

The Stakeholder Participation Model for Museum as Tourist Attractions in Thailand: A Case Study of the National Science Museums

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Abstract

Museums in Thailand were originally established as repositories of cultural heritage and community valuables, aiming to attract visitors and create shared learning experiences. Currently, the country has over 1,600 museums, with 1,532 still in operation. However, many remain underdeveloped and fail to meet international standards, resulting in limited visitor engagement and reduced socio-economic benefits. The present study aims to propose a development model for museums through stakeholder engagement, thereby providing a guideline for enhancing museum sustainability and impact. The research employs a case study of the museums of the National Science Museum Organization (NSM), examining four groups of stakeholders: (1) customer groups, (2) business partners, (3) local community groups, and (4) organizational employees. A qualitative research design was adopted, with data collected through in-depth interviews. The findings were analyzed using a systematic content analysis process, involving coding and thematic analysis. This analytical framework allowed the study to explore patterns of stakeholder participation, as well as their perceptions of the museum's role, attitudes, and interests, and needs and expectations to provide suggestions that form an actionable framework for enhancing museum engagement strategies. The results indicate that perceptions of the museum's role across all four stakeholder groups are accurate and aligned with the organization's stated objectives. However, differences emerged between staff who were internal stakeholders and external stakeholders who were involved in different roles in terms of attitudes and interests, particularly regarding satisfaction and loyalty to the museum. Similarly, variations were identified in stakeholder needs and expectations, leading to distinct participation patterns. The study suggests designing stakeholder participation mechanisms for organizations with comparable characteristics. Furthermore, to advance their institutional development, museums should consider strengthening communication formats and partnerships with network collaborators.

Keywords: Museum Attraction; Stakeholder Participation; Net Promoter Score; Thai Museum; National Science Museum

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Introduction

Museums have long been recognized as vital institutions that preserve cultural heritage, interpret historical events, and serve as centers of education, culture, and tourism. As Simpson (2009) stated, “*Heritage preservation and interpretation are central functions of museums and constitute the most public dimensions of museum practice.*” Museum tourism, therefore, provides travelers with meaningful opportunities to engage with the past, bridging the gap between tradition and modernity while experiencing art, culture, and stories of previous generations (Mavragani, 2018). In this sense, museums are not only places of preservation but also integral components of the global tourism industry, offering effective ways of learning and inspiring millions of visitors annually.

In the contemporary era, museums have been increasingly positioned as drivers of the creative economy and innovation, aligned with national policies for cultural and economic development (Shaw Hong, 2020; Srisuk et al., 2022). They now face new challenges, such as digital transformation under the concept of *Industry 4.0* and the shift toward a “digital society.” These changes necessitate that museums redefine their operational scope to ensure long-term sustainability. Moreover, marketing management has become an essential tool for museums to connect with visitors, managers, and stakeholders, enabling them to respond more effectively to diverse expectations (Kupec et al., 2020).

In Thailand, however, many museums struggle to meet international standards. Several institutions lack robust marketing strategies to attract both domestic and international tourists (Chinmaneevong, 2010). In fact, numerous museums have faced closures or periods of abandonment, which contrasts sharply with the role of museums in many countries that serve as leading tourist destinations (Panthong, 2022). These challenges underscore the urgent need for Thai museums to enhance their management practices, improve visitor engagement, and address institutional limitations.

Against this backdrop, the National Science Museum Organization (NSMO) plays a pivotal role in advancing museum tourism in Thailand. NSMO oversees six specialized science museums: the Science Museum, the Natural History Museum, the Information Technology Museum, the Rama IX Museum, and two Science Squares located in Bangkok (The Street Ratchada) and Chiang Mai. Since its establishment, NSMO has sought to expand access to science learning, with annual visitor numbers reaching several hundred thousand across its facilities. These museums were envisioned as national learning resources to promote scientific literacy, awareness of innovation, and public engagement with science and technology.

Despite their potential, the six science museums face significant challenges and opportunities. On one hand, they provide unique platforms for interactive learning, school partnerships, and public science communication, and they have been gradually growing in both exhibitions and outreach activities. On the other hand, persistent challenges remain, including fluctuating visitor numbers, underutilization of digital technology for engagement, limited marketing visibility, and uneven integration with tourism networks. Importantly, there is a clear managerial gap in terms of strategic planning, stakeholder collaboration, and the development of sustainable business models. This gap underscores a pressing need for a more systematic approach to management and development, one that extends beyond traditional exhibition practices.

Therefore, stakeholder participation emerges as a critical factor in museum development and sustainability. Stakeholders, both internal and external, play a decisive role in shaping organizational outcomes and ensuring that museums fulfill their educational, cultural, and tourism functions. Understanding the perceptions, attitudes, needs, and expectations of these stakeholders provides a rational basis for identifying weaknesses in current management and for developing effective strategies that can transform science museums into vibrant and sustainable learning resources.

Accordingly, this study aims to develop a stakeholder participation model for strengthening science museum tourism in Thailand. By focusing on NSMO and its six museums, the research not only explores the perceptions and expectations of stakeholders but also addresses the managerial gaps that currently hinder the growth of science museums. In doing so, it seeks to provide practical guidelines for enhancing their role as educational and tourism institutions in the digital age.

Literature Review

Thailand Museum Attraction

Thailand has a total of 1,600 museums, with 1,532 still in operation, representing one of the largest museum networks in Southeast Asia (Princess Maha Chakri Sirindhorn Anthropology Centre, 2024). This rapid expansion is linked to national strategies supporting the creative economy and the government's emphasis on cultural tourism since 2004, with the ambition of positioning Thailand as the creative industry hub of ASEAN (Punpeng, 2021). In recent decades, many "New Generation Museums" have emerged under collaborative and innovative models, such as Museum Siam, Bangkok Art and Culture Centre, Rattanakosin Exhibition Hall, ASEAN

Cultural Centre, and the National Science Museum’s Science Square. Notably, the Rama IX Museum has become the largest in Southeast Asia, capable of hosting over one million visitors annually (Royal Thai Embassy, 2019).

While these figures demonstrate Thailand’s strong commitment to expanding its museum landscape, a closer analysis reveals several challenges. First, the quantity-versus-quality paradox persists: despite the large number of museums, many struggle to meet international standards in curation, visitor services, and digital adaptation. Second, although the concept of “New Generation Museums” has injected innovation into the sector, their sustainability remains uncertain due to heavy reliance on state funding and limited diversification of revenue sources. Third, while flagship institutions like the Rama IX Museum attract significant visitor numbers, disparities in visitor engagement remain evident, with many regional or smaller museums facing low attendance and inadequate visibility in the tourism ecosystem.

From a tourism management perspective, museums in Thailand have indeed become important variables in the creative economy, contributing to social cohesion and local identity. However, their ability to function as competitive tourist attractions hinges on effective stakeholder collaboration, marketing strategies, and managerial innovation. The growing museum sector, therefore, presents both opportunities and vulnerabilities: it creates unique cultural heritage spaces but simultaneously highlights the pressing need for systematic governance, sustainable business models, and enhanced engagement mechanisms.

In summary, Thailand’s museum attractions are at a crossroads. The country has achieved significant growth in numbers and visibility, yet faces a managerial and strategic gap that prevents many institutions from realizing their full potential. These issues underline the importance of examining museums not only as cultural assets but also as organizational entities whose sustainability depends on stakeholder participation, innovative management, and adaptive strategies.

Museum Stakeholder

Museum management is inherently tied to stakeholder engagement, as museums depend on local communities, government agencies, tourism operators, and cultural organizations for their relevance and sustainability (Boukas & Ioannou, 2020). Effective stakeholder engagement aligns with broader economic objectives and enhances the sustainability of museum tourism (Zbuchea & Bira, 2020). Prior studies have demonstrated that leveraging stakeholder insights can lead to innovative tourism strategies and foster collaboration (Martínez-Peláez et al., 2023; Stone, Migacz, & Wolf, 2021). Moreover, meaningful stakeholder engagement improves not only tourist experience

and sense of belonging but also fosters shared responsibility in conservation and cultural development (Soliman, Al-Shanfari & Gulvady, 2023). Within organizations, employee engagement as an internal stakeholder has been found to directly increase service quality, customer satisfaction, and organizational success, particularly in tourism-related services (Shahzad et al., 2022; Jeong & Kim, 2020).

Net Promoter Score (NPS)

Consumer satisfaction and loyalty are reflected in the Net Promoter Score (NPS), which is a measure of consumer loyalty. Compared to relying solely on average customer satisfaction scores from the survey, this approach will help firms better understand the degree of customer satisfaction (Baquero, 2022). ‘Would you recommend your product or service to others?’ is a question that customers will be asked to rate on a scale of 0 to 10, with 10 denoting ‘definitely possible’ and 0 signifying ‘unlikely.’ Three groups can be formed based on the customer’s score: (1) Customers who give the company a score of 9 to 10 are either promoters or customers who will support it. This client base is devoted to the company and will continue to purchase its goods and services as well as refer others to it in the future. (2) Clients that give the company a score of 7 to 8 are passive or clients who are willing to switch if they find better goods or services; they are also easily swayed by rivals. And (3) Customers or critics who are dissatisfied with the company’s goods or services. Customers in this group assign scores ranging from 0 to 6. In addition to not recommending the organization’s products or services, this group of customers is also a group that may damage the organization’s reputation. This group may still purchase products or services from the organization, but they do so out of necessity or because they have no alternative. NPS can be calculated using the formula:

$$NPS = Promoters - Detractors$$

Stakeholder Value Creation

Kujala, Lehtimäki, and Freeman (2019) describe stakeholder value creation as the interdependence between organizations and their stakeholders, emphasizing sustainable relationships that align stakeholder expectations with organizational goals. Several frameworks have been developed to conceptualize the creation of value. Vilanova, Lozano & Arenas (2009) propose five dimensions—customer, human capital, shareholder, corporate, and social value—while Samarasinghe (2012) adds environmental and knowledge value. Harrison and Wicks (2013) highlight benefits related to products and services, organizational justice, cooperation, and perceived opportunity costs. Garriga (2014) focuses on competencies such as innovation, entrepreneurship, social integration,

and environmental responsibility. Together, these perspectives underline that value creation is multi-dimensional and context-dependent, requiring organizations to integrate diverse stakeholder interests over time.

For Thai museums, the framework proposed by Harrison and Wicks (2013) is most relevant, as its focus on fairness, cooperation, and opportunity costs directly reflects the challenges of balancing stakeholder expectations, increasing visitor engagement, and ensuring accountability. To strengthen this model, Samarasinghe (2012) suggests that environmental and cultural values should also be incorporated, reflecting the sustainability and heritage dimensions central to Thailand's museum sector.

In the case of the six science museums under the National Science Museum Organization (NSMO)—the Science Museum, Natural History Museum, Information Technology Museum, Rama IX Museum, and the two Science Squares in Bangkok and Chiang Mai—key stakeholders include students and teachers who use them as learning spaces, families and the public seeking informal education, research institutions and policy makers supporting science communication, as well as local communities, employees, and tourism operators. Engaging these groups is vital for museums to fulfill their dual role as educational institutions and tourism destinations.

Research Gap

While existing studies highlight the importance of stakeholder engagement and value creation in cultural institutions, there is a lack of research specifically examining stakeholder participation in science museums in Thailand. Furthermore, no prior studies have attempted to integrate NPS measurement with stakeholder engagement models in the museum context. This gap is significant because science museums, particularly under the National Science Museum Organization (NSMO), play a unique role in advancing public understanding of science and technology while also being positioned as key tourism assets. Identifying this gap provides the rationale for this study, which seeks to develop a stakeholder participation model through the case study of NSMO's six science museums, thereby aligning stakeholder value creation with sustainable museum tourism in Thailand.

Research Framework

A project's success depends on managing stakeholders' expectations and interests. This research framework, in conjunction with Stakeholder Engagement and Materiality Analysis (SET, 2024) and Alqaisi (2018), suggests that identifying and managing stakeholders' needs and expectations can create a favorable environment and act as a catalyst for success. NPS was used in this study to examine their interests (Baquero, 2022).

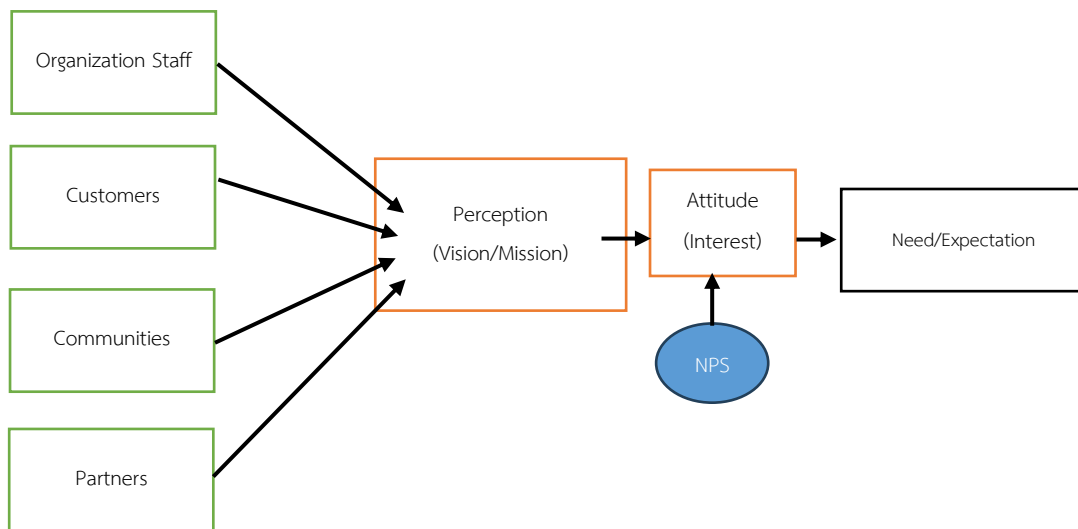


Figure 1 Research Framework

The proposed framework positions stakeholder “perception” as the foundation shaping evaluative beliefs about a museum’s vision and mission, which subsequently influence “attitudes” toward the institution (Ajzen, 1991). When perceptions are positive, stakeholders are more likely to develop favorable attitudes that reflect trust, loyalty, and willingness to engage, with the Net Promoter Score (NPS) serving as a practical indicator to measure the strength of these attitudes through the classification of promoters, passives, and detractors. These attitudes, in turn, shape stakeholders’ needs and expectations, as suggested by *Expectation-Confirmation Theory* (Thong et al., 2006) whereby Thong, Hong, and Tam (2006) argue that confirmation of expectations and perceived usefulness strengthen satisfaction, and these positive attitudes drive continuance intention. Extending their view, positive attitudes can also be seen as catalysts that raise stakeholders’ expectations for enhanced services, innovative learning opportunities, and sustained organizational performance in museum settings. In this way, the framework assumes a sequential relationship—perception influences attitude, attitude shapes need/expectation, and NPS validates attitudinal strength—thereby providing a theoretically grounded rationale for selecting variables in studying stakeholder behavior within museums.

Research Methodology

This is a case study using qualitative research based on the Interpretivist Paradigm or Naturalistic Paradigm, which emphasizes understanding phenomena from individual perspectives. This approach is grounded in the positivist paradigm, as it is based on the notion of cause and effect (Aytton and Tsindos, 2023). The methodology framework applied the theories of ‘subjectivity’,

which believe that it is subjective and multiple, constructed and interpreted by individuals based on their experiences. Together with ‘understanding’ in social phenomena from the perspective of those who are involved, which is not to predict or control it. So, this research used in-depth interviews as a form of intensive individual interview with a small number of respondents, to explore their perspectives on a particular service or issue that has been undertaken in systematic and carefully considered ways of identifying the problem, collecting, analysing, explaining, evaluating, and interpreting the data (Nassaji, 2020, Nickerson, 2024) which quantitative cannot scrutinize deep in motion.

Research Instruments

The data collection tools were semi-structured in-depth interviews designed to explore a model for developing effective museum tourism in Thailand. The study was conducted through the perspectives of stakeholders by examining their “Perception, Attitude, and Needs and Expectations”. The interview questions were carefully developed with reference to the conceptual and theoretical framework, ensuring their appropriateness for each stakeholder group and alignment with the museums’ cooperation guidelines.

In addition, the semi-structured interview was integrated with the use of the Net Promoter Score (NPS) as a common question asked across all stakeholder groups, particularly external stakeholders such as customers, partners, and community members. While the semi-structured questions captured diverse qualitative insights grounded in theory, the NPS question served as a standardized measure to assess stakeholder satisfaction and loyalty toward the organization. This methodological combination enhanced both the depth of qualitative understanding and the practical assessment of stakeholder commitment, thereby providing more comprehensive evidence for developing the proposed model.

Table 1 Research Key Points and Questions

Key Points	Open-ended questions with target audience (Key terms)			
	Organization Staff	Partners	Customer	Community
Perception	- Perceiving the Museum Vision	- Perceiving the Museum Vision	- Perceiving the Museum Vision	- Perceiving the Museum Vision
	- Perceiving and understanding the role of the museum	- Perceiving and understanding the role of the museum	- Perceiving and understanding the role of the museum	- Perceiving and understanding the role of the museum

Table 1 Research Key Points and Questions (Continued)

Key Points	Open-ended questions with target audience (Key terms)			
	Organization Staff	Partners	Customer	Community
Attitude	- Satisfaction with the Museum's Work (1-10 Score) - Satisfaction with the working environment including occupational health and safety	Satisfaction with the museum's work (1-10) Please explain the projects you have worked on with the museum.	Overall satisfaction with the museum (rating 1-10)	As a neighboring community, what are your thoughts on the museum? (rating 1-10) Perspectives on future cooperation with the museum
Need/Expectation	Needs, Expectations and Obstacles for Museums That We Want to Develop	Needs, Expectations and Obstacles for Museums That We Want to Develop	Needs, Expectations and Obstacles for Museums That We Want to Develop	Needs, Expectations and Obstacles for Museums That We Want to Develop

Key informants

This study has four groups of stakeholders in the operation: (1) the organization's staff, 44 people; (2) the customers, 22 experienced school teachers; (3) the partners, 10 organizations; and (4) the local community, 10 people. The selection of informants was conducted with the cooperation of the museum. In the case of the customer group, the study specifically selected school teachers because schools have historically been the primary target audience of the museum, whereas general tourists have not been considered the main focus of its programs and services. Moreover, teachers were chosen as informants since they possess direct and repeated experiences with the museum's educational services, which allowed them to provide more accurate and relevant insights regarding perceptions, attitudes, and expectations.:

The organization's staff was selected by the Non-Probability Sampling method by specifying >5 per cent of the total population of 812 people, along with the Quota Sampling method according to the proportion of the organization's work groups and the Convenience Sampling method for personnel working on the day and time, including employees and volunteers. There were 44 participants: 20 employees (6 directors/senior officers and 8 specialists), 16 employees of the organization, and 8 volunteers from the organization, who were selected to represent the current personnel

in proportion. Personal information of the sample group who participated in the workshop; the male: female ratio was 45.5:54.5 per cent; Age 25-35 years 40.9 per cent, <25 years 27.3 per cent, 35-45 years 22.7 per cent, and >45 years 9.1 per cent; Education Bachelor's degree 61.4 per cent, Master's degree and <Bachelor's degree 9.1 per cent each, >Master's degree 6.8 per cent; Service years 3-5 years 45.5 per cent, <3 years 40.9 per cent, and >5 years 13.6 per cent.

Customer, 22 experienced school teachers, selected from the corporate client database that had used museum services continuously for more than 3 times in the past 5 years (covering the COVID-19 pandemic), found that 30 schools contacted to request an interview and received a total of 22 responses (Table 2)

The Alliance Group or partner is a large organization that has continuously cooperated with museums, comprising 10 organizations, and continues to cooperate at present. (Table 3)

The local communities in the area are organizations or shops in the vicinity of the museum that will be directly affected by the museum's operations. The informants will be within a radius of no more than 5 kilometers from the museum. Contacting to request data collection received cooperation from a total of 10 people from 10 organizations or shops. (Table 4)

Table 2 Key Informants: Customer

No.	Key Informant	Province	Gender	Interview date
	Experienced school teacher			
1	School1	Bangkok	Female	25 June 23
2	School2	Bangkok	Male	1 July 23
3	School3	Bangkok	Male	4 July 23
4	School4	Rayong	Male	4 July 23
5	School5	Lampang	Female	4 July 23
6	School6	Saraburi	Female	4 July 23
7	School7	Pathumthani	Male	5 July 23
8	School8	Chiangmai	Male	5 July 23
9	School9	Bangkok	Male	5 July 23
10	School19	Samutprakan	Female	5 July 23
11	School11	Samutprakan	Male	5 July 23
12	School12	Chiangmai	Female	5 July 23

Table 2 Key Informants: Customer (Continued)

No.	Key Informant Experienced school teacher	Province	Gender	Interview date
13	School13	Bangkok	Female	6 July 23
14	School14	Bangkok	Female	6 July 23
15	School15	Pathumthani	Male	6 July 23
16	School16	Bangkok	Male	21 July 23
17	School17	Bangkok	Female	21 July 23
18	School18	Chiangmai	Female	22 July 23
19	School19	Chiangmai	Male	22 July 23
20	School20	Pathumthani	Female	22 July 23
21	School21	Ayudhaya	Female	28 July 23
22	School22	Phayao	Female	28 July 23

Table 3 Key Informants: Partners

No.	Key Informant from Partners	Organization Type	Position	Gender	Interview date
1	Partner1	Company	Director	Female	21 June 23
2	Partner2	state enterprise	Director	Male	23 June 23
3	Partner3	Company	Manager	Female	26 June 23
4	Partner4	University	Dean	Male	4 July 23
5	Partner5	Government agent	Manager	Female	4 August 23
6	Partner6	Company	Manager	Female	7 August 23
7	Partner7	NGO	Spacialist	Male	8 August 23
8	Partner8	Association	Vice President	Female	9August 23
9	Partner9	Company	Manager	Male	15August 23
10	Partner10	Company	Manager	Male	21August 23

Table 4 Key Informants: Local Community

No.	Key Informant from Community	Organization Type	Position	Gender	Interviewed Date
1	Community2	Department Store	Manager	Male	22 June 23
2	Community5	Hospital	Head of Nurse	Female	25 June 23
3	Community3	Nature Center	Operation	Female	26 June 23
4	Community4	University	Head of Program	Male	27 June 23
5	Community1	Local government agencies	Director	Female	28 June 23
6	Community9	Research Institute	Director	Male	28 June 23
7	Community7	University	Dean Assistant	Female	28 June 23
8	Community6	Department Store	Manager	Female	5 July 23
9	Community10	Restaurant	Owner	Female	29 July 23
10	Community8	School	Committee	Female	15 August 23

Data Collection and Analysis

Since the target groups are different, the researcher designed the data collection method into 2 methods:

1) The interview method for employees in the organization was conducted simultaneously via an online interview tool. The researcher invited the target group of informants to join the meeting together and explained the purpose, study goals, and their roles before starting the discussion, so that participants could respond more freely than in a face-to-face interview, where they might be reluctant to express their opinions. Additionally, the online format enabled respondents to express their views independently and anonymously through the system, which reduced discomfort when addressing sensitive issues. Participants were also encouraged to ask questions or seek clarification from the researcher at any point during the session.

2) Interview method for customers, partners, and communities, by calling to make an appointment in advance, informing the purpose and the questioning guidelines so that the informants have time to prepare or review the information. Then, the researcher conducted the interview via an online system, face-to-face.

Data analysis approach

Case research is an intensive study to derive detailed, contextualized inferences and to understand the dynamic processes underlying a phenomenon of interest. The study applied in-depth interviews to collect data from key informants. The analysis followed the nature of the data collected and proceeded through several steps: (1) preparing the interview transcripts and conducting multiple readings to obtain a holistic sense of the content; (2) coding the data systematically by assigning labels to meaningful units of text that represent concepts, actions, or stakeholder perspectives; (3) identifying themes by clustering codes into broader categories, capturing recurring patterns and relationships across informants; (4) summarizing the patterns of each theme and linking them to specific stakeholder groups; (5) reconciling these findings to construct an overall “structure” and to provide practical guidelines for future application; and (6) analyzing the Net Promoter Score (NPS) results by categorizing respondents into promoters, passives, and detractors, calculating the NPS score using the standard formula, and integrating these quantitative results with qualitative themes to provide a more comprehensive understanding of stakeholder loyalty and satisfaction.

Results

As specified in the research objectives, the study aims to develop a model for effective museum tourism attractions in Thailand, from the perspective of stakeholders, by surveying the Needs, Expectations, and Engagement of museum stakeholders. The results are as follows.

Perception

Study the perception of the museum to confirm that all stakeholders are aware of and understand the museum's intention in which they are involved. Through asking about the ‘vision’ and ‘mission’ that the museum has continuously presented, that is, NSM’s vision and mission are: Vision ‘To be a learning source with excellence in organizing informal learning, creating and promoting awareness of science, technology, and biodiversity’ and Mission ‘To inspire everyone to enjoy discovery, lifelong learning with the wonders of science, Inspire everyone with the best learning, research and edutainment solutions.’ The underlined words are the keywords (coding) used in the search. The results of the questionnaire of all 4 groups found that:

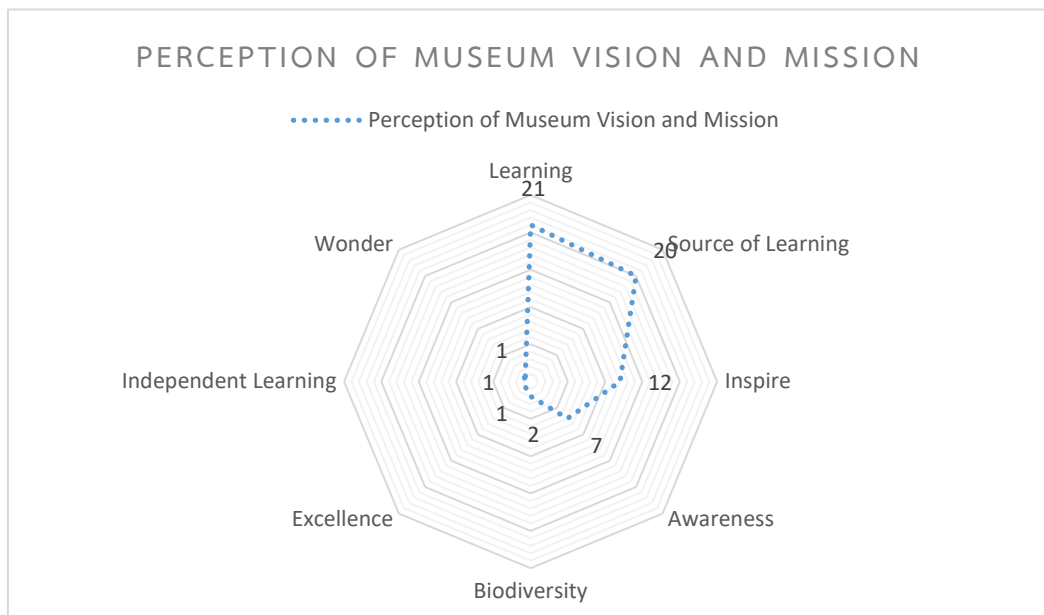


Figure 2 Perception of Museum Vision and Mission

According to the study, it was found that most informants answered the questions based on their understanding or immediate feelings. In conclusion, the role of NSM’s museums that are shown can be perceived as an agency related to ‘learning’, which is most commonly found, followed by being a ‘learning resource or learning area’, both in the classroom or outside the classroom, and can also help ‘create scientific inspiration’ and increase ‘awareness’ to instill scientific consciousness, respectively.

Attitude

This section illustrates the results from the staff of external agencies and organizations in terms of satisfaction, with a satisfaction level ranging from 1 (least) to 10 (most), as measured by the organization's loyalty score (NPS). The survey was conducted by asking only those who had experience visiting the museum. The results of the study are as follows:

Table 6 Satisfaction Level from external agencies

No.	Customers	Level of Satisfaction	Partners	Level of Satisfaction	Community	Level of Satisfaction
1	School2	9	Partner10	8.5	Community1	9
2	School9	8	Partner7	9	Community2	9
3	School1	7	Partner6	10	Community3	8
4	School3	9	Partner8	10	Community4	9
5	School12	10	Partner2	9	Community5	9
6	School8	9	Partner5	9	Community6	9
7	School7	10	Partner3	10	Community7	9
8	School11	10	Partner1	8	Community8	9
9	School10	10	Partner4	8	Community9	9
10	School4	8	Partner9	10	Community10	8
11	School5	10				
12	School6	10				
13	School13	7				
14	School14	9				
15	School15	9				
16	School16	10				
17	School17	8				
18	School18	9				
19	School19	8				
20	School20	10				
21	School21	9				
22	School22	10				
Average		9.05		9.15		8.8
NPS		Promoters		Promoters		Promoters
		72.73%		70.0%		88%



Figure 3 Satisfaction from the organization staff

For museum staff, when asked about their level of satisfaction with the organization using the NPS, the highest score was 4.5 and tended to decrease (as shown in the picture). The explanation of the study results revealed that 75 similar issues need improvement. The results were summarized into 10 opinions reflecting the reasons for giving such a level of satisfaction, as follows:

(1) NST has good policies and work systems, and good work results. However, there are still problems that need continuous development. The work processes within the organization must be improved to create understanding and a common vision (27 votes).

(2) The work processes are very complicated, slow, inefficient, and require cooperation from too many groups of people from different sectors. Contacting many people, using the same people who have succeeded repeatedly (25 votes).

(3) Lack of clarity and inequality among executives, a crony-like work system, not listening to subordinates, judging us as wrong by focusing on our own ideas (24 votes).

(4) Abnormal organizational structure, Unbalanced and uneven workload affecting work performance

(5) No Work Life Balance, having to take work home to continue, resulting in less time for oneself and family (22 votes)

(6) Delays in document processes, duplication of documents, and some steps and processes should be cut out or changed for faster work (9 votes)

(7) Too much workload, unable to finish on time, or if finished, the quality is not as good as it should be

(8) Feeling of inappropriateness in many aspects related to work, lack of clarity (7 votes)

(9) Efficient management methods have a high impact on the organization, a lack of clarity in operations, and the need for change (6 votes)

(10) Lack of facilities for people to work in many ways, access to and development of basic public utilities, and various welfare are still not appropriate (4 votes).

Need / Expectation

This study used open-ended questions for informants to express their opinions about what is needed and expected to meet their needs. The results of the study were obtained as context and coded to organize the responses as follows:

1. Customers Need and Expectation

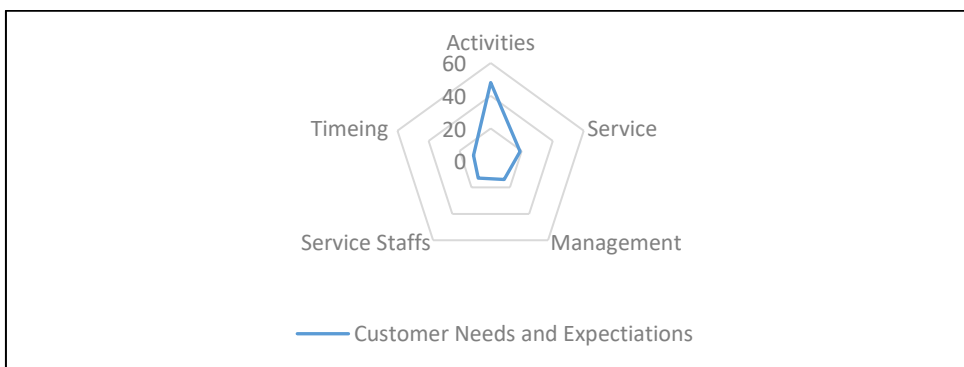


Figure 4 Customer Needs and Expectations

The results of the study of opinions on the needs and expectations of external service recipients found that most of them gave importance to the development of ‘activities’, followed by ‘service’, ‘management’, ‘extended opening hours’, ‘staff’ and ‘time’, respectively.

2. Community Needs and Expectations

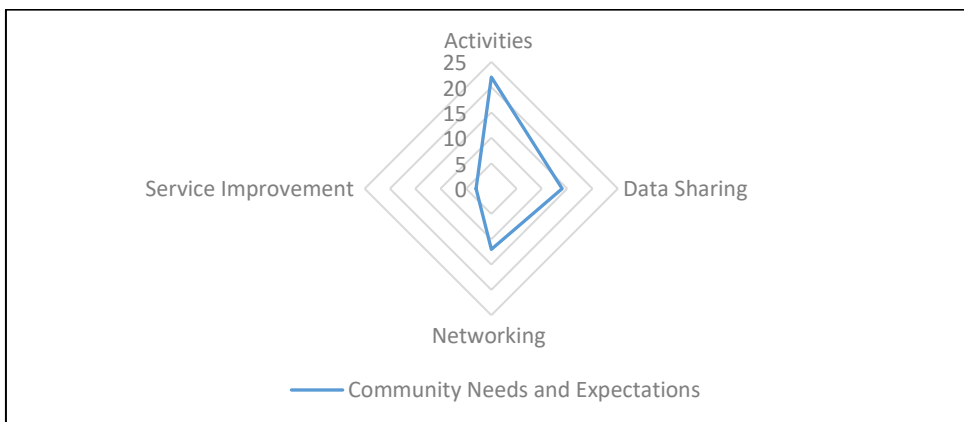


Figure 5 Community Needs and Expectations

Results of the Needs and Expectations from the community/local agencies found that most people gave importance to the development of ‘activities’, followed by ‘information sharing’, ‘network building’, and ‘service development’, respectively.

3. Partner Needs and Expectations

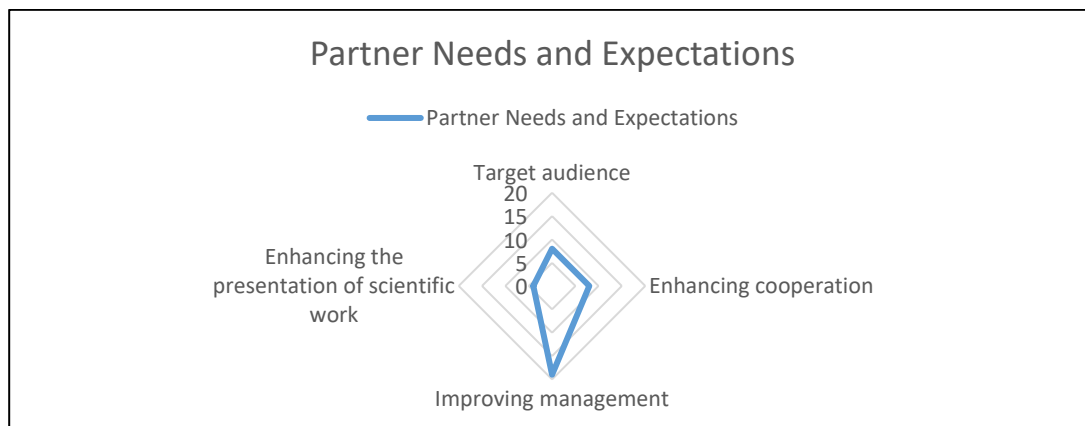


Figure 6 Partner Needs and Expectations

The result illustrates the key areas valued by partners in a collaborative setting. Among the four categories, "Improving management" is rated the highest, indicating its primary importance. "Enhancing the presentation of scientific work" and "Target audience" follow, showing moderate emphasis. "Enhancing cooperation" receives the lowest score, suggesting it is a lesser priority. This visual aids in understanding how different aspects are prioritized to meet partner expectations effectively.

4. Staff Needs and Expectations

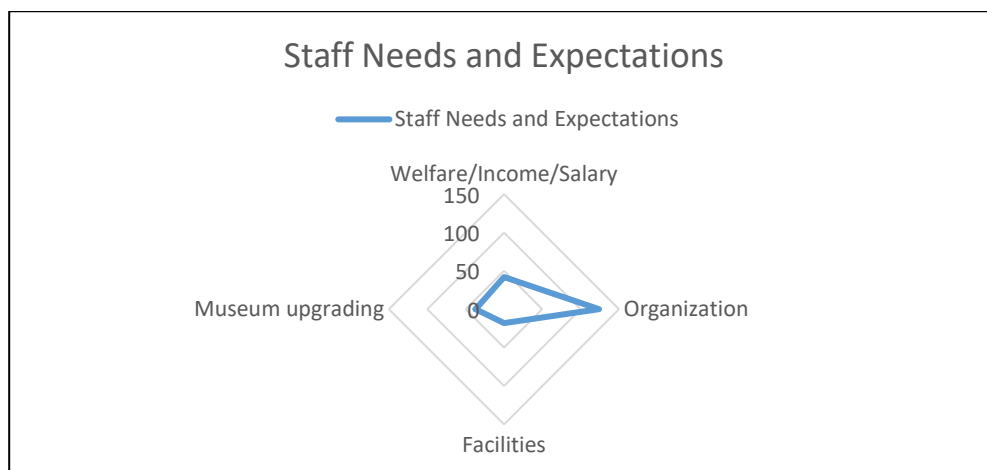


Figure 7 Staffs Needs and Expectation

The result presents four key areas that staff consider important. The highest emphasis is on Organization, indicating a strong desire for structural or managerial improvement. Welfare/Income/Salary also ranks high, reflecting expectations for better financial support. Facilities and Museum upgrading receive lower scores, suggesting these are less immediate concerns. Overall, the chart highlights staff priorities in creating a more supportive and efficient work environment.

Summary of The Participation Model

All four stakeholder groups perceived the role of the museums they collaborated with as agencies that ‘promote learning, are learning resources, are places that inspire science, create awareness about science, and can present biodiversity.’ The results of the perception, when considered together with the vision and mission, showed that they were well-related, indicating that the museum’s role, as it has always been performed, is clear and allows stakeholders to understand and provide support in a consistent and mutually beneficial manner.

In terms of stakeholder attitudes, the study results were divided into 2 parts. It was found that stakeholders from all three external agencies had positive attitudes towards working with the museum, at the level of ‘Willing to work together’, and supported and informed others about this positive relationship. For the organization’s staff, it was found that their attitudes were inclined towards being less satisfied with their work, and they wanted the organization to improve communication to work in the same direction. Unclear work and management systems were the issues that received the most support. In terms of Need/Expectation, the results from the 4 groups found that stakeholders wanted the museum to take action in the following areas:

<p>Customer</p> <ul style="list-style-type: none"> Demanding for Activities Demanding Services Improvement Demanding Attraction Management Demanding for Employees Demanding change visiting time focus 	<p style="text-align: right;">Community</p> <ul style="list-style-type: none"> Willing to Support all Activities Demanding Information Sharing Demanding Networking Future Space and Service Support
<p>Partner</p> <ul style="list-style-type: none"> Enhance management Enhance cooperation Focus on target groups Enhance the presentation of scientific works 	<p style="text-align: right;">Employees</p> <ul style="list-style-type: none"> Elevate the organization Develop welfare and salary systems Develop facilities Elevate the museum

Figure 8 Museum Stakeholder Participation “Need/Expectation”

Guidelines for developing into a tourist attraction

The role of the museum did not adequately indicate its dimension in promoting tourism, both domestically and internationally. Therefore, not all stakeholders have reflected their cooperation in this direction, but will instead focus more on being a learning resource for youth or people in the country.

However, the study results indicate that stakeholders are highly willing to support the museum's work. If the organization is clear on its work process and management with a moral system, it will lead to significantly improved operations.

The Thailand Museum Tourism Participatory Model Suggestion

The proposed Museum Stakeholder Participation Model for Tourism in Thailand directly addresses the issues highlighted in the study, which emphasized that although Thailand has more than 1,500 museums, including six under the National Science Museum Organization (NSMO), many remain unable to meet international standards or sustain active visitor engagement. The research findings showed that current practices rely heavily on schools and teachers as the primary customer group, while other important factors, such as families, general tourists, tourism agencies, digital platforms, and special groups (including the elderly and persons with disabilities), have not been systematically integrated. To address this managerial gap, the model structures stakeholder participation across an eight-stage value chain—from *Insight & Data* through *Curation & Design*, *Experience Enablement*, *Marketing & Distribution*, *On-site Operations*, *Community & Partnerships*, *Post-Visit & Loyalty*, to *Evaluation & Investment*. Each stakeholder group is mapped to specific stages, clarifying not only their roles but also the measurable indicators. The Net Promoter Score (NPS) serves as a statistical tool to assess satisfaction and loyalty. By linking the qualitative dimensions of perception, attitude, and expectation with quantitative NPS results, the model advances beyond descriptive needs into a coherent framework that museums can adopt to enhance learning value, visitor experience, and sustainable tourism development. Moreover, it broadens the scope of stakeholder inclusion and provides a replicable model that contributes to both academic discourse on stakeholder theory and practical policy discussions on strengthening museum-based tourism in Thailand.

Table 7 The Museum Stakeholder Participation Model for Tourism in Thailand

Stakeholder Group	Role in Value Chain	Value Chain Stage(s)	Key Indicators (incl. NPS)
School Teachers & Students	Primary learning customers; co-designers of educational kits and programs	1. Insight & Data 2. Curation & Program Design 7. Post-Visit & Loyalty	NPS (teachers) Repeat visits Curriculum integration rate Learning outcome scores
Families & General Visitors	Broaden audience base; promote informal learning & leisure experiences	2. Curation & Program Design 3. Experience Enablement 5. On-site Operations	NPS (visitors) Visitor dwell time Weekend/holiday attendance Membership subscriptions
Partners (Universities, NGOs, Private Sector)	Provide resources, expertise, and innovation; co-create exhibitions and CSR programs	4. Marketing & Distribution 6. Community & Partnerships 8. Evaluation & Investment	NPS (partners) Joint projects launched Funding/CSR contributions Research collaborations
Local Communities	Custodians of local culture; enrich tourism experiences; benefit from community-based tourism	6. Community & Partnerships 5. On-site Operations (festivals, local markets)	NPS (community) Income from local products Community event participation Employment opportunities
Employees & Volunteers	Frontline service delivery; provide innovation ideas and operational excellence	3. Experience Enablement 5. On-site Operations 8. Evaluation & Investment	NPS (staff) Job satisfaction index Retention rate Service quality ratings
Tourism Agencies (TAT, provincial DMOs)	Promote museums as tourism destinations; link to national tourism policy	4. Marketing & Distribution 7. Post-Visit & Loyalty	NPS (agencies) Inclusion in tourism routes Joint marketing campaigns Tourist arrivals via packages
Digital/Media/OTAs	Increase visibility, ticketing access, and digital engagement	4. Marketing & Distribution 7. Post-Visit & Loyalty	Online NPS App downloads Ticket sales via OTA Social media engagement
Special Groups (Elderly, Persons with Disabilities)	Ensure accessibility and inclusivity in museum experiences	3. Experience Enablement 5. On-site Operations	Accessibility index (UD/UDL) NPS (special groups) Feedback on facilities Participation in inclusive programs

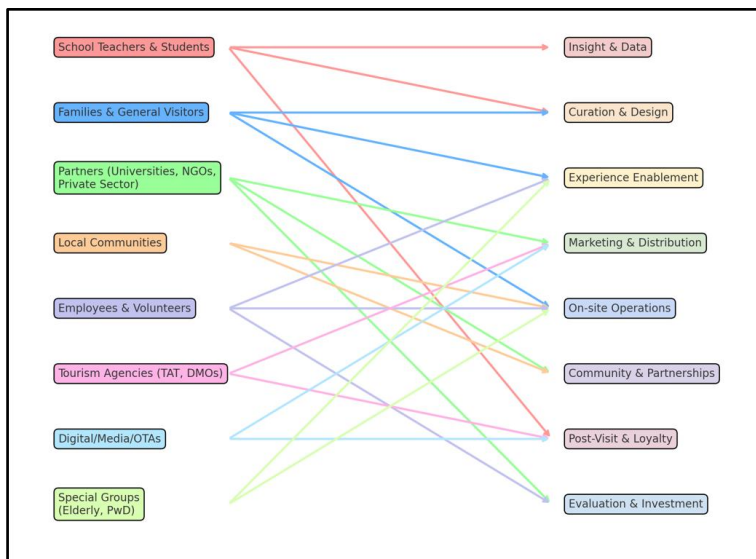


Figure 9 Museum Stakeholder Participation Model – Value Chain Mapping

The Museum Stakeholder Participation Model – Value Chain Mapping shows how eight stakeholder groups contribute across eight stages of the museum tourism value chain. For instance, teachers and students support *Insight*, *Curation*, and *Loyalty* as key learning customers, while families and visitors shape *Experience* and *Operations*. Partners, communities, and employees provide resources, cultural value, and service quality, whereas tourism agencies, digital platforms, and OTAs drive *Marketing* and *Post-Visit engagement*. Finally, special groups ensure inclusivity in *Experience* and *Operations*. This model highlights a structured framework for integrating stakeholders into museum management, addressing existing gaps and promoting sustainable tourism development.

Discussion

The development of museums in Thailand must increasingly emphasize stakeholder cooperation, as such collaboration is a key determinant of whether museum initiatives can achieve broad social and cultural impact (Bender, 2020). The findings of this study confirm that the examined museums under the National Science Museum Organization (NSMO) have made strong progress in fulfilling their educational and cultural missions. However, to further enhance their role in Thailand’s tourism landscape, a systematic participation framework is required. The proposed Museum Stakeholder Participation Model – Value Chain Mapping directly responds to this need by clarifying the involvement of diverse groups—teachers, families, partners, communities, employees, tourism agencies, digital platforms, and special groups—across the value chain of *insight*, *design*,

experience, marketing, operations, partnerships, loyalty, and evaluation. This structured integration not only strengthens the communication of organizational vision and mission but also aligns with the strategic goals of promoting scientific literacy, lifelong learning, and equity in education (ShawHong, 2020; The Princess Maha Chakri Sirindhorn Anthropology Centre, 2022; Punpeng, 2021).

A critical theme emerging from the study is the role of employees in supporting mission-driven activities. Consistent with Mascareño et al. (2020) and Hui et al. (2020), employee perceptions and attitudes toward organizational goals have a direct influence on their engagement in delivering high-quality programs. While external stakeholders demonstrated strong loyalty and satisfaction, as reflected in the Net Promoter Score (NPS), internal stakeholders were less satisfied, identifying gaps in communication and unclear operational frameworks. This resonates with Alqaisi's (2018) findings that poor communication and expectation management can negatively impact project outcomes. By positioning employees explicitly within the model as central actors in *experience enablement, operations, and evaluation*, museums can bridge these gaps and ensure organizational goals are consistently reinforced (Abdullah et al., 2020).

In conclusion, the study emphasizes the importance of aligning an organization's vision with the perceptions of both internal and external stakeholders. The proposed model provides a practical and theoretically grounded framework for closing managerial gaps in Thai museum tourism. By systematically embedding stakeholders into every stage of the value chain, museums can elevate visitor experiences, ensure accountability, and establish museums not only as cultural repositories but also as dynamic drivers of sustainable tourism and lifelong learning.

Contribution

This study makes a distinctive theoretical contribution by positioning museums as ecosystems of value co-creation, thereby extending Stakeholder Theory (Harrison & Wicks, 2013) into the field of museum tourism. It demonstrates how stakeholder participation can be systematically mapped across an eight-stage value chain, filling a managerial and theoretical gap in Thai museum studies. The research also advances theory by integrating the Net Promoter Score (NPS)—originally a tool for measuring customer loyalty—into stakeholder engagement research, thereby creating a hybrid framework that links qualitative constructs, such as perception, attitude, and expectation, with quantitative measures of loyalty. Furthermore, the findings bridge stakeholder theory with Organizational Communication Theory, demonstrating that gaps in vision and mission alignment between employees and external stakeholders significantly impact institutional performance

(Alqaisi, 2018). Finally, the proposed Museum Stakeholder Participation Model – Value Chain Mapping is not only context-specific but also transferable, offering a conceptual framework that can be adapted to other types of museums, cultural institutions, and learning-based organizations. These contributions enrich theoretical discussions of stakeholder value creation (Vilanova, Lozano & Arenas, 2009; Garriga, 2014) and provide a foundation for future research that explores how cultural institutions can align organizational missions with stakeholder participation to achieve sustainable development outcomes.

References

- Abdullah, I. M., Huang, D., Sarfraz, M., Ivascu, L., & Riaz, A. (2020). Effects of internal service quality on nurses' job satisfaction, commitment and performance: Mediating role of employee well-being. *Nursing Open*, 8(2), 607–619. <https://doi.org/10.1002/nop2.665>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Alqaisi, F., I. (2018). *The effects of stakeholder's engagement and communication management on projects success*. MATEC Web of Conferences, 162, 02037. <https://doi.org/10.1051/mateconf/201816202037>
- Ayton, D., Tsindos, T., & Berkovic, Danielle. (2023). Chapter 2: Foundations of qualitative research – paradigms, philosophical underpinnings. *Qualitative Research – a practical guide for health and social care researchers and practitioners*. https://oercollective.caul.edu.au/qualitative-research/chapter/_unknown_-2/
- Baquero, A. (2022). Net Promoter Score (NPS) and Customer Satisfaction: Relationship and Efficient Management. *Sustainability*, 14(4), 2011. <https://doi.org/10.3390/su14042011>
- Bender, P. (2020). *Effective Stakeholder Management*. McGraw-Hill.
- Boukas, N., & Ioannou, M. (2020). Co-creating visitor experiences in cultural heritage museums: the avenue towards sustainable tourism development. *International Journal of Tourism Policy*, 10(2), 101-122. <https://doi.org/10.1504/IJTP.2020.110862>
- Chinmaneevong, C. (2010). *Museums Lag Global Standards*. Bangkok Post, <https://www.bangkokpost.com/life/arts-and-entertainment/30495>
- Garriga, E. (2014). Beyond stakeholder utility function: Stakeholder capability in the value creation process. *Journal of Business Ethics*, 120(4), 489–507. <https://doi.org/10.1007/s10551-013-2001-y>

- Harrison, J. S., & Wicks, A. C. (2013). Stakeholder theory, value, and firm performance. *Business Ethics Quarterly*, 23(1), 97–124. <https://doi.org/10.5840/beq20132314>
- Hui, L., Qun, W., Nazzir, S., Mengyu, Z., Asadullah, M.A., & Khadim, S. (2021). Organizational identification perceptions and millennials ‘creativity: testing the mediating role of work engagement and the moderating role of work values. *European Journal of Innovation Management*, 24(5), 1653-1678. <https://doi.org/10.1108/EJIM-04-2020-0165>
- Jeong, Y. & Kim, S. (2020). A study of event quality, destination image, perceived value, tourist satisfaction, and destination loyalty among sport tourists. *Asia Pacific Journal of Marketing and Logistics*, 32(4), 940-960. <https://doi.org/10.1108/APJML-02-2019-0101>
- Kujala, J., Lehtimäki, H., & Freeman, R. E. (2019). A stakeholder approach to value creation and leadership. In A. Kangas (Ed.), *Leading change in a complex world: Transdisciplinary perspectives*. 123–144. Tampere University Press.
- Kupec, V., Lukáč, M., Štarchoň, P. & Bartáková, G.P. (2020). Audit of Museum Marketing Communication in the Modern Management Context. *International Journal of Financial Studies*, 8(39). <https://doi.org/10.3390/ijfs8030039>
- Martínez-Peláez, R. Ochoa-Brust, A., Rivera, S., Félix, F. G., Ostos, R., Brito, H., Félix, R. A., & Mena, .L. J. (2023). Role of Digital Transformation for Achieving Sustainability: Mediated Role of Stakeholders, Key Capabilities, and Technology. *Sustainability*, 15(14), 11221; <https://doi.org/10.3390/su151411221>
- Mascareño, J., Rietzschel, E., & Wisse, B. (2019). Envisioning innovation: Does visionary leadership engender team innovative performance through goal alignment?, *Creativity and Innovation Management*, 29(1), 33-48. <https://doi.org/10.1111/caim.12341>
- Mavragani, E. (2018). Museum Services in the Era of Tourism. In: Bast, G., Carayannis, E., Campbell, D. (eds) *The Future of Museums. Arts, Research, Innovation and Society*. Springer, 37-47. https://doi.org/10.1007/978-3-319-93955-1_4
- Nassaji, H.. (2020). Good qualitative research. *Language Teaching Research*, 24(4) , 427-431. <https://doi.org/10.1177/1362168820941288>
- Nickerson, C. (2024). *Interpretivism Paradigm and Research Philosophy*. <https://www.simplypsychology.org/interpretivism-paradigm.html>
- Panthong, P. (2022). *Future of Thai Museums*. <https://onceinlife.co/museum-focus>
- Punpeng, G. (2021). Thai Creative Industries In Flux. *The ASEAN October-November 2021*, 38-40.

- Royal Thai Embassy, (2019). *Thailand building the largest museum in Southeast Asia*.
<https://thaiembdc.org/2019/03/25/thailand-building-the-largest-museum-in-southeast-asia/>
- Samarasinghe, R. (2012). The influence of cultural values and environmental attitudes on green consumer behaviour. *The Journal of Behavioral Science*, 7(1), 83–98. <https://doi.org/10.14456/ijbs.2012.6>
- SET. (2024). *Stakeholder Engagement and Materiality Analysis*. <https://setsustainability.com/page/stakeholder-engagement>
- Shahzad, M., Qu, Y., Ur Rehman, S., Ding, X., & Razzaq, A. (2023). Impact of stakeholders' pressure on green management practices of manufacturing organizations under the mediation of organizational motives. *Journal of Environmental Planning and Management*, 66(10), 2171–2194. <https://doi.org/10.1080/09640568.2022.2062567>
- ShawHong, S. (2020). Museums and Tourism: Reengineering the Role of Museums in Malaysia's Cultural Heritage Tourism. *Business Economic Communication and Social Sciences (BECOSS) Journal*, 2(1), 145-157. <https://doi.org/10.21512/becossjournal.v2i1.6151>
- Simpson, M. (2009). Museums and restorative justice: heritage, repatriation and cultural education. *Museum International*, 61(1–2), 121–129. <https://doi.org/10.1111/j.1468-0033.2009.01669.x>
- Soliman, M., Al-Shanfari, L.S., & Gulvady, S. (2023). Sensory marketing and accessible tourism: An AI-generated article. *Robonomics: The Journal of the Automated Economy*, 4(53), 1-25. <https://journal.robonomics.science/index.php/rj/article/view/53>
- Srisuk, N., Chanthasaro, P.A.S. & Rujjanapan, B. (2020). *The Community Museum Prototyping in Electronic System*. (Research report, Mahachulalongkornrajavidyalaya University) , <http://mcur.mcu.ac.th:8080/jspui/handle/123456789/653>
- Stone, J.M., Migacz, I.S & Wolf, E. (2021). Learning through culinary tourism and developing a culinary tourism education strategy. *Journal of Tourism and Cultural Change*, 20(1-2), 177-195. <https://doi.org/10.1080/14766825.2021.1876078>
- The Princess Maha Chakri Sirindhorn Anthropology Centre. (2024). *Growth of Museums in Thailand*. <https://db.sac.or.th/museum/>
- Thong, J. Y. L., Hong, S. J., & Tam, K. Y. (2006). The effects of post-adoption beliefs on the expectation-confirmation model for information technology continuance. *International Journal of Human-Computer Studies*, 64(9), 799–810. <https://doi.org/10.1016/j.ijhcs.2006.05.001>

Vilanova, M., Lozano, J. M., & Arenas, D. (2009). Exploring the nature of the relationship between CSR and competitiveness. *Journal of Business Ethics*, 87(Supplement 1), 57–69.

<https://doi.org/10.1007/s10551-008-9812-2>

Zbucea, A., & Bira, M. (2020). Does Stakeholder Management Contribute to a Museum's Sustainable Development? *Management Dynamic in the Knowledge Economy*, 8(1), 95-107.

<https://www.managementdynamics.ro/index.php/journal/article/view/339>