IMMERSIVE ATTRACTIONS: VISITORS EXPERIENCES IN LIGHT AND SOUND SHOWS

Karuna Subedi[1]

Abstract:

The advent of technology has revolutionized the tourism industry with light and sound shows appearing as prominent night attraction in many cities. Despite the growing popularity very few studies exist on these shows and visitor experiences in such shows. So, this phenomenological research is aimed at understanding the influential elements in shaping tourist's satisfaction during light and sound shows. This research also identifies the likelihood of recommending such shows to others. A mixed research approach with thematic and sentiment analysis of 228 travel reviews of shows from France, Australia, India, Singapore and Egypt is conducted. The findings suggest that shows from Australia and Singapore provided higher satisfaction leading to higher rate of recommendation. Meanwhile, shows from Egypt and India are criticized for outdated technology, poor narration and disorganization. The findings also reveal that although audio/visual effects are prime element of the show, visitors equally evaluated other components like hospitality, management, storyline that shaped the overall experience. This research has both theoretical and practical implications as it contributes significantly to the knowledge of commercially driven attractions, especially related with nighttime tourism; as well as has practical implications to businesses, policy makers and destination management organizations.

Keywords: Light and sound show, tourism, tourist attractions, satisfaction, visitors experience

1. INTRODUCTION

The advent of technology has been a boon for the tourism industry. Technological advances have resulted in growth of tourist numbers and have helped many developing nations to thrive in the international market. Advanced technology like Augmented Reality (AR) is being increasingly adopted by airports, like the Gatwick Airport, UK. Similarly, destinations offer virtual tours with the use of Virtual Reality (VR), which is believed to inspire and motivate travelers to physically see the place.

Plenty of tourist destinations have integrated technology to offer diverse products that enhance tourist engagement with the sites. Some notable use of technology is observed in lights and sounds

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[1] Tribhuvan University. mskarunasubedi@gmail.com

shows which have become a major night attraction in many cities. Organizing light and sound outdoor shows provide visitors with rewarding experiences (Xiang, et al., 2017). Creative strategies such as cultural light shows are widely used in tourism to enhance tourist experience and increase local distinctiveness (Giordano & Ong, 2017). Light shows are like the exhibition in museum where the spatial, contextual and technological advancements determine the presentation, nevertheless still provides a completely unique and immersive experience than a museum (Acosta, 2013).

Lights have been used primarily for security purposes. Eventually, light was adapted for lighting urban centers for aesthetic purposes as well. Light festivals in Europe have been organized since a very long time and particularly in France light events and festivals emerged as Son et Lumière. 'Son et Lumière' refers to the technique of illuminating buildings and outdoor spaces with dramatic lighting, with music synchronization, specifically designed for entertainment purposes (Lovell & Griffin, 2018). Besides, in different parts of the world lights were used for religious or cultural ceremonies like Deepawali in India and Nepal, lantern festival in China, and so on. The use of lights in touristic sites has led to rise in 'nocturnal destinations.' These nocturnal destinations are in vogue, and it occurs when the traditional day-time tourism is shifted to night-time tourism (Zong & Kamal, 2022).

Tourism is a part of the entertainment industry, and it not only encompasses places of interest, but also the experience of place generated through physical attributes (Wang, 1999; Ryan & Collins, 2008). Light festivals using artificial light are a tool to build a distinctive brand of a city (Zielinska-Dabkowska, 2016). These events add value to existing tourist sites and add more value to those places which do not have particular historical heritage (Zielinska-Dabkowska, 2016; Camprubí & Coromina, 2019). Light and illuminations-based events are gaining popularity to attract visitors during low season and low rush hour (Eldridge & Smith, 2019). With authentic artefacts being overshadowed, the modern tourist increasingly seeks mediated experiences that are more frugal and affective (Edensor, 2005).

Light and Sound shows are often referred to as light shows that make use of archaeological monuments or temples as canvases to project lights on them, simultaneously narrating history of the site (Acosta, 2013). Light shows simulate heritage buildings with fantasy and motion that surpasses reality by creating hyperreal structure (Lovell, 2018). However, light shows are not limited within archaeological monuments and can also be observed in modern construction like in Singapore, Hongkong, China, and so on. While there are some occasional light shows in special occasion and months, this study only covers few light and sound shows that are operated on a daily basis.

Light shows offer a phenomenological experience blending technology with archaeological data and mythological narratives (Acosta, 2013). Light shows technology (LST) is defined as "a performing technology combined with lighting, audio, video, water fogging and electronic fireworks based on the attributes of destination and cultural connotations" (Zong & Kamal, 2022, p. 39). Four modes of light shows are identified in China that are: CBD building light show, Tourism sites light show, Public area light show and special-interest light show.

The most basic elements of technology which are lights and sounds have been widely used for a long time, but very few studies have been done on the use of these technologies to develop tourist products. Tourism literatures seem to have neglected this field of tourism as very little research is done on this aspect. Plethora of studies are conducted in the use of light as medium to create an attractive urban site (Zielinska-Dabkowska & Xavia, 2018), light festivals as an alternative tourism product, light shows as means of creative tourism and so on. But light and sound shows particularly the tourist site light shows are not studied. The various elements of light and sound show which impact tourist experience has also not been studied.

Thus, this research is aimed at understanding the most influential element in shaping tourist's satisfaction during light and sound shows. Through a mixed- research approach using thematic analysis and sentiment analysis, vital elements of such shows and their overall appeal is identified. This research also identifies the likelihood of recommending such shows to others. This research has both theoretical and practical implications as it contributes significantly to the knowledge of commercially driven attractions, especially related with nighttime tourism; as well as has practical implications to businesses, policy makers and destination management organizations as it reveals what visitors look forward to in different types of shows. The shows chosen encompass shows operated in archaeological sites, traditional architectures, and tourism focused areas. Therefore, due to such heterogeneity, the study is applicable in enhancing features that visitors most pay attention to that influences their decision of recommending others.

2. LITERATURE REVIEW

Light and sound show is a relatively untouched topic with only a few research done on it. Among the earliest study on light and sound shows is a study by Elizabeth Marlowe, who examined Acropolis light show of Greece. She has criticized the light show as a museum display where only selective history, mostly accompanied by political agenda are presented, while deliberately leaving any alternative histories (Marlowe, 2001). Edensor (2005) explored various technologies in portraying William Wallace with audio-visual installments at Wallace Monument. The study identified physical and sensory aspects had more impact on visitors than audio-visuals, although these installments aided in better interpretation of the site (Edensor, 2005). Acosta's (2013) study reveal contradiction between tourism advocates and nationalists regarding commoditization of archaeological sites in Mexico caused by installation of light shows. But light shows are not limited to archaeological sites and manifest as variety of commercialized shows. Visitors engage in different ways, while some quietly observe large and impressive displays, some on the other hand actively interact with installations; thus, creating a range of emotional and sensory experiences (Edensor, 2015).

Light is seen as an important part of the tourism and urban development sector. Giordano & Ong (2017) highlight that light festivals and events have been successful in attracting visitors, thus there is practice of imitating or a process of 'serial reproduction'. The study emphasizes the importance for hosting cities to have a clear theme of the light events so that it becomes distinct from their competitors (Giordano & Ong, 2017). A study regarding the issues related to use of LED lights in heritage sites such as aesthetic issues have been identified with a reference to Italian cities

(Zielinska-Dabkowska & Xavia, 2018). The color of light influences the atmosphere and ambience of the sites, so replacing traditional luminaries with LED has caused significant dissatisfaction among the local community (Zielinska-Dabkowska & Xavia, 2018). The use of lights in tourist sites encourages nighttime activities as well as supports political agenda like it gives a sense of security implying that the site is indeed very safe to visit even during night (Eldridge & Smith, 2019). Archaeological sites are used for light shows which raises the debate of authenticity and commodification. Light shows are designed to be experientially authentic (Lovell & Bull, 2017).

Study by Lovell (2018) examines light shows in terms of authenticity grounded in hyperreality theory. Research by Zong and Kamal (2022) throws some light on the tourist experience and light shows. They have identified three main emotions: delightful, nostalgic and inspiring (Zong & Kamal, 2022). But other emotions like disappointment or dissatisfaction are not taken into consideration. Light events and festivals are an alternative to traditional tourism, so called creative tourism where lights are used creatively to showcase different festivals and creativity of artists ((Li & Kovacs, 2021). While most research shows use of artificial lights in a positive way to promote tourism providing diversity and alternative tourism some have identified negative aspects of it. Artificial light is considered as a potential source of environment pollution (Brons, et al., 2008).

Despite these studies, there remains a significant research gap in commercially driven light shows and how different elements play crucial roles in shaping visitor's satisfaction during such shows. This research fills these gaps by examining the influential factors shaping visitor satisfaction in light and sound shows, using shows from diverse geographical and cultural background. It also investigates the likelihood of visitors recommending these shows, providing insights into the practical implications for businesses, policymakers, and destination managers.

3. RESEARCH METHODOLOGY

3.1 Data Collection and Sampling

Understanding what shapes visitors experience in light and sound shows and likeliness of recommending these shows to others requires a holistic research approach. To ensure diversity and wide implications, shows were chosen from different geographical and cultural context. The shows chosen for the study are:

1. Wings of Time (Singapore)
2. Light and Sound Shows- Pyramid of Giza (Egypt)
3. Amber Fort Sound and Light Show (India)
4. Flagstaff Hill Maritime Village Light Show (Australia)
5. Aura Invalides Immersive Show (France)

This study utilizes online reviews for data collection, and the data are collected from different websites. Online travel sites which receive significant travel review is Tripadvisor.com, so this platform has served as primary data source. Similarly, Google reviews is proven to be significantly important for data collection regarding popular attractions (like Wings of Time, Flagstaff Hill

Show). Other two sites are also data source for the study like Viator and Civitatis. The use of several website is because a single online site did not have enough reviews for all the chosen attractions.

A total of 228 reviews are collected from 5 shows. The shows were selected through convenience sampling prioritizing the shows with accessible and extensive reviews enough for data analysis compared to other similar shows of the countries chosen. Along with that, the shows are also chosen based on their popularity. In 'Things to do section' for each touristic city, these shows fall on top five activities to do like Tripadvisor's ranking for Flagstaff Hill Maritime Museum Light show #4 of 54 things to do in Warrnambool, Victoria, Australia; Wings of Time #1 of 3 Theater & Concerts in Sentosa Island, Singapore, and Sound and Light Show - Amber Fort #2 of 8 Theater & Concerts in Jaipur, India. Aura Invalides, France and Light Show in Pyramid of Giza, Egypt are selected for their general popularity among tourists compared to other similar light and sound shows of these countries.

After deciding on the online websites and shows to investigate, the reviews are selected based on recency and relevance. For a precise and more updated results the reviews from only between 2023/December and 2024/ December is gathered. Similarly, for relevance the reviews with stars (star-rated 1-5 stars) or with couple word feedback like 'Great Show' or 'Not worth it' are not considered for this study. So, the reviews which had at least 10 words and directly related to light and sound shows are only taken. To reduce biasness and inaccuracy of the data, the filter available in Tripadvisor as 'popular tags' and 'people often mention' in Google review is applied. These light and sound show tags helped in narrowing down the data and provided more precision.

With a total of 228 reviews sample, over 40 reviews for light and sound shows from each country was collected. Number of reviews from each shows are Wings of Time n= 48, Flagstaff Hill Light show n= 44, Pyramid Light show n= 46, Amber Fort show n= 43, Aura Invalides n= 47. The slight variation in review number is because some shows received large numbers of review compared to other, but through review selection process mentioned above each show accounted for over 40 reviews.

3.2 Data Analysis

The data collected from online reviews are processed, analyzed and interpreted using mixed approaches. Firstly, the data is thematically analyzed and then a quantitative analysis is conducted. Qualitative research approach is designed to understand the specific features of human experience and to support the investigation of experience (Polkinghorne, 2005). Qualitative thematic analysis of travel reviews is a key component of data analysis for this study. Thematic analysis is used to explore questions about people's experiences as well as the factors and social processes that influence and shape particular phenomena (Braun & Clarke, 2013).

Thematic analysis is a foundation for qualitative approach while offering flexibility to determine themes in a number of ways (Braun & Clarke, 2006). Themes in data are identified either through a theoretical method or inductive method, while level at which themes are identified is in semantic or latent level (Braun & Clarke, 2006). This study is completely data-driven; therefore, a bottom-up/ inductive approach is applied in analyzing themes. In semantic level, themes are

identified in surface meanings of data, and the researcher is not looking anything beyond what participants have said or written.

Braun & Clarke's (2006) 6 phases of thematic analysis include: 1. Familiarizing with data; 2. Generating initial codes; 3. Searching for themes; 4. Reviewing themes; 5. Defining and naming themes; 6. Producing the report. On basis of this framework, the researcher went through the online reviews collected. Visitor experiences in the light and sound shows in five different nations were coded separately for each show. After, creating initial set of codes through line-by-line reading or inductive analysis, the codes were refined into several recurring themes. After careful review of the generated themes, they are named into 6 categories.

For quantitative analysis, the themes are classified into three sections: positive, negative and neutral. The reviews that contained positive words like 'enjoyed', 'worth it', 'recommend it', 'friendly', 'kind', 'amazing'; negative words like 'boring', 'outdated', 'waste of time', 'no value of money', 'disorganized'; and neutral reviews like 'average' are segregated for sentiment analysis. The frequency of codes is more than the review count as most of the feedback have comments on more than one element of the show. For a narrow analysis the frequency count of codes are considered as a single review (Table 1, 2, 3).

Table 1. Initial codes of reviews of Singapore and Australia

Initial coding- Singapore	Frequency	Initial coding- Australia	Frequency
Entertaining	31	Entertaining	35
Recommendation	27	Service excellent/staff	13
No value for money	2	Recommendation	23
Good ambience	7	Average lighting	1
bad experience	3	Ordinary sound effects	1
Disorganized/ cancellation	1	Outdated show	2
Nice storytelling	9	Good lights/visual	15
Great audio/visual effects	19	Nice storytelling	11
Special effects	19	Creative/educational	12
Adults friendly	3	Kids friendly	7
Kids Friendly	7	Disabled friendly	2
Poor storyline	4	Dissatisfied	1
Short duration	4		
No need of premium tickets	3		

Source: Author's analysis of online reviews from Tripadvisor.com & Google reviews

Table 2. Initial codes of reviews of Egypt and India

Initial Coding-Egypt	Frequency	Initial coding – India	Frequency
Entertaining	10	Entertaining	9
Service excellent	5	Recommendation	1
Recommendation	6	No value for money	20
No value for money	9	Average lighting	7
Average lighting	4	Outdated show/poor quality	10
Ordinary sound effects	5	Bad experience/disappointed	18
Great Guide	3	Disorganized/ parking inconvenience	9
outdated show	9	Narration boring/wrong history glorified	11
Poor ambience	4	Bad Lighting	13
bad experience	3	Not resourceful/poor utilization of Historic fort	7
Disorganized	2	Not kids friendly	3
narration boring	3	Too history focused	7
Unprofessional Travel operator	3	Good voice	7
Terrible audio visual	6		
Nice storytelling	3		

Source: Author's analysis of online reviews from Tripadvisor.com, Google reviews and Viator.com

Table 3. Initial codes of reviews of Frances

Initial coding – France	Review
Entertaining	20
Recommendation	8
No value for money	9
Average lighting	5
Ordinary sound effects	6
Poor ambience/crowded	2
Good lights	13
bad experience/disappointed	13
Disorganized/ amenities lacking	13
narration boring/less history/ lack of creativity	8
Long Queue	2

Source: Author's analysis of online reviews from Tripadvisor.com & Civitatis.com

4. DISCUSSION AND FINDINGS

The results yielded through thematic analysis and sentiment analysis provide new insights on the underexplored aspects of light and sound shows. The 6 themes (Figure 1) are discussed briefly:

a. *Entertainment value*

The light and sound show provided high entertainment value in Singapore and Australia where the show was enjoyed by most of the reviewers. The shows from this country were described as immersive and unique as well as recommendation was higher compared to other shows. Reviews from Singapore suggest that visitors enjoyed the ambience and are likely to recommend it.

> *"Amazing light and water experience. An experience not to be missed. Reasonably priced. Photos don't do justice. Highly recommended."*

Show from Australia was also rated to be most educational, and least boring though the content was largely educational. A review from Flagstaff Hill Maritime Light and Sound show, Australia describes the show as:

> *"Flagstaff Hill Village in Warrnambool offers an unforgettable experience with its captivating night show and exceptional customer service. The storytelling and special effects were mesmerizing, and the front staff were friendly and professional. Highly recommended for anyone seeking a memorable and enjoyable visit"*

Aura Invalides received mixed reviews with some of them mentioning the show as entertaining but not recommending it. The Pyramid show in Egypt was also not much entertaining, with frequent complaints of outdated technology. The Jaipur Fort light show was the most disliked and negatively reviewed shows among all.

b. *Value for Money*

Recommending the shows to other is one way to identify if someone finds the show worth it or not. The shows of Singapore and Australia received positive reviews and more recommendation clearly indicating that they were worth the money. People felt like the price paid is reasonable to the experience they gained. But some reviews (n=3) described unnecessary pricing for the premium shows at Singapore with no additional facilities except for the chair support. Also, there were couple reviews that claimed the show to be a bit pricey for 20 minutes presentation. Visitors in France were also not happy with the price they paid. A review of the show says:

> *"The experience is nice and the light and sound effects are well done and highlight the place. On the other hand, it's really not worth the €22 we spend per person for 50 minutes. There are beginning to be abuses and excessive prices in certain shows and exhibitions."*

Similar to France show, Pyramid Light show also received negative reviews in terms of the price value with 9 bad reviews claiming not worth the money and time. Again, the worst show indicating waste of time and money is show from India with 20 reviews directly mentioning it. One of the reviews is:

> *"Below par substandard show by Amer fort management team. Price is at 250 per person but the quality shown in light and sound show is very poor if you compare with other heritage places ASI hosted shows. Poor lightings on the walls of the fort was unexpected. Wastage of money. This review is of August 2024. I advice avoiding this and save time and money."*

c. *Audio/Visual Effects*

Wings of Time show in Singapore stands out among all with a high rating on good audio-visual performance. The use of pyrotechnics was applauded not just for engaging the audiences but also for displaying creativity. This show is closely followed by Flagstaff Hill show where visitors enjoyed the lights and sound effects, with only two bad reviews one claiming the sound was not that great and other tagging the show as outdated. The show at France was rated above average with 13 reviews that rated audio/visual effects to be good while 5 reviews claimed to have average lights. Biggest disappointment is observed in shows from Egypt and India. Both the shows are highly rated as outdated and just blinking of lights. Pyramid show received 9 reviews as outdated with 6 reviews for terrible audio/visual, whereas Amber Fort show received 13 negative reviews for lights and 10 as outdated. A review of Egypt is presented here:

> *"The entire light and sound show was disappointing. The whole thing felt so dated and amateurish with basic lighting shinning on different parts of the Pyramids as boring and unclear voices narrated the history of the pyramids. In fact was told all the light and sound shows at various ancient sites across Egypt are the same standards. Won't recommend."*

Although light was disappointing in India show, voice over of the show gained good reviews. A famous Bollywood actor narrated the history of the place, so people enjoyed hearing his voice.

d. *Storytelling*

Storytelling in the show was strongest in Australia where people found it to be both entertaining and educational. Singapore show did not have a strong storyline yet because of the overall presentation and modern technology, people still enjoyed the show. Pyramid show received both negative and positive reviews regarding the story narration but most of the negative reviews were due to poor technology that couldn't properly present the story. The issue in narration is seen in France and India. The visitors were dissatisfied with wrong narration of history in India, whereas in France the narration was boring and only some history was covered which didn't meet visitors' expectations. Some reviews regarding the France and Indian shows are:

> *"The dome and the chapels are well highlighted. On the other hand, neither the crypt, nor the tomb, nor the altar are. Napoleon is barely mentioned. It's a shame to do the show around Napoleon's tomb to barely integrate his story into the scenography"*

> *"Recently saw light & sound show at amber fort. It's a total disappointment . Dont waste ur money & time on it. Its not worth watching. Just lights switch on & off &*

> *there is a boring commentary for 1 hr which is full of utter lies ,, glorifying mughals & demeaning Hindus."*

e. Accessibility and Organization

Although this is a light and sound show, there were other elements that influenced the experience of visitors. The issue of accessibility was not persistent in any show except for Amber fort show where people complained of having to walk for almost 15 minutes to reach the show spot. Parking facility was also at farther distance so mandatory walking made experience shallow.

In terms of organization, Australia Flagstaff Hill show received highest positive reviews with most reviews highlighting friendly nature of staff. The experience was enhanced by a good service and hospitality which provoked visitors to recommend the shows to others. Organization related reviews were not observed in Singapore. Pyramid show received complaints on poor organization from tour operators, but the service from tour guide was exceptional. The reviews also show that visitors were more or less impressed by organization. While France was appreciated in terms of light and sounds, it received most negative reviews for organization. People complained on having to wait outside for a long time and there was a long queue. Besides, most reviews mentioned of poor amenities like toilet, which was very far from the show location. Similarly, people were very very dissatisfied with Amber fort show, not only because of the audio/visual effects and storyline, but also because of disorganization of the show. Visitors showed their dissatisfaction with the utilization of the historic fort accusing of misusing it and not being resourceful. A very dissatisfied review of the fort is:

> *"Disappointed and heart breaking experience. save your time and money....Such a waste and shame for a potential historical site to make it as one of a kind show got wasted. Absolute horrible lighting to reflect the story narrated."*

f. Suitability for Diverse Audiences

The light and sound shows were also evaluated on the basis of facilities provided to diverse audiences. Flagstaff Hill show was kids and disabled friendly with 9 positive reviews, while Singapore was more kids friendly, and adults also enjoyed it with 10 good reviews. There was not any mention of audience suitability in Egypt and France shows. Amber Fort light and sound show was not kids friendly because of too much historical context that suited only those with deep history knowledge. Here are few reviews from Australia, Singapore and India:

> *"Night show was amazing. Wonderful experience and also suitable for people with mobility issues as they offer a mobility bus down to the night show."*

> *"Do yourself a favour and GO. This was a highlight of our Singapore trip. Our 7 year old was out of his seat the whole show with excitement. We paid for the 'better' seats, and we would again, it was nice to have a back rest, but not essential. We all said that we would have happily gone back the following night."*

> *"Decent atmosphere. It's more sound than light though. Worth a visit if you have time. Kids may not like it unless they are interested in history. Lots of mosquitoes*

> *too. Entrance is quite far from Amber Fort entrance so make sure you keep at least 15-30 mins to get there, depending on whether you are driving or walking. And there's a walk from car park to the venue."*

Other factors like ambience also impacted visitor experience like in case of Egypt, people were disappointed with loud noise of vehicles passing by and loud music of local pub.

Figure 1. Bar chart demonstrating 6 themes generated through thematic analysis across 5 shows
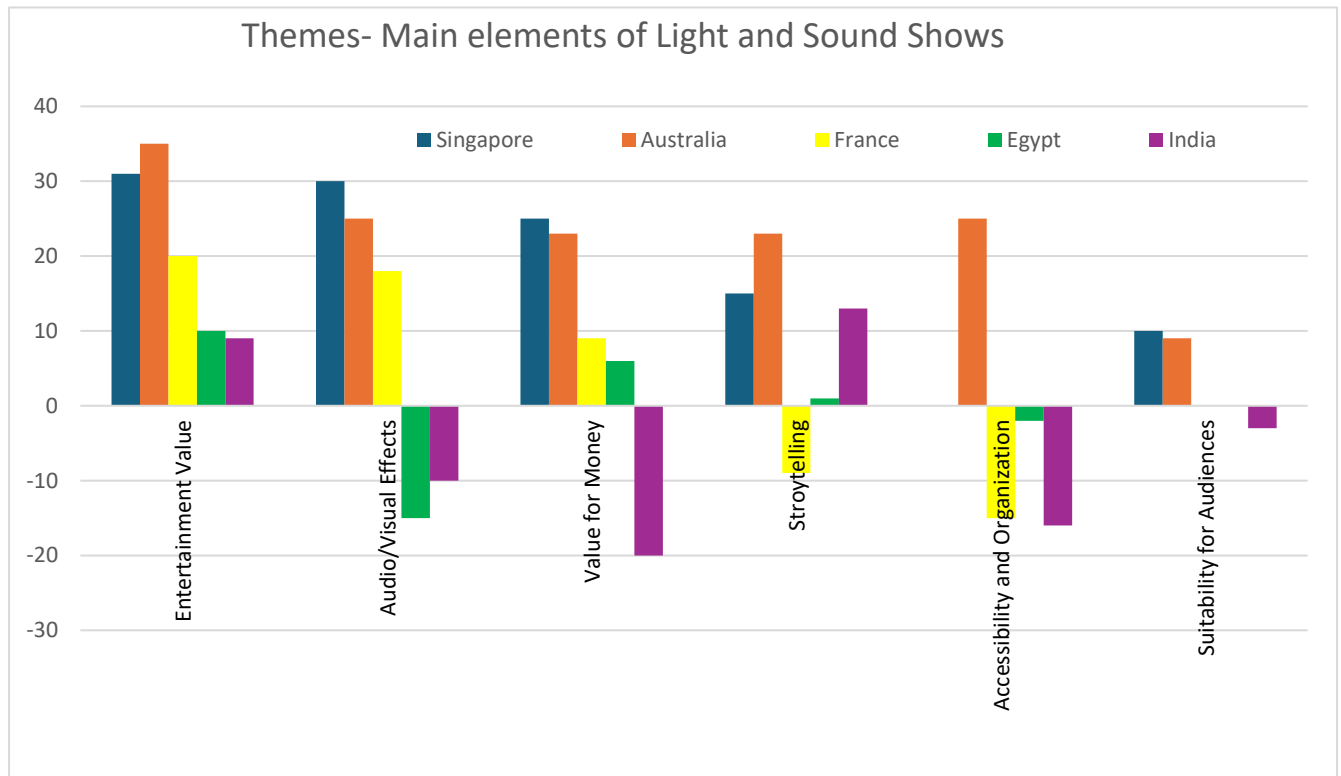
Source: Author's analysis of themes in bar chart developed through excel

g. *Statistical Analysis*

A statistical test was conducted in SPSS to determine the likelihood of recommendation. A descriptive analysis was performed where mean percentage for three sentiments positive, negative and neutral was generated. The show which has mean percent between 100-50% ranked as high with value 1, highly recommended; between 50-30% with moderate value of 2, moderately recommended; and between 30-0% low value of 3, not recommended or low recommended (Table 4).

Table 4. Sentiment- analysis for 5 light shows

Location	Positive %	Negative %	Neutral %	Likelihood of Recommendation		
	Mean	Mean	Mean	High	Moderate	Low
Australia- Flagstaff Hill Maritime Museum Light show	91.3	4.35	4.35	1	0	0
Egypt- Light Show Pyramid of Giza	20.41	61.22	18.37	0	0	1
France- Aura Invalides Immersive Show	45.45	29.55	25	0	1	0
India- Amber Fort Light and Sound Show	19.15	65.96	14.89	0	0	1
Singapore-Wings of Time	88.64	6.82	4.55	1	0	0

Source: SPSS sentiment analysis using thematic data obtained from thematic analysis

With minimal negative and neutral response, receiving highest positive review of 91.3% and 88.64%, Australia and Singapore shows have highest recommendation level. The shows are widely appreciated for wonderful presentation in terms of visual effects and hospitality. In contrast, Pyramid light show of Egypt and Amber fort light and sound show are criticized heavily with positive review of 20.41% and 19.15% respectively. These two shows received most negative reviews with India's show accounting 65.96% and Egypt show 61.22%. Outdated technology and poor narration were main reason for a bad experience on these shows resulting low recommendation among all shows. The Aura Invalides show of France demonstrate moderate likelihood of recommendation, with only 45.45% of positive sentiment. The negative review and neutral feedback are quite similar recording 29.55% and 25% respectively. Although, visitors enjoyed the audio-visual effects and ambience, disorganization and poor storyline impacted the overall experience. The findings reveal that high satisfaction and likelihood of recommendation is driven by various factors including advanced technology, proper storytelling, engaging experience, effective management.

CONCLUSION

This study examined the factors that influenced visitors experience in light and sound shows which ultimately affected in being recommended to others. The findings of the study underscore that the shows in Australia and Singapore provide immersive and valuable experiences with highest recommendation as both shows have high entertainment value mostly generated through advanced technology, good service, suitability for diverse audiences, and engaging storyline. On the other hand, Egypt and India shows have poor performance with highest negative sentiments and low likelihood of recommendation. These shows are rated negatively primarily due to use of outdated technology, weak story, false narrative (in case of India) and poor management. Besides, these shows also fail to provide experience worth the time and money spent, thus leading to low chances of being recommended. Lastly, occupying the middle ground, France show has a huge potential to offer an immersive experience, but the disorganization particularly lack of amenities; and poor storytelling has resulted in moderate recommendation.

This study supports the existing literatures in highlighting the importance of other elements for higher visitor satisfaction (Edensor, 2005). It also aligns with emotions generated in previous studies (Zong & Kamal, 2022). However, this research extends beyond these studies by investigating visitors' sentiment not only in terms of positive emotions but also negative and neutral. Similarly, this research identifies several elements through thematic analysis that impact the satisfaction level among visitors and demonstrates a clear correlation between satisfaction level and likelihood of recommendation as higher satisfaction led to higher recommendation.

Tourism enterprises, local government and destination management organization can benefit from this study. Commercially driven shows have primary motive of profit generation, but in a long run show with low satisfaction and likelihood of recommendation will be out of business. Therefore, related tourism stakeholders need to continue good performance like in Australia and Singapore to ensure sustainability; while shows of France, Egypt and India needs need critical improvements. As the findings suggest, it is necessary for organizers and government/policy makers apart from advancing the technology to be resourceful and serve a diverse audience.

The research has some limitations as it only includes some of the major daily shows of few countries. This research is also limited in terms of data collection which has utilized online reviews only. Thus, in the future, further research can be conducted in seasonal and special shows which can present even more clear picture of what features are particularly important during such events through direct interaction with the visitors.

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