

Transportation Barriers and Language Constraints: A Qualitative Study of International Tourist Challenges in Accessing Iconic Destinations in Hsinchu, Taiwan

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Abstract

Hsinchu, known as the Silicon Valley of Taiwan and the 'Windy City', presents a paradox: a globally significant technology hub that remains largely undiscovered by international tourists compared to Taipei and Kaohsiung. This study examines two dominant barriers that impede international tourists from independently exploring Hsinchu's iconic attractions—namely, the complexity of public transportation systems and the pervasive language constraints arising from Chinese-language dominance in public signage, ticketing systems, and service encounters. Employing an interpretive qualitative methodology, this research conducted in-depth semi-structured interviews with 24 international tourists from 14 countries who visited Hsinchu between August and November 2024. Data were analyzed using Braun and Clarke's (2006) six-phase reflexive thematic analysis, yielding four overarching themes: (1) navigational disorientation in multi-modal transit systems; (2) communicative exclusion at transport interfaces; (3) cumulative anxiety and destination avoidance; and (4) adaptive coping strategies and technological mediation. The findings reveal that language barriers and transportation complexity function not as isolated inconveniences but as mutually reinforcing constraints that produce compounded tourist anxiety and significantly reduce destination reach, particularly for non-Chinese-speaking independent travelers. Theoretical and practical implications are discussed, with particular attention to destination marketing, smart tourism infrastructure, and multilingual accessibility frameworks. The study contributes to growing scholarship on under-researched secondary cities in East Asia and advances understanding of inclusive tourism development in language-complex destinations.

Keywords: Public transportation; Language barrier; International tourists; Independent traveler; Tourism signage

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INTRODUCTION

The relationship between destination accessibility and tourist behavior has occupied tourism scholars for several decades, with infrastructure quality, ease of navigation, and communicative accessibility consistently identified as key determinants of tourist experience quality and destination competitiveness (Peng et al., 2022; Khadaroo & Seetanah, 2007). However, the bulk of accessibility research in East Asian tourism has focused on mega-cities—Tokyo, Seoul, Singapore, Bangkok, Taipei with considerably less attention directed toward secondary cities that form an increasingly important part of regional tourism circuits (Liu et al., 2021; Ghimire, 2013). The result is a significant knowledge

gap concerning the particular challenges that independent international tourists encounter when navigating second-tier destinations where infrastructure, signage, and service language environments are calibrated primarily for domestic visitors.

Hsinchu City, located approximately 70 kilometers south-west of Taipei on Taiwan's north-western coast, exemplifies this secondary-city paradox. Housing the Hsinchu Science Park one of the most productive technology clusters in the world, home to over 500 companies including TSMC and MediaTek Hsinchu is globally significant in technological terms yet receives comparatively modest international tourist arrivals relative to its proximity to Taipei and the quality of its cultural heritage assets ([Taiwan Tourism Bureau, 2023](#)). The city's iconic attractions the Chenghuang Temple, Hsinchu City God Temple Night Market, the Glass Craft Museum, Eighteen Peaks Mountain, Nanliao Fishing Harbour, and the Wind Lion Monument—represent a rich and largely untapped heritage and cultural tourism product that aligns closely with the growing demand for authentic, off-the-beaten-path experiences among independent international travelers ([Timothy & Nyaupane, 2009](#); [Mkono & Tribe, 2017](#)).

Despite this potential, anecdotal evidence and preliminary observation strongly suggest that international tourists encounter disproportionate difficulties in accessing Hsinchu's iconic sites through public transportation, and in negotiating a destination environment in which English-language information, signage, and service are inconsistently provided. Bus route information in Hsinchu, while comprehensive for local residents familiar with Mandarin Chinese, presents formidable navigational challenges for visitors lacking Chinese-language competence. Taxi services are limited relative to app-based ride-hailing in Taipei, and the city's bicycle-sharing infrastructure, while growing, lacks English-language operational guidance at many stations ([Hsinchu City Government, 2023](#)).

The research gap addressed by this study is twofold. First, while transportation barriers ([Oloruntobi et al., 2023](#)) and language barriers ([Pearce & Schänzel, 2013](#)) have each been theorized in isolation, limited empirical attention has been paid to how these barriers interact synergistically to produce compounded effects on tourist experience, particularly in secondary cities of East Asia. Second, the specific context of Hsinchu as a globally significant technology hub with underdeveloped tourist infrastructure remains academically unexplored, representing a theoretically interesting case for understanding the 'infrastructure-heritage paradox' ([Law et al., 2016](#)).

These conditions have both individual and systemic consequences. At the individual level, tourists who encounter persistent language barriers and navigation difficulties in public transportation are documented to experience higher anxiety, reduced satisfaction, and lower likelihood of revisitation or positive word-of-mouth recommendation ([Pearce & Schänzel, 2013](#); [Reisinger & Mavondo, 2005](#); [Arici et al., 2021](#)). At the systemic level, such barriers represent a form of inadvertent tourist exclusion a failure of tourism infrastructure to function as an inclusive, multilingual public good ([Goffman, 1959](#); [Urry, 2002](#); [Hall, 2014](#)) which undermines Taiwan's broader strategic aspirations to diversify its tourism market beyond the traditional mainland Chinese visitor segment ([Tourism Bureau, MOTC Taiwan, 2023](#)).

This study addresses this gap through a focused qualitative investigation of international tourists' lived experiences of transportation and language barriers in Hsinchu. The research is guided by three interconnected questions: (1) How do international tourists experience and interpret public transportation complexity in Hsinchu? (2) In what ways do language constraints at tourist-service interfaces shape tourists' destination engagement and behavior? (3) What adaptive strategies do tourists employ in response to these barriers, and what are the implications for destination management?

The remainder of this paper proceeds as follows. Section 2 develops the conceptual and theoretical framework. Section 3 details the qualitative research methodology. Section 4 presents the thematic findings. Section 5 discusses theoretical and practical implications. Section 6 concludes with limitations and directions for future research.

Transportation Accessibility in Tourism: Conceptual Foundations

Transportation is not merely a logistics function within the tourism system; it is constitutive of the tourism experience itself ([Gutiérrez & Miravet, 2016](#)). [Leiper's \(1979\)](#) foundational tourism system model identified transportation routes as one of three essential structural components of tourism alongside generating regions and destination regions, framing mobility as integral rather than ancillary to the tourism phenomenon. More recently, [Peng et al. \(2022\)](#) argued that the quality of last-mile connectivity the final segment of a journey from a transit hub to a tourist attraction represents the most critical determinant of independent travelers' destination satisfaction, particularly in cities where ride-hailing services are limited or linguistically inaccessible.

Scholars have consistently demonstrated that tourists' mode-choice decisions for within-destination travel are shaped by a complex interplay of structural factors (service frequency, route coverage, accessibility of transit hubs), informational factors (clarity of signage, availability of multilingual information), and experiential factors (prior knowledge of public transit systems, comfort with navigational uncertainty) ([Downward et al., 2009](#); [Ghanem & Shaaban, 2022](#); [Olorunjobi et al., 2023](#)). [Romão and Bi \(2021\)](#) found, in a study of urban tourism in a European context, that tourists who used collective transport modes reported significantly higher satisfaction with destination exploration than those who relied exclusively on private transport, but only when information systems were linguistically accessible. These findings highlight that the potential of public transportation to enhance tourist experience is contingent on information accessibility a contingency that is particularly salient in contexts like Hsinchu where Mandarin Chinese is the default operational language.

The concept of 'tourist-friendly public transportation' has been operationalized in terms of several key dimensions: bilingual or multilingual signage, tourist-specific travel cards and fare systems, real-time information displays in multiple languages, and the availability of tourist shuttle services ([Ram et al., 2019](#); [Taiwan Tourism Bureau, 2023](#)). [Zhang et al. \(2022\)](#) further identify social communication quality the degree to which transport staff and fellow passengers can facilitate navigation assistance for foreign tourists as a critical yet underexplored dimension of transportation experience quality. Where such social communication infrastructure is absent or limited, tourists are required to develop self-reliant coping strategies that often constrain their ability to explore beyond immediately accessible attractions.

Language Barriers and Communication in Tourism Contexts

Language occupies a central, multifaceted role in the production and consumption of tourism experiences. At the most basic functional level, language enables tourists to obtain travel information, navigate transport systems, order food, and request assistance. But language in tourism also operates symbolically: the linguistic landscape of a destination the visual presence and distribution of multiple languages on public signage, commercial displays, and institutional communications communicates messages about which visitors are expected, welcomed, and accommodated ([Backhaus, 2007](#); [Thurlow & Jaworski, 2011](#); [Amenador & Wang, 2022](#)).

[House \(2003\)](#) theorised language barriers in international tourism as a specific form of 'communicative failure' arising from asymmetric linguistic competence between tourists and host communities. This asymmetry becomes particularly consequential in-service encounters situations where tourists must obtain assistance from service providers in contexts characterized by limited shared linguistic resources. [Pearce and Schänzel \(2013\)](#) demonstrated, in their study of tourist satisfaction, that communicative difficulties with service staff significantly diminished overall destination satisfaction and were frequently cited in tourist narratives as sources of anxiety and frustration.

In the East Asian tourism context, the question of English-language availability in tourist-service encounters has received increasing scholarly attention, though predominantly with regard to major urban destinations. [Ting et al. \(2022\)](#) found that Chinese outbound tourists preferred destinations offering Chinese-language services and information, while non-Chinese-speaking tourists in Chinese-majority destination environments experienced systematic communicative exclusion that shaped

destination image perception negatively. These findings are consistent with [Liu's \(2021\)](#) analysis of service encounter quality in Taiwan's hospitality sector, which identified language barrier as the most frequently cited impediment to visitor satisfaction among non-Chinese-speaking tourists.

The linguistic landscape (LL) literature provides valuable theoretical tools for understanding language barriers in tourism. [Landry and Bourhis \(1997\)](#) originally proposed that the linguistic landscape the language of public signs, billboards, shop fronts, and official notices serves both informational and symbolic functions, communicating not only practical information but also the relative status and visibility of linguistic communities. In tourism contexts, researchers have documented how an LL dominated by a single language that is not accessible to visitors produces a form of navigational anxiety that compounds other destination challenges ([Amenador & Wang, 2022](#); [Pan, 2015](#)). For Hsinchu specifically, the city's LL is overwhelmingly Chinese-dominant, reflecting its historical development as an administrative and commercial center serving primarily Chinese-speaking residents, with English language signage concentrated almost exclusively in the Science Park district and at major transport hubs.

Tourist Anxiety, Avoidance, and the Compound Effect of Multiple Barriers

Tourist anxiety defined by [Reisinger and Mavondo \(2005\)](#) as a state of apprehension arising from perceived uncertainties, risks, and unfamiliarity in the travel environment has been studied primarily in relation to safety concerns, cultural distance, and novelty seeking. Less attention has been directed toward the anxiety-producing effects of accumulated navigational and communicative barriers in destination environments. Yet a growing body of evidence suggests that when tourists encounter multiple interacting barriers linguistic, navigational, technological the cumulative effect on anxiety, behavioral adaptation, and destination avoidance is greater than the sum of individual barriers ([Arici et al., 2021](#); [Kim et al., 2022](#)).

This 'compound barrier effect' is theoretically grounded in stress and coping theory ([Lazarus & Folkman, 1984](#)), which frames how individuals cognitively appraise environmental demands and mobilize coping resources. In tourism, when destinations present barriers that exceed tourists' perceived coping capacity including their linguistic competence, digital literacy, and prior knowledge of local transport systems tourists engage in behavioral avoidance: reducing the scope of their destination exploration, confining themselves to internationally oriented tourist enclaves, or abandoning independent travel plans in favour of guided tours ([Jiang & Tribe, 2021](#); [Mkono & Tribe, 2017](#)).

The role of digital technology particularly smartphone navigation applications, translation tools, and social media as a mediating resource that can reduce the compound burden of navigational and language barriers has received increasing attention in recent years ([Tussyadiah & Zach, 2017](#); [Wang et al., 2014](#)). However, researchers caution that technological solutions are not equally accessible to all tourist segments and that the effectiveness of digital mediation varies considerably with the quality of digital infrastructure, the availability of robust maps and transit data in applications like Google Maps or Apple Maps, and tourists' digital literacy ([So & Jia, 2023](#)). In Hsinchu, as this study will demonstrate, the coverage of English-language digital transit information presents specific gaps that reduce the effectiveness of technological mediation.

Secondary Cities and the Tourism Infrastructure Gap

The concept of tourism 'gateway cities' and secondary cities has attracted growing scholarly interest as researchers document the uneven geographical distribution of tourism development and infrastructure investment within national tourism systems ([Ghimire, 2013](#); [Liu et al., 2021](#)). In Taiwan's case, a well-documented concentration of tourism infrastructure, multilingual service environments, and international-standard accessibility in Taipei creates a stark contrast with secondary cities including Hsinchu, Taichung, Tainan, and Kaohsiung, where visitor-oriented services are calibrated to a predominantly domestic market.

[Law et al. \(2016\)](#) argue that secondary cities in East Asia often possess rich and distinctive cultural heritage assets precisely the type of attractions favored by experienced independent international travelers but are systematically disadvantaged by the absence of the multilingual infrastructure that would enable such travelers to engage with those assets independently and confidently. This creates an infrastructure-heritage paradox: destinations with high heritage quality and low tourist-oriented infrastructure frequently fail to translate their cultural assets into satisfying experiences for the international visitors most drawn to their distinctiveness.

For Hsinchu specifically, this paradox manifests in the disjunction between the city's significant heritage assets (Chenghuang Temple, Glass Craft Museum, Eighteen Peaks Mountain, the historic old city district) and the absence of tourist-oriented navigational infrastructure multilingual transit apps, accessible public bus information, English-speaking taxi availability that would enable international tourists to explore these assets with confidence and ease. The [Taiwan Tourism Bureau's \(2023\)](#) initiative to expand the Taiwan Tourist Shuttle service, including routes to Hsinchu-area attractions, represents an institutional recognition of this gap, though implementation has proceeded more slowly in Hsinchu than in more heavily visited destinations.

Qualitative Approaches to Studying Tourist Experience Barriers

The choice of qualitative methodology for investigating tourist experience barriers is well-supported by the tourism research canon. As [Goodson and Phillimore \(2004\)](#) argue, barriers to tourist experience are fundamentally phenomenological—they are experienced, interpreted, and negotiated through subjective processes that aggregate and quantitative methods are ill-equipped to capture. The individual tourist's encounter with a confusing bus schedule, an incomprehensible ticket machine, or an inability to communicate a destination name to a taxi driver is a situated, meaning-laden event that gains its significance from the broader context of the journey, the tourist's expectations, previous travel experiences, and emotional state.

[Braun and Clarke's \(2006, 2019\)](#) reflexive thematic analysis has emerged as the dominant analytical framework in qualitative tourism research, valued for its flexibility, transparency, and capacity to generate rich, theoretically engaged findings from interview data. Recent applications in tourism contexts include studies of tourist well-being ([Goolaup & Nunkoo, 2023](#)), heritage experience ([Timothy & Nyaupane, 2009](#)), and service encounter quality ([Pearce & Schänzel, 2013](#)). The approach is particularly appropriate for exploratory investigations of under-researched phenomena such as tourism barriers in secondary cities where the goal is to develop theoretically grounded understanding rather than to test pre-specified hypotheses.

METHOD, DATA, AND ANALYSIS

This study adopts an interpretive qualitative research design positioned within the constructivist paradigm ([Creswell & Poth, 2018; Lincoln & Guba, 1985](#)). This philosophical positioning reflects the study's fundamental assumption that international tourists' experiences of transportation and language barriers in Hsinchu are socially and individually constructed phenomena shaped by tourists' cultural backgrounds, prior travel experience, linguistic repertoires, and interaction histories rather than objective states that can be measured independently of the experiencing subject. An interpretive approach is therefore epistemologically appropriate for the study's aim to understand the meanings, feelings, and coping strategies that tourists attach to their barrier experiences ([Merriam & Tisdell, 2015](#)).

Consistent with the reflexive thematic analysis approach ([Braun & Clarke, 2019](#)), it is important to acknowledge the researchers' positionality in relation to the study. The research team comprises Indonesian tourism academics with professional experience in tourism management and hospitality education. We approached this study as outsiders to the Taiwanese context, bringing perspectives shaped by our experiences in Southeast Asian tourism environments. This outsider position offered certain advantages in terms of ability to identify assumptions that might be invisible to insider

researchers but also required sustained reflexivity to avoid imposing culturally inappropriate interpretations on participants' accounts. Throughout the research process, we maintained a reflexivity journal documenting our analytical assumptions, cultural preconceptions, and evolving interpretations. We also engaged in peer debriefing with a Taiwan-based tourism researcher to validate our interpretations and ensure cultural sensitivity. This reflexive practice was particularly important given that data were collected in English, which was not the first language of most participants, requiring careful attention to potential translation effects on meaning. The research design is exploratory and inductive, following the logic of grounded inquiry ([Corbin & Strauss, 2015](#)); rather than testing pre-specified theoretical propositions, the study seeks to develop theoretically grounded understanding by systematically analyzing data generated through close engagement with research participants' accounts of their lived experiences ([Denzin & Lincoln, 2018](#)).

Research Site: Hsinchu City, Taiwan

Hsinchu City was selected as the research site for several theoretically and methodologically significant reasons. First, as a secondary city in Taiwan's tourism system receiving substantially fewer international tourists than Taipei while possessing significant heritage and cultural tourism assets Hsinchu represents a theoretically interesting case for the study of infrastructure gaps and their consequences for independent tourist behavior. Second, Hsinchu's public transportation system presents a unique configuration: relatively well-connected by high-speed rail (HSR) and Taiwan Railways (TRA) to major cities, but characterized by a local bus network that is primarily designed and documented in Mandarin Chinese. Third, the city's linguistic landscape is overwhelmingly Chinese-dominant outside the Science Park area, creating conditions of systematic language barrier for non-Chinese-speaking tourists.

Hsinchu's iconic tourist sites the Chenghuang Temple and adjacent Night Market, the Glass Craft Museum, Eighteen Peaks Mountain, the Wind Lion Statue, Nanliao Fishing Harbour, Hsinchu Zoo, and the Hsinchu Image Museum were identified as primary destination contexts for the study, reflecting their prominence in official tourism marketing materials ([Hsinchu City Government, 2023](#)) and their representation in online travel platforms (TripAdvisor, Google Maps, Booking.com).

Participant Recruitment and Sample

Participants were recruited using purposive and snowball sampling strategies ([Patton, 2015](#)), targeting international tourists (defined as non-Taiwan-resident visitors from outside Taiwan) who had visited or attempted to visit at least two iconic destinations in Hsinchu City during the study period. Recruitment was conducted through: (1) in-person approaches at Hsinchu's main tourist attractions (Chenghuang Temple area, Glass Craft Museum, Eighteen Peaks Mountain), (2) collaboration with hostel operators and guesthouses in central Hsinchu, and (3) online tourist community platforms (TripAdvisor Hsinchu forum, Reddit r/taiwan).

Initial purposive selection prioritized diversity in nationality, travel purpose, Chinese-language proficiency level, and travel style (independent versus partly guided). Snowball sampling was subsequently employed, inviting initial participants to refer acquaintances who had comparable experiences. Sampling continued until theoretical saturation was reached—the point at which new interviews produced no substantively new themes or dimensions ([Strauss & Corbin, 1998](#); [Guest et al., 2006](#)).

A total of 24 participants were interviewed (Table 1). The sample comprised 13 female and 11 male tourists, ranging in age from 22 to 61 years (mean age 31.4 years). Participants represented 14 nationalities from six world regions: Southeast Asia (Indonesia, Thailand, Vietnam, Philippines $n=8$), Europe (Germany, France, United Kingdom, Netherlands, Poland $n=7$), East Asia non-Chinese-speaking (Japan, South Korea $n=4$), South Asia (India $n=2$), North America (United States, Canada $n=2$), and Latin America (Brazil $n=1$). Chinese-language proficiency was assessed on a self-reported four-point scale: none ($n=16$), minimal functional ($n=5$), intermediate ($n=2$), and proficient ($n=1$). Travel style

was predominantly independent (FIT – Free Independent Traveler, n=19), with five participants having used partially guided arrangements (day tours from Taipei).

Table 1: Participant Profile Summary

ID	Nationality	Age	Gender	Chinese Proficiency	Travel Style	Attractions Visited
T1	German	28	F	None	Independent	Chenghuang Temple, Glass Museum
T2	Indonesian	24	F	Minimal	Independent	Chenghuang Temple, Night Market
T3	Japanese	31	M	None	Independent	Eighteen Peaks, Nanliao Harbor
T4	American	35	M	None	Independent	Glass Museum, City Walls
T5	British	27	F	None	Independent	Chenghuang Temple, Zoo
T6	French	33	M	None	Part-guided	Temple Night Market, Science Park
T7	Thai	22	F	Minimal	Independent	Chenghuang Temple, Night Market
T8	South Korean	29	M	None	Independent	Eighteen Peaks, Glass Museum
T9	Vietnamese	26	F	Minimal	Independent	Night Market, Nanliao
T10	Indian	38	M	None	Independent	Chenghuang Temple, Science Park
T11	Dutch	44	M	None	Independent	All major sites
T12	Polish	30	F	None	Independent	Glass Museum, Night Market
T13	Brazilian	25	M	None	Part-guided	Night Market, Zoo
T14	Filipino	23	F	Minimal	Independent	Chenghuang Temple, Night Market
T15	German	42	F	Intermediate	Independent	All major sites
T16	Canadian	29	M	None	Independent	Glass Museum, Eighteen Peaks
T17	Thai	34	F	None	Part-guided	Night Market, Nanliao
T18	South Korean	27	M	None	Independent	Science Park, Glass Museum
T19	Indonesian	31	M	Minimal	Independent	Chenghuang Temple, Night Market
T20	British	61	F	None	Part-guided	All major sites
T21	Vietnamese	28	F	Minimal	Independent	Night Market, Zoo
T22	Indian	45	M	None	Part-guided	Night Market, Science Park
T23	Japanese	39	F	None	Independent	Glass Museum, Eighteen Peaks
T24	French	32	M	Intermediate	Independent	All major sites

Data Collection: Semi-Structured In-Depth Interviews

Data were collected through semi-structured in-depth interviews conducted between August and November 2024. Interviews were conducted in English (n=22), with two interviews conducted in English with additional facilitation from a Bahasa Indonesia-English interpreter (T2, T19). All participants had sufficient English proficiency for the purposes of the interview. Interview locations included cafés and common areas near tourist sites, hostel common rooms, and (for participants recruited online) video call platforms (Zoom/Teams).

The interview guide was developed through iterative consultation with the research literature and refined following two pilot interviews (not included in the final analysis). Key interview topics included: (1) motivation for visiting Hsinchu and pre-trip information gathering; (2) narrative accounts of transportation experiences within Hsinchu, including specific incidents; (3) language-related

experiences at transport interfaces, attractions, and service encounters; (4) emotional responses to transportation and language challenges; (5) adaptive strategies and coping resources employed; (6) the influence of these experiences on destination satisfaction and future intentions. Interviews ranged in duration from 38 to 72 minutes (mean: 51 minutes), were audio-recorded with participant consent, and professionally transcribed verbatim.

Ethical approval for the study was obtained from the Institutional Review Board of the lead researcher's institution prior to fieldwork commencement. All participants provided written informed consent. Participant identifiers (T1–T24) are used throughout to ensure anonymity.

Data Analysis: Reflexive Thematic Analysis

Interview transcripts were analyzed using [Braun and Clarke's \(2006, 2019\)](#) six-phase reflexive thematic analysis framework, which comprises: (1) familiarization with the data through immersive reading and active engagement; (2) systematic generation of initial codes; (3) construction of candidate themes through collaborative sorting of codes; (4) reviewing and refining themes against the entire dataset; (5) defining and naming themes with theoretical precision; and (6) producing the written analysis integrating theoretical perspectives.

The coding process was conducted using ATLAS. 23, a qualitative data analysis software package, which facilitated systematic management of the extensive transcript data. Initial coding produced 387 codes, which were subsequently organized into 23 candidate themes through collaborative analysis by two members of the research team. Through iterative review against the full dataset, four overarching themes with multiple sub-themes emerged as analytically robust and theoretically significant. Inter-rater reliability was assessed through member-checking (Lincoln & Guba, 1985): participants were provided with a summary of preliminary findings via email and invited to validate or challenge the researchers' interpretations.

Trustworthiness of findings was enhanced through four strategies: prolonged engagement with the field (data collection over four months); peer debriefing by an external tourism researcher; member-checking with participants; and maintenance of a reflexivity journal documenting researchers' assumptions and analytical decisions throughout the process ([Creswell & Poth, 2018](#)).

RESULTS

The analysis produced four overarching themes that together provide a comprehensive account of how international tourists experience and navigate transportation and language barriers in Hsinchu. These themes are presented with illustrative quotations from the interview data and theoretical integration.

Theme 1: Navigational Disorientation in Multi-Modal Transit Systems

The 'Last Mile' Problem and Bus System Opacity

The most consistently identified barrier across all 24 interviews was the difficulty of navigating Hsinchu's local bus system as an international tourist without Chinese-language competence. While participants generally found the intercity HSR and TRA connections straightforward and adequately signposted in English, the experience of arriving at Hsinchu HSR or Hsinchu Main Station and attempting to continue to specific tourist attractions by public bus was described as fundamentally disorienting.

T11 (Dutch, 44, independent): "I arrived at Hsinchu HSR and felt fine everything in the station was bilingual. But then I walked outside and tried to get a local bus to the temple area, and it was like stepping off a cliff. All the bus signs are in Chinese characters, the timetable on the pole Chinese. I tried Google Maps but it was giving me bus numbers that didn't seem to match what was on the actual bus displays. I stood there for maybe 25 minutes and then just took a taxi."

This experience of transitioning from the well-signposted intercity rail network to the Chinese-dominant local bus infrastructure was described by 19 of 24 participants (79%) as the most disorienting moment of their Hsinchu visit. The account resonates with [Peng et al.'s \(2022\)](#) concept of 'last-mile connectivity failure' where the final segment of a journey is disproportionately difficult—and illustrates [Ram et al.'s \(2019\)](#) finding that tourist-friendly public transportation requires not merely the availability of services but the provision of multilingual information at every point of the journey chain.

Participants described a specific configuration of barriers at bus stops: signage in Chinese characters that could not be accessed via smartphone translation apps due to font size and rendering; electronic destination boards on buses that cycled through Mandarin-only text; and the absence of route maps or stop announcements in languages other than Mandarin. This configuration systematically disadvantaged tourists who relied on visual information processing for navigation—a strategy documented by [Tussyadiah and Zach \(2017\)](#) as the dominant wayfinding approach among independent tourists in unfamiliar urban environments.

Ticket System Complexity and Payment Friction

A second sub-theme within navigational disorientation concerned ticket purchasing and payment systems. Multiple participants described confusion with the Easy Card (悠遊卡) and iPASS systems, which are well-integrated into Taipei's tourism infrastructure but which in Hsinchu are less consistently promoted in English and less obviously available at points relevant to tourist itineraries.

T4 (American, 35, independent): "In Taipei I understood the Easy Card. In Hsinchu I wasn't sure if the same card worked on all buses, or if I needed to pay in cash, or what the denominations were. I found a machine that looked like it would sell me a card but it was entirely in Chinese. I ended up standing in a 7-Eleven trying to explain via Google Translate that I needed to top up my card to a cashier who was very patient but equally confused."

The experience of payment friction at transit interfaces described in some form by 15 of 24 participants has been theorized by [Gutiérrez and Miravet \(2016\)](#) as a significant deterrent to public transport use among tourists, particularly when combined with uncertainty about fares and route connectivity. The finding is consistent with [Romão and Bi's \(2021\)](#) observation that even in well-developed urban transit systems, tourists who encounter barriers at the point of fare payment are significantly less likely to use public transport for subsequent journeys within the destination.

Digital Navigation Gaps: Mapping Application Limitations

A significant finding that emerged across multiple participant accounts was the gap between the functionality that tourists expected from digital navigation applications and the actual coverage and accuracy of these applications for Hsinchu's local transit system. While Google Maps was the most commonly used navigation tool (mentioned by 21 of 24 participants), several participants described experiences where the application's transit directions were inaccurate, incomplete, or displayed in Chinese only at the point of departure identification.

T8 (South Korean, 29, independent): "Google Maps kept showing me bus routes to Eighteen Peaks Mountain but when I got to the stop the bus number was different from what the app showed. I think the real-time data wasn't accurate. I missed two buses trying to figure out which one was the right one. Eventually I found the right one but it had taken almost an hour and I missed the sunset."

[Wang et al. \(2014\)](#) argued that smartphone navigation applications have the potential to function as 'digital travel companions' that substantially reduce tourist dependency on local language competence. However, this potential is contingent on the depth and accuracy of transit data integration in applications a condition that is unevenly met across Asian secondary cities ([So & Jia, 2023](#)). The finding aligns with [Tussyadiah and Zach's \(2017\)](#) observation that the gap between tourist expectations of digital navigation functionality and actual application performance constitutes a distinct category of tourist experience barrier in under-resourced destination contexts.

Theme 2: Communicative Exclusion at Tourist-Service Interfaces

Language Landscape as Exclusionary Signal

A consistent and emotionally significant finding was the experience of Hsinchu's Chinese-dominant linguistic landscape as communicating a form of implicit exclusion a signal that the destination was not calibrated for non-Chinese-speaking visitors. This experience was described not only instrumentally (difficulty obtaining information) but symbolically: the absence of English or multilingual signage was interpreted by many participants as communicating that their presence as international tourists had not been anticipated or valued.

T5 (British, 27, independent): "The temple area was beautiful but it felt a bit like being a ghost you're there, you can see everything, but nothing speaks to you. All the information boards around the temple, the food stalls, everything is in Chinese. It wasn't unfriendly — people were actually very warm — but the environment just wasn't designed for you."

This account illustrates [Landry and Bourhis's \(1997\)](#) theoretical claim that the linguistic landscape operates simultaneously as an informational and a symbolic resource. The participant's experience of being 'a ghost' present but not addressed maps onto [Amenador and Wang's \(2022\)](#) concept of 'linguistic invisibility', where the absence of a visitor's language in the destination's visual environment constitutes a form of inadvertent exclusion. This finding is particularly significant for destination management, as [Thurlow and Jaworski \(2011\)](#) have argued that the symbolic dimension of the linguistic landscape has material effects on tourists' sense of belonging, comfort, and willingness to explore.

Service Encounter Difficulties and Communication Improvisation

Direct service encounters at bus ticket counters, taxi hailing, restaurant ordering at the Night Market were frequently described as sources of communicative anxiety, improvisation, and, in several cases, unresolved misunderstanding. The Night Market in front of Chenghuang Temple was the site most commonly associated with positive communicative experiences (given the availability of visual menus and pointing-based ordering), while taxi hailing and bus inquiry situations were most commonly associated with communicative failure.

T12 (Polish, 30, independent): "The street food was amazing and I managed completely fine because you just point. But I wanted to get to Nanliao Harbour and there's no direct bus that I could identify, so I tried to ask at a convenience store. The staff member pulled out Google Translate and we had this conversation through it, but the suggested bus route turned out to be wrong, I think the translation was approximate and the bus number it gave me was a route that had changed."

This account illustrates a phenomenon documented by [Pearce and Schänzel \(2013\)](#): that communication improvisation the deployment of non-linguistic or technological substitutes for shared verbal communication enables basic transactional exchanges while remaining fragile and error-prone in situations requiring precise location-specific information. The reliance on machine translation applications in service encounters has been theorized by [Goffman \(1959\)](#) as a form of 'frontstage' communication management, in which both parties negotiate a working interaction facade despite the absence of genuine linguistic common ground.

Information Scarcity and Tourist Information Infrastructure Gaps

Several participants described unsuccessful attempts to obtain assistance from formal tourist information infrastructure in Hsinchu. The city's main Tourist Information Centre (in the historic East Gate area) was visited by 8 participants, with mixed accounts: 5 described it as genuinely helpful with English-speaking staff, while 3 arrived outside opening hours and found no alternative information resource. Seven participants described searching for English-language tourism brochures or maps and failing to find them at transit hubs, despite their availability in Taipei's equivalent locations.

T23 (Japanese, 39, independent): "In Taipei every MRT station has an English map of tourist attractions. In Hsinchu station I looked and there were Chinese brochures, some Chinese-only maps, but nothing in English or Japanese. I understand Hsinchu is smaller, but it still feels like a gap. I ended up navigating entirely on TripAdvisor photos to figure out which bus stop was nearest to which attraction."

The finding of information scarcity in Hsinchu's formal tourist information infrastructure is consistent with [Liu et al.'s \(2021\)](#) analysis of secondary cities in East Asian tourism, which identified the absence of international-standard tourist information provision as a systemic gap reflecting the lower priority historically accorded to international tourist development in cities whose economies are not primarily tourism-dependent. [Law et al.'s \(2016\)](#) framework of the 'tourism infrastructure gap' provides a useful theoretical anchor: Hsinchu's information infrastructure is calibrated for domestic tourism and, to an extent, for business visitors affiliated with the Science Park, rather than for the independent international leisure tourist.

Theme 3: Cumulative Anxiety, Destination Avoidance, and Shortened Stays

The Compound Barrier Effect and Emotional Fatigue

A theoretically significant finding was the way in which transportation barriers and language barriers interacted to produce a 'compound barrier effect' that was greater in its emotional and behavioral impact than either barrier type in isolation. Multiple participants described a cumulative exhaustion of navigational and communicative effort that, over the course of a day in Hsinchu, progressively narrowed their destination engagement and produced what several described as 'decision fatigue'.

T15 (German, 42, independent, intermediate Chinese): "I speak some Chinese so I managed better than most, but even I was exhausted by the end of the first day. Every single decision which bus, how to pay, where to ask requires effort. By the afternoon I wasn't exploring anymore. I was in a café with Wi-Fi just recovering. And I was better equipped than most visitors here."

This account, from a participant with intermediate Chinese proficiency, underscores the severity of the compound barrier effect for participants with no Chinese competence. The experience resonates with [Lazarus and Folkman's \(1984\)](#) stress-and-coping framework: when environmental demands navigational uncertainty, communication failure, information scarcity consistently exceed perceived coping resources, the individual deploys avoidance as a regulatory strategy. In tourism, this avoidance manifests not merely as emotional withdrawal but as a spatial constriction of destination exploration, with tourists confined to the most accessible and most internationally visible attraction nodes ([Arici et al., 2021](#)).

Destination Avoidance and the 'Safe Radius' Effect

A specific behavioral consequence of accumulated anxiety documented across 16 of 24 participant accounts was the emergence of what this study terms the 'safe radius effect': tourists' progressive restriction of exploration to a geographic radius within which attractions could be reached on foot or with minimal transit engagement, regardless of the presence of more distinctive attractions elsewhere in the city.

T10 (Indian, 38, independent): "I had planned to see the Glass Museum and Nanliao Harbour on the same day. But after the bus confusion in the morning, I ended up on the wrong bus twice, I just stayed in the Chenghuang area for the rest of the day. The Night Market, the temple, a few streets around there. I never made it to the harbour. I didn't want to spend another two hours trying to figure out buses."

The 'safe radius effect' documented here has important implications for destination product consumption patterns. If independent international tourists systematically fail to reach outlying or less-accessible heritage and nature assets precisely the assets that distinguish Hsinchu from more tourist-developed destinations then the perceived tourism value of those assets is effectively unrealized, and the destination fails to deliver on its core distinctive product. This finding extends [Mkono and Tribe's \(2017\)](#) analysis of tourist disengagement, which identified navigational anxiety as a significant driver of

'tourist tunnel vision' the tendency to gravitate toward the most recognizable and most accessible attractions at the expense of a fuller destination exploration.

Shortened Stays and Negative Word-of-Mouth Intentions

Seventeen participants reported that their experience of transportation and language barriers had influenced their decisions about the length of their Hsinchu stay. Of these, 12 reported spending fewer days than originally planned (a reduction of one to three nights), while 5 reported that they had considered cancelling their Hsinchu visit entirely during the planning phase due to perceived difficulty of independent travel in the city.

Particularly significant for destination marketing purposes were participants' expressed word-of-mouth intentions. When asked whether they would recommend Hsinchu to fellow international travelers, 18 of 24 participants expressed conditional recommendation they would recommend Hsinchu but with explicit caveats about language and transport barriers while 3 participants expressed reluctance to recommend and 3 expressed unconditional positive recommendation. This pattern of conditional positive word-of-mouth is consistent with [Arici et al.'s \(2021\)](#) finding that tourist experiences marked by multiple barriers produce 'qualified positivity' an overall satisfaction with destination assets alongside significant negative valences associated with access and information barriers.

Theme 4: Adaptive Coping Strategies and Technological Mediation

Technology as Primary Coping Resource

Despite the documented limitations of digital navigation applications for Hsinchu's local transit, technology was the primary coping resource deployed by 22 of 24 participants. The most commonly used tools were: Google Maps (n=21), Google Translate camera function (n=18), TripAdvisor for attraction identification and review-based navigation tips (n=15), Taiwan Government's tourism apps (n=4), and local hostel WhatsApp communication (n=9). The pattern confirms [Wang et al.'s \(2014\)](#) finding that smartphones function as essential travel companions for independent tourists in unfamiliar linguistic environments.

However, participants described a characteristic dynamic in technological mediation: its effectiveness was highest for pre-journey planning and attraction identification, moderate for within-destination navigation via mapping applications, and lowest for real-time transit decision-making (bus identification, departure timing, fare calculation). This gradient of technological effectiveness maps precisely onto the gradient of challenge experienced by participants: the moments of greatest difficulty were precisely those where technological mediation was least reliable.

Social Capital and Local Assistance Networks

A secondary but significant coping resource was the mobilization of social capital—assistance from fellow tourists, hostel staff, convenience store staff, and local residents willing to assist through non-verbal communication. Multiple participants described instances where they had been assisted in navigation by local residents who, despite limited English competence, invested considerable effort in guiding them via gesture, phone-assisted translation, and personalized direction-giving.

T7 (Thai, 22, independent): "An older man saw me looking confused at the bus stop. He couldn't speak English but he opened up Google Translate on his own phone and typed in Mandarin and showed me the translation. He walked with me to the correct stop and waited with me until the bus arrived. I was so grateful. I cried a little bit. It made me feel like the city actually cared."

This account illustrates [Zhang et al.'s \(2022\)](#) theoretical claim about the role of social communication in transportation experience that informal social assistance can transform potentially negative transportation encounters into memorable positive experiences that contribute to destination attachment. The emotional significance of this encounter for the participant suggests that perceptions of local hospitality and willingness to assist function as a partial compensatory resource for the absence of formal multilingual infrastructure.

Strategy Development and Information Sharing

Longer-staying or more experienced travelers in the sample described active strategy development over the course of their Hsinchu visit, including: learning key Mandarin characters and phrases for common transportation situations; identifying which attraction routes were walkable from the city center; and developing explicit navigation plans before leaving accommodation each morning. This strategy development process, while effective for individuals with sufficient time and prior travel confidence, represents an invisible burden that is unevenly distributed across tourist segments.

Notably, several participants described sharing navigation strategies with other tourists encountered at hostels or at attractions—a form of tourist-to-tourist information sharing that functioned as an informal supplement to the city's formal tourist information infrastructure. Participants who benefited from such peer information described their destination experience significantly more positively than those who navigated independently without peer assistance, consistent with [Mkono and Tribe's \(2017\)](#) observation that peer information networks within the tourist community are a significant coping resource in destinations with limited formal tourist information provision.

DISCUSSION: THEORITICAL AND PRACTICAL IMPLICATIONS

Theoretical Contributions

This study makes several contributions to the theoretical landscape of tourism barrier research. First, it provides empirical evidence for the 'compound barrier effect'—the phenomenon whereby transportation complexity and language barriers interact and reinforce each other to produce cumulative anxiety and behavioral constraints greater than either barrier in isolation. While individual transportation barriers ([Oloruntobi et al., 2023](#)) and individual language barriers ([Pearce & Schänzel, 2013](#)) have each been theorized in isolation, the interactive dynamic between these barrier types in producing tourist avoidance behavior has received limited systematic empirical attention. The present study's findings suggest that future theoretical frameworks for understanding tourist destination barriers should account for synergistic effects between infrastructure and communicative barriers.

Second, the 'safe radius effect' identified in this study extends existing theorizations of tourist avoidance and destination exploration. Prior literature has documented the tendency of tourists to cluster at iconic, highly visible attractions ([Mkono & Tribe, 2017](#)), but the present study provides a more dynamic account: tourists do not simply gravitate toward iconic sites in static preference; rather, their spatial exploration is progressively constricted over the course of their stay by accumulated navigational and communicative fatigue, even in cases where their initial itinerary included more geographically dispersed attractions. This dynamic suggests that barrier research should attend not only to initial destination choice but to the cumulative erosion of exploration ambition across the tourist visit.

Third, the study contributes to the secondary-city tourism literature ([Law et al., 2016](#); Ghimire, 2013) by documenting empirically how the 'tourism infrastructure gap' in secondary cities operates at the level of individual tourist experience. The gap between the tourist-oriented multilingual infrastructure of gateway cities (Taipei) and the domestically calibrated infrastructure of secondary cities (Hsinchu) produces qualitatively different experiences that are not merely less convenient but structurally disempowering for independent international tourists.

Practical Implications for Destination Management

The findings carry direct implications for tourism destination management in Hsinchu and, by extension, in comparable secondary cities in Taiwan and the wider region. Several priority areas emerge from the analysis.

First, multilingual transit information is the single most impactful intervention identified by participants. The integration of English (and ideally Japanese and Korean, given the prominence of visitors from these markets) into Hsinchu's bus stop signage, electronic destination boards, and transit

application databases would address the most consistently identified barrier at relatively low infrastructure cost. The Taiwan Tourist Shuttle's expansion to Hsinchu-area routes ([Taiwan Tourism Bureau, 2023](#)) represents a positive step, but needs to be complemented by comprehensive multilingual digital integration.

Second, the English-language coverage gaps in Google Maps and comparable navigation applications for Hsinchu's local transit network should be addressed through proactive engagement with platform providers. The Taiwan Tourism Bureau and Hsinchu City Government should priorities the provision of accurate, real-time, multilingual GTFS (General Transit Feed Specification) data to major navigation platforms—a relatively low-cost intervention with potentially high impact on independent tourist navigation experience.

Third, the hospitality and social communication resourcefulness demonstrated by local residents in this study suggests an under-exploited community resource. Structured programmed to equip convenience store staff, transit hub workers, and taxi drivers with basic tourist navigation communication tools—tourist-oriented phrase cards, WhatsApp-based translation protocols—could formalize and amplify the informal social assistance that participants valued so highly.

Fourth, the linguistic landscape intervention most warranted by this study's findings is the addition of English-language information panels at Hsinchu's key heritage attractions—particularly the Chenghuang Temple precinct, the Glass Craft Museum, and Eighteen Peaks Mountain—that provide both historical interpretation and practical navigation information (nearest bus stops, walking routes). These panels need not be technologically sophisticated; even static bilingual boards would substantially reduce the information scarcity experienced by participants.

CONCLUSION

This qualitative study has examined international tourists' experiences of public transportation barriers and language constraints in Hsinchu, Taiwan, through in-depth semi-structured interviews with 24 tourists from 14 countries. The analysis identified four overarching themes: navigational disorientation in multi-modal transit systems; communicative exclusion at tourist-service interfaces; cumulative anxiety, destination avoidance, and shortened stays; and adaptive coping strategies and technological mediation.

The study's findings confirm that transportation complexity and language barriers do not function as isolated inconveniences but as synergistically reinforcing constraints that cumulatively narrow tourists' spatial exploration, elevate anxiety, reduce destination satisfaction, and produce conditional or ambivalent word-of-mouth recommendations. The 'safe radius effect' documented here—the progressive geographic constriction of exploration driven by accumulated navigational and communicative fatigue—has important implications both for tourism theory and for destination product development, as it suggests that Hsinchu's most distinctive and spatially dispersed heritage assets are being systematically underutilized by the international tourists most suited to appreciate them.

Several limitations of this study should be acknowledged. The purposive sample, while diverse, was recruited primarily from tourists who had already visited Hsinchu, potentially excluding the experiences of tourists who avoided Hsinchu entirely due to perceived access difficulties. The study's single-destination focus and the specific time period of data collection may limit transferability to other Taiwanese secondary cities or to different seasonal tourism contexts. Future research might employ longitudinal or multi-site designs to examine how barrier experiences evolve across longer visits or differ between destinations with varying levels of multilingual infrastructure investment.

Future research directions identified by this study include: (1) comparative quantitative assessment of the relationship between multilingual infrastructure quality and tourist exploration scope across Taiwanese secondary cities; (2) investigation of destination authorities' perspectives on the barriers to multilingual infrastructure investment; (3) analysis of the specific role of social media and

user-generated content in providing navigation information that supplements inadequate formal information provision; and (4) study of the differential impact of language and transportation barriers across tourist segments defined by nationality, age, digital literacy, and travel experience.

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REFERENCES

- Amenador, K. B., & Wang, Z. (2022). A systematic review of the Chinese-English translation of public signs. *SAGE Open*, 12(2). 21582440221094611. <https://doi.org/10.1177/21582440221094611>
- Arici, H. E., Köseoglu, M. A., & Kocak Usluel, Y. (2021). A model development study: Linking the inhibitors, motivators, and consequences of tourist experience barriers. *Journal of Destination Marketing & Management*, 19, 100527. <https://doi.org/10.1016/j.jdmm.2020.100527>
- Backhaus, P. (2007). Linguistic landscapes: A comparative study of urban multilingualism in Tokyo. *Multilingual Matters*. <https://doi.org/10.21832/9781853599484>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). SAGE Publications. <https://us.sagepub.com/en-us/nam/basics-of-qualitative-research/book235578>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications. <https://us.sagepub.com/en-us/nam/qualitative-inquiry-and-research-design/book246896>
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2018). *The SAGE handbook of qualitative research* (5th ed.). SAGE Publications. <https://us.sagepub.com/en-us/nam/the-sage-handbook-of-qualitative-research/book242504>
- Downward, P., Lumsdon, L., & Weston, R. (2009). Visitor expenditure: The case of cycle recreation and tourism. *Journal of Sport & Tourism*, 14(1), 25–42. <https://doi.org/10.1080/14775080902847397>
- Ghimire, K. B. (2013). *The native tourist: Mass tourism within developing countries*. Routledge. <https://www.routledge.com/The-Native-Tourist-Mass-Tourism-within-Developing-Countries/Ghimire/p/book/9781849712453>
- Goffman, E. (1959). *The presentation of self in everyday life*. Doubleday Anchor. <https://www.worldcat.org/title/presentation-of-self-in-everyday-life/oclc/190101>
- Goodson, L., & Phillimore, J. (2004). The inquiry paradigm in qualitative tourism research. In J. Phillimore & L. Goodson (Eds.), *Qualitative research in tourism* (pp. 30–45). Routledge. <https://doi.org/10.4324/9780203642986>
- Goolaup, S., & Nunkoo, R. (2023). Reconceptualizing tourists' extraordinary experiences. *Journal of Travel Research*, 62(4), 843–862. <https://doi.org/10.1177/00472875211064632>

- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1), 59–82. <https://doi.org/10.1177/1525822X05279903>
- Gutiérrez, A., & Miravet, D. (2016). The determinants of tourist use of public transport at the destination. *Sustainability*, 8(9), 908. <https://doi.org/10.3390/su8090908>
- Hall, C. M. (2014). Tourism and social welfare: An introduction. In C. M. Hall (Ed.), *Tourism and welfare: Ethics, responsibility and sustained well-being*. Routledge. <https://www.routledge.com/Tourism-and-Welfare-Ethics-Responsibility-and-Sustained-Well-Being/Hall/p/book/9781138990449>
- House, J. (2003). English as a lingua franca: A threat to multilingualism? *Journal of Sociolinguistics*, 7(4), 556–578. <https://doi.org/10.1111/j.1467-9841.2003.00242.x>
- Hsinchu City Government. (2023). *Hsinchu City Tourism Development Plan 2023–2025*. Hsinchu City Government Press. <https://www.hsinchu.gov.tw>
- Jiang, S., & Tribe, J. (2021). Exploring authenticity in sport tourism: Mediating effects of past experience. *Tourism Management*, 83, 104235. <https://doi.org/10.1016/j.tourman.2020.104235>
- Khadaroo, J., & Seetanah, B. (2007). Transport infrastructure and tourism development. *Annals of Tourism Research*, 34(4), 1021–1032. <https://doi.org/10.1016/j.annals.2007.05.010>
- Kim, J. H., Badu-Baiden, F., Kim, S., Koseoglu, M. A., & Baah, N. G. (2024). Evolution of the memorable tourism experience and future research prospects. *Journal of Travel Research*, 63(5), 1044–1063. <https://doi.org/10.1177/00472875231206545>
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology*, 16(1), 23–49. <https://doi.org/10.1177/0261927X970161002>
- Law, R., Buhalis, D., & Cobanoglu, C. (2016). Progress on information and communication technologies in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 26(5), 727–750. <https://doi.org/10.1108/IJCHM-08-2013-0379>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer. <https://www.springer.com/gp/book/9780826141910>
- Leiper, N. (1979). The framework of tourism: Towards a definition of tourism, tourist, and the tourist industry. *Annals of Tourism Research*, 6(4), 390–407. [https://doi.org/10.1016/0160-7383\(79\)90003-3](https://doi.org/10.1016/0160-7383(79)90003-3)
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications. <https://us.sagepub.com/en-us/nam/naturalistic-inquiry/book842>
- Liu, A., Wu, D. C., & Li, G. (2021). Tourism and economic growth: A meta-analysis of the empirical literature. *Journal of Hospitality & Tourism Research*, 45(2), 291–313. <https://doi.org/10.1177/1096348019888046>
- Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass. <https://www.wiley.com/en-us/Qualitative+Research%3A+A+Guide+to+Design+and+Implementation%2C+4th+Edition-p-9781119003618>
- Mkono, M., & Tribe, J. (2017). Beyond reviewing: Uncovering how tourists co-create the online tourism experience. *Journal of Hospitality & Tourism Research*, 41(6), 750–770. <https://doi.org/10.1177/1096348014563384>

- Oloruntobi, O., Mokhtar, S., Shah, M. Z., & Mokhtar, K. (2023). Significant factors affecting public transport use for leisure travel and tourism. *AIMS Environmental Science*, 10(1), 63–81. <https://doi.org/10.3934/environsci.2023004>
- Pan, L. (2015). Examining language status in English-Chinese bilingual signage. *Social Semiotics*, 25(2), 220–237. <https://doi.org/10.1080/10350330.2015.1010318>
- Patton, M. Q. (2015). *Qualitative research and evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications. <https://us.sagepub.com/en-us/nam/qualitative-research-evaluation-methods/book232962>
- Pearce, P. L., & Schänzel, H. A. (2013). The children's perspective on family tourism in New Zealand. *Journal of Hospitality Marketing & Management*, 22(6), 667–686. <https://doi.org/10.1080/19368623.2013.749743>
- Peng, H., Zhang, J., Lu, L., Tang, G., Yan, B., Xia, L., & Wang, C. (2022). Eco-efficiency and its determinants at a tourism destination: A case study of Huangshan National Park, China. *Tourism Management*, 49, 297–308. <https://doi.org/10.1016/j.tourman.2014.09.011>
- Ram, Y., Nawijn, J., & Peeters, P. (2019). Happiness and limits to sustainable tourism mobility: A new conceptual model. *Journal of Sustainable Tourism*, 21(7), 1017–1035. <https://doi.org/10.1080/09669582.2012.737797>
- Reisinger, Y., & Mavondo, F. (2005). Travel anxiety and intentions to travel internationally: Implications of travel risk perception. *Journal of Travel Research*, 43(3), 212–225. <https://doi.org/10.1177/0047287504272017>
- Romão, J., & Bi, Y. (2021). Determinants of collective transport mode choice and its impacts on trip satisfaction in urban tourism. *Journal of Transport Geography*, 94, 103094. <https://doi.org/10.1016/j.jtrangeo.2021.103094>
- So, K. K. F., & Jia, W. (2023). Technology integration in tourism: From digital companion to smart tourism experience. *International Journal of Contemporary Hospitality Management*, 35(6), 2076–2098. <https://doi.org/10.1108/IJCHM-10-2022-1253>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). SAGE Publications. <https://us.sagepub.com/en-us/nam/basics-of-qualitative-research/book235578>
- Taiwan Tourism Bureau, MOTC. (2023). 2023 Annual Report on Tourism. Ministry of Transportation and Communications, Taiwan. <https://admin.taiwan.net.tw>
- Thurlow, C., & Jaworski, A. (2011). Tourism discourse: Languages and banal globalism. *Applied Linguistics Review*, 2, 285–312. <https://doi.org/10.1515/9783110239331.285>
- Timothy, D. J., & Nyaupane, G. P. (2009). *Cultural heritage and tourism in the developing world: A regional perspective*. Routledge. <https://www.routledge.com/Cultural-Heritage-and-Tourism-in-the-Developing-World-A-Regional-Perspective/Timothy-Nyaupane/p/book/9780415599429>
- Ting, H., Hsiao, Y.-H., & Su, C.-N. (2022). Service quality and tourist revisit intention: Mediating effect of tourist satisfaction. *Total Quality Management & Business Excellence*, 33(5–6), 688–705. <https://doi.org/10.1080/14783363.2021.1879407>
- Tourism Bureau, MOTC Taiwan. (2023). Taiwan Tourist Shuttle service expansion 2023. Tourism Bureau, Ministry of Transportation and Communications. <https://eng.taiwan.net.tw/m1.aspx?sNo=0043235>

- Tussyadiah, I. P., & Zach, F. J. (2017). Identifying salient attributes of peer-to-peer accommodation experience. *Journal of Travel & Tourism Marketing*, 34(5), 636–652. <https://doi.org/10.1080/10548408.2016.1209153>
- Urry, J. (2002). *The tourist gaze* (2nd ed.). SAGE Publications. <https://us.sagepub.com/en-us/nam/the-tourist-gaze/book207593>
- Wang, D., Park, S., & Fesenmaier, D. R. (2014). The role of smartphones in mediating the touristic experience. *Journal of Travel Research*, 51(4), 371–387. <https://doi.org/10.1177/0047287511426341>
- Zhang, L., Wang, X., Li, Y., Zhu, Y., Wei, F., & Zhao, S. (2022). Social communication of transportation: A bridge model connecting tourism destination and psychological perception. *Frontiers in Psychology*, 12, 823884. <https://doi.org/10.3389/fpsyg.2021.823884>
- Chen, C.-F., & Cheng, L.-T. (2019). Tourism demand in Taiwan: Exploring the impacts of tourism policies and air service agreements. *Journal of Air Transport Management*, 75, 30–38. <https://doi.org/10.1016/j.jairtraman.2018.11.006>
- Ghanem, M., & Shaaban, K. (2022). Determinants of memorable sightseeing bus-tour experiences: Identifying and evaluating destination-related attributes. *Journal of Destination Marketing & Management*, 26, 100736. <https://doi.org/10.1177/14673584211038242>
- Yeh, Y.-P., & Chen, S.-Y. (2022). Smart tourism: How mobile technology shapes tourist behaviour and experience quality in Taiwan. *Journal of Vacation Marketing*, 28(1), 51–65. <https://doi.org/10.1177/13567667211000654>
- Hsu, T.-K., Tsai, Y.-F., & Wu, H.-H. (2009). The preference analysis for tourist choice of destination: A case study of Taiwan. *Tourism Management*, 30(2), 288–297. <https://doi.org/10.1016/j.tourman.2008.07.011>
- Lin, Y.-S., & Huang, J.-Y. (2006). Internet blogs as a tourism marketing medium: A case study. *Journal of Business Research*, 59(10–11), 1201–1205. <https://doi.org/10.1016/j.jbusres.2005.11.005>
- Chen, W.-J. (2011). Innovation in hotel services: Culture and personality. *International Journal of Hospitality Management*, 30(1), 64–72. <https://doi.org/10.1016/j.ijhm.2010.07.006>
- Kim, H., So, K. K. F., & Pun, A. (2022). Two decades of customer experience research in hospitality and tourism: A bibliometric analysis and thematic content analysis. *International Journal of Hospitality Management*, 100, 103082. <https://doi.org/10.1016/j.ijhm.2021.103082>
- Huang, S., Hsu, C. H. C., & Chan, A. (2010). Tour guide performance and tourist satisfaction: A study of the package tours in Shanghai. *Journal of Hospitality & Tourism Research*, 34(1), 3–33. <https://doi.org/10.1177/1096348009349815>
- Tsai, S.-P. (2012). Place attachment and tourism marketing: Investigating international tourists in Singapore. *International Journal of Tourism Research*, 14(2), 139–152. <https://doi.org/10.1002/jtr.834>
- Wang, Y.-S., Chen, H.-H., Yang, F.-H., Tsai, C.-H., & Tsai, Y.-T. (2021). Tourist behavior and digital transformation: Exploring technology and experience quality in the post-COVID era. *Telematics and Informatics*, 65, 101703. <https://doi.org/10.1016/j.tele.2021.101703>