doi:10.1108/JGR-01-2024-0012.
- [21] Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407–424. doi:10.1111/0022-4537.00175.
- [22] Zhang, Y., Zhao, H., & Zaman, U. (2025). Eco-consciousness in tourism: A psychological perspective on green marketing and consumer behavior. *Acta Psychologica*, 255, 104951. doi:10.1016/j.actpsy.2025.104951.
- [23] Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, New Jersey, United States.
- [24] Peiró-Signes, Á., Biondo, A., Sakka, G., Borsellino, V., & Galati, A. (2025). Exposure to social media pro-environmental campaigns and its impact on Generation Z's commitment to environmental sustainability actions. *Sustainable Futures*, 10, 101320. doi:10.1016/j.sfr.2025.101320.
- [25] Fang, W. T., Hassan, A. A., & LePage, B. A. (2022). *Environmental literacy. The living environmental education: Sound science toward a cleaner, safer, and healthier future*. Springer Nature Singapore, Singapore. doi:10.1007/978-981-19-4234-1\_4.
- [26] Goldman, D., Ayalon, O., Baum, D., & Weiss, B. (2018). Influence of 'green school certification' on students' environmental literacy and adoption of sustainable practice by schools. *Journal of Cleaner Production*, 183, 1300–1313. doi:10.1016/j.jclepro.2018.02.176.
- [27] Huang, H., & Hsin, C. Te. (2023). Environmental Literacy Education and Sustainable Development in Schools Based on Teaching Effectiveness. *International Journal of Sustainable Development and Planning*, 18(5), 1639–1648. doi:10.18280/ijstdp.180535.
- [28] Zheng, S. Y., Han, J. N., Gandolfi, F., Alturise, F., & Alkhalaf, S. (2025). Fostering eco-conscious tourists: How sustainable marketing drives green consumption behaviors. *Acta Psychologica*, 255, 104900. doi:10.1016/j.actpsy.2025.104900.
- [29] Mahinay, H. A. C., Marapao, M. S. A., Jempero, J. Hua B., & Allawan, J. G. L. (2023). Environmental Literacy Levels and Environmental Pollution among Senior High School Students. *Journal of Environmental Impact and Management Policy*, 3(36), 17–25. doi:10.55529/jeimp.36.17.25.

- [30] Paço, A., & Lavrador, T. (2017). Environmental knowledge and attitudes and behaviours towards energy consumption. *Journal of Environmental Management*, 197, 384–392. doi:10.1016/j.jenvman.2017.03.100.
- [31] Baloch, Q. B., Shah, S. N., Iqbal, N., Sheeraz, M., Asadullah, M., Mahar, S., & Khan, A. U. (2023). Impact of tourism development upon environmental sustainability: a suggested framework for sustainable ecotourism. *Environmental Science and Pollution Research*, 30(3), 5917–5930. doi:10.1007/s11356-022-22496-w.
- [32] Galvani, A. P., Bauch, C. T., Anand, M., Singer, B. H., & Levin, S. A. (2016). Human-environment interactions in population and ecosystem health. *Proceedings of the National Academy of Sciences of the United States of America*, 113(51), 14502–14506. doi:10.1073/pnas.1618138113.
- [33] Xaba, F., & Adanlawo, E. F. (2024). The Potential Role of Ecotourism in Sustainable Development: A Systematic Review. *Journal of Ecohumanism*, 3(4), 3356–3367. doi:10.62754/joe.v3i4.3852.
- [34] Ribeiro, M. A., Seyfi, S., Elhoushy, S., Woosnam, K. M., & Patwardhan, V. (2025). Determinants of generation Z pro-environmental travel behaviour: the moderating role of green consumption values. *Journal of Sustainable Tourism*, 33(6), 1079–1099. doi:10.1080/09669582.2023.2230389.
- [35] Rabi, M. K., & Jaeger-Erben, M. (2024). Reducing single-use plastic in everyday social practices: Insights from a living lab experiment. *Resources, Conservation and Recycling*, 200, 107303. doi:10.1016/j.resconrec.2023.107303.
- [36] Vukolić, D., Radišić, M., Radišić, M., Pevac, D., Milošević, S., & Gajić, T. (2025). The Role of Food Safety in Sustainable Gastronomic Tourism: Insights from Farm-Stay Tourist Experiences. *Agriculture (Switzerland)*, 15(18), 1966. doi:10.3390/agriculture15181966.
- [37] Chowkase, A. A. (2023). Social and emotional learning for the greater good: Expanding the circle of human concern. *Social and Emotional Learning: Research, Practice, and Policy*, 1, 100003. doi:10.1016/j.sel.2023.100003.
- [38] Pham, S. Van. (2024). The Influence of Social and Emotional Learning on Academic Performance, Emotional Well-Being, and Implementation Strategies: A Literature Review. *Saudi Journal of Humanities and Social Sciences*, 9(12), 381–391. doi:10.36348/sjhss.2024.v09i12.001.
- [39] Cheng, Z., & Chen, X. (2022). The Effect of Tourism Experience on Tourists' Environmentally Responsible Behavior at Cultural Heritage Sites: The Mediating Role of Cultural Attachment. *Sustainability (Switzerland)*, 14(1), 565. doi:10.3390/su14010565.
- [40] Cincera, J., Biberhofer, P., Binka, B., Boman, J., Mindt, L., & Rieckmann, M. (2018). Designing a sustainability-driven entrepreneurship curriculum as a social learning process: A case study from an international knowledge alliance project. *Journal of Cleaner Production*, 172, 4357–4366. doi:10.1016/j.jclepro.2017.05.051.
- [41] Hosokawa, R., Matsumoto, Y., Nishida, C., Funato, K., & Mitani, A. (2024). Enhancing social-emotional skills in early childhood: intervention study on the effectiveness of social and emotional learning. *BMC Psychology*, 12(1), 761. doi:10.1186/s40359-024-02280-w.
- [42] Brill, K., McGuinness, C., & Nordstokke, D. (2025). Relations between a social emotional learning (SEL) program and changes in resilience, self-esteem, and psychological flourishing in a youth sample. *Discover Mental Health*, 5(1), 43. doi:10.1007/s44192-025-00173-x.
- [43] Ngo, T. T. A., Vo, C. H., Tran, N. L., Nguyen, K. V., Tran, T. D., & Trinh, Y. N. (2024). Factors influencing Generation Z's intention to purchase sustainable clothing products in Vietnam. *PLoS ONE*, 19(12), 315502. doi:10.1371/journal.pone.0315502.
- [44] Antonopoulou, H. (2024). The Value of Emotional Intelligence: Self-Awareness, Self-Regulation, Motivation, and Empathy as Key Components. *Technium Education and Humanities*, 8, 78–92. doi:10.47577/teh.v8i.9719.
- [45] Klussman, K., Curtin, N., Langer, J., & Nichols, A. L. (2022). The Importance of Awareness, Acceptance, and Alignment With the Self: A Framework for Understanding Self-Connection. *Europe's Journal of Psychology*, 18(1), 120–131. doi:10.5964/ejop.3707.
- [46] Meneffee, D. S., Ledoux, T., & Johnston, C. A. (2022). The Importance of Emotional Regulation in Mental Health. *American Journal of Lifestyle Medicine*, 16(1), 28–31. doi:10.1177/15598276211049771.
- [47] Mumtazah, L. (2025). The Role of Emotion Regulation in Increasing Resilience to Stress and Life Pressure. *Asian Journal of Multidisciplinary Research*, 1(2), 88–96. doi:10.59613/bs2n5f66.
- [48] Baljević, D., Prior, J., & Dovey, K. (2025). The social dynamics of ethical decision-making in a corporate entity: espoused versus enacted practices. *Journal of Organizational Ethnography*, 14(2), 167–181. doi:10.1108/JOE-09-2024-0067.
- [49] Blašková, M., Figurska, I., Adamoniene, R., Poláčková, K., & Blaško, R. (2018). Responsible decision making for sustainable motivation. *Sustainability (Switzerland)*, 10(10), 3393. doi:10.3390/su10103393.

- [50] Wang, Z., Zhang, D., & Zheng, Z. (2023). Cross-Cultural Differences in Empathy and Relevant Factors. *Journal of Education, Humanities and Social Sciences*, 10, 197–202. doi:10.54097/ehss.v10i.6919.
- [51] Silke, C., Davitt, E., Flynn, N., Shaw, A., Brady, B., Murray, C., & Dolan, P. (2024). Activating Social Empathy: An evaluation of a school-based social and emotional learning programme. *Social and Emotional Learning: Research, Practice, and Policy*, 3, 100021. doi:10.1016/j.sel.2023.100021.
- [52] Recuero-Virto, N., & Valilla Arróspide, C. (2024). Culinary destination enchantment: The strategic interplay of local gastronomy in regional tourism development. *International Journal of Gastronomy and Food Science*, 36, 100931. doi:10.1016/j.ijgfs.2024.100931.
- [53] Maleachi, S., Juliana, J., Sianipar, R., & Sitorus, N. B. (2024). Study of Sustainable Gastronomy Tourism in Siantar City. *Jurnal Ilmiah Global Education*, 5(1), 138–149. doi:10.55681/jige.v5i1.1528.
- [54] Kalenjuc Pivarski, B., Grubor, B., Banjac, M., Đerčan, B., Tešanović, D., Šmugović, S., Radivojević, G., Ivanović, V., Vujašinić, V., & Stošić, T. (2023). The Sustainability of Gastronomic Heritage and Its Significance for Regional Tourism Development. *Heritage*, 6(4), 3402–3417. doi:10.3390/heritage6040180.
- [55] Obersteiner, G., Gollnow, S., & Eriksson, M. (2021). Carbon footprint reduction potential of waste management strategies in tourism. *Environmental Development*, 39, 100617. doi:10.1016/j.envdev.2021.100617.
- [56] Zhang, L., Wei, W., Fan, A., Milman, A., & King, B. E. M. (2025). Cultural sustainability in hospitality and tourism: toward a holistic framework. *International Journal of Contemporary Hospitality Management*, 37(13), 20–38. doi:10.1108/IJCHM-10-2024-1551.
- [57] Enthoven, L., & Van den Broeck, G. (2021). Local food systems: Reviewing two decades of research. *Agricultural Systems*, 193, 103226. doi:10.1016/j.agsy.2021.103226.
- [58] Wan, C., Lee, D., Wut, T. M., & Banerjee, R. (2025). Tourists' local food consumption: Travel experience, responsible tourism, or both? *Sustainable Futures*, 9, 100663. doi:10.1016/j.sfr.2025.100663.
- [59] Yang, M., Ehrnström-Fuentes, M., & Wincent, J. (2025). Big things from small beginnings: Creating and scaling community-based opportunities for sustainable small and local businesses. *Journal of Business Venturing*, 40(5), 106522. doi:10.1016/j.jbusvent.2025.106522.
- [60] Suriyankietkaew, S., Krittayarangroj, K., Thinthan, S., & Lumlongrut, S. (2025). Creative tourism as a driver for sustainable development: A model for advancing SDGs through community-based tourism and environmental stewardship. *Environmental and Sustainability Indicators*, 27. doi:10.1016/j.indic.2025.100828.
- [61] Nichifor, B., Zait, L., & Timiras, L. (2025). Drivers, Barriers, and Innovations in Sustainable Food Consumption: A Systematic Literature Review. *Sustainability (Switzerland)*, 17(5), 2233. doi:10.3390/su17052233.
- [62] Baena, V., & Cerviño, J. (2024). Tourism in the Era of Social Responsibility and Sustainability: Understanding International Tourists' Destination Choices. *Sustainability (Switzerland)*, 16(19), 8509. doi:10.3390/su16198509.
- [63] Park, E., & Widyanta, A. (2022). Food tourism experience and changing destination foodscape: An exploratory study of an emerging food destination. *Tourism Management Perspectives*, 42, 100964. doi:10.1016/j.tmp.2022.100964.
- [64] Liu, L., & Tobias, G. R. (2024). The impact of environmental literacy on residents' green consumption: Experimental evidence from China. *Cleaner and Responsible Consumption*, 12, 100165. doi:10.1016/j.clrc.2023.100165.
- [65] Kazazoglu, S. (2025). Environmental Education Through Eco-Literacy: Integrating Sustainability into English Language Teaching. *Sustainability (Switzerland)*, 17(5), 2156. doi:10.3390/su17052156.
- [66] Lin, S. H., Sah, A. K., & Hong, Y. M. (2025). Environmental Literacy Among the General Public in Chiayi County, Taiwan. *Sustainability (Switzerland)*, 17(7), 3108. doi:10.3390/su17073108.
- [67] Raman, R., Das, P., Mandal, S., Vijayan, V., AR, A., & Nedungadi, P. (2024). The impact of Gen Z's pro-environmental behavior on sustainable development goals through tree planting. *Sustainable Futures*, 8, 100251. doi:10.1016/j.sfr.2024.100251.
- [68] Tonsakunthaweeteam, S., Pongsakornrunsilp, S., Pongsakornrunsilp, P., Ketkaew, K., Rattanapan, P., & Grusevaja, M. (2025). Climate and Visa Exemption Policies on International Tourism Revenue: A Cross-Country Panel Study. *Journal of Human, Earth, and Future*, 6(4), 900–915. doi:10.28991/HEF-2025-06-04-010.
- [69] Yildirim, M. S., Elkoca, A., Gökçay, G., Yılmaz, D. A., & Yıldız, M. (2025). The relationship between environmental literacy, ecological footprint awareness, and environmental behavior in adults. *BMC Public Health*, 25(1), 551. doi:10.1186/s12889-025-21340-3.
- [70] Gautam, V., & Bhalla, S. (2024). Exploring the relationships among tourism involvement, residents' empowerment, quality of life and their support for sustainable tourism development. *Journal of Cleaner Production*, 434, 139770. doi:10.1016/j.jclepro.2023.139770.

- [71] D'Acunto, D., Filieri, R., & Okumus, F. (2025). The Gen Z attitude-behavior gap in sustainability-framed eWOM: A generational cohort theory perspective. *International Journal of Hospitality Management*, 129, 104194. doi:10.1016/j.ijhm.2025.104194.
- [72] Elbertson, N. A., Jennings, P. A., & Brackett, M. A. (2025). The role of educators in school-based social and emotional learning. *Social and Emotional Learning: Research, Practice, and Policy*, 6, 100134. doi:10.1016/j.sel.2025.100134.
- [73] Cubeddu, F., & Martini, E. (2025). Resilience and adaptive capacities of societies: social and cultural strategies. *Frontiers in Sociology*, 10, 1581631. doi:10.3389/fsoc.2025.1581631.
- [74] Brush, K. E., Jones, S. M., Bailey, R., Nelson, B., Raisch, N., & Meland, E. (2022). Social and Emotional Learning: From Conceptualization to Practical Application in a Global Context. *Life Skills Education for Youth: Critical Perspectives*, 5, 43–71. doi:10.1007/978-3-030-85214-6\_3.
- [75] Choe, J. Y., & Kim, S. (2018). Effects of tourists' local food consumption value on attitude, food destination image, and behavioral intention. *International Journal of Hospitality Management*, 71, 1–10. doi:10.1016/j.ijhm.2017.11.007.
- [76] Wang, J., Dai, J., Gao, W., Yao, X., Dewancker, B. J., Gao, J., Wang, Y., & Zeng, J. (2024). Achieving Sustainable Tourism: Analysis of the Impact of Environmental Education on Tourists' Responsible Behavior. *Sustainability (Switzerland)*, 16(2), 552. doi:10.3390/su16020552.
- [77] Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications, California, United States.
- [78] Orea-Giner, A., & Fusté-Forné, F. (2023). The way we live, the way we travel: generation Z and sustainable consumption in food tourism experiences. *British Food Journal*, 125(13), 330–351. doi:10.1108/BFJ-11-2022-0962.
- [79] Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. doi:10.1108/EBR-11-2018-0203.