



Digital Storytelling Guideline Applied with Inclusive Design for Museum Presentation from Experts' and Audiences' Perspectives for Youth

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Abstract: *The majority of young tourists are not interested in museums since most presentations do not make a connection with this group. Moreover, most digital storytelling presentation guidelines are created based on expert recommendations, and not on audience perspectives and needs. Hence, the aim of this research is to cocreate and propose a digital storytelling presentation guideline including both experts' and audiences' views to motivate young tourists to engage in museums. For experts' recommendations, seventeen face-to-face interviews were conducted. For audiences' views, thirty-seven interviews were set up to understand what they really need. As a result, this study creates nine factors for digital storytelling presentation guidelines for museums. The value of this guideline is to propose: (1) on-site presentations at the museums; (2) virtual online presentations; and (3) short presentations to attract prospective tourists to come to museums.*

Keywords: *Digital Storytelling, Presentation, Museum, Youth, Cultural Tourism, Guideline, Audience*

Introduction

It has been noticed throughout history that most young visitors do not appreciate or enjoy stories or information provided in museums. Furthermore, they are not motivated or interested in visiting real places or museums (Kasemsarn and Nickpour 2017; Kasemsarn 2022; Richards 2018; Rizvic et al. 2012). Several studies also reflect that most museums worldwide, including in Thailand, provide information about history that is too formal, academic, old-fashioned, and designed for a specific group of people interested in such in-depth information. Such formal settings do not appeal to everyone, especially young people. These issues will persist until the latest technology changes (Boukas 2008; Brida, Nogare, and Scuderi 2015; Kasemsarn 2022; Richards 2018). Therefore, the first research problem of this study is the youth's lack of interest in museum presentations.

For this research opportunity on how to increase young tourists' enthusiasm for museums, this study adopts the digital storytelling technique, which is widely used to explain all types of stories, narratives, films, advertising, presentations, interactives, and novels via digital systems (Bahtiar, Segara, and Suyoto 2020; Miller 2020; Ohler 2013; Psomadaki et al. 2019). This research defines digital storytelling as a medium using "digital technology to combine a number of media into a coherent narrative" (Ohler 2013, 16). Different countries have different

age ranges to define the youth of a country. In this article, researchers selected the United Nations' definition of youth as "those persons between the ages of 15 and 24 years" due to its universal recognition (United Nations 2022).

Currently, several cultural and heritage sites worldwide have already been widely digitized as virtual museums or use applications with short visual presentations to make difficult stories or subjects seem more alive, concise, connected, and attractive to viewers (Bollati, Ilaria, and Marta 2022; Chiao, Chen, and Huang 2018; Hein 2004; Kasemsarn and Nickpour 2016; Psomadaki et al. 2019). Moreover, results from previous studies support the idea that digital storytelling presentation can enhance online users' experiences and increase online users' motivations to visit the real places (Floch and Jiang 2015; Hein 2004; Rizvic et al. 2012).

This type of presentation could be broadly applied to different kinds of cultural presentations both online and offline; an example would be telling stories about archaeological sites, which are difficult to access physically. Moreover, advertising, presentations, short films, stories behind an exhibition in the museum, or interesting stories generated on social media as types of digital storytelling presentations, have been offered to stimulate visitor interest. In this research, the focus is specifically on digital storytelling through short presentations (e.g., short films, on-site presentations, and presentations on social media) to attract and motivate young audiences to visit museums (Kasemsarn 2022; Rizvic et al. 2012).

However, another research problem arises with regard to the creation of digital storytelling presentations because there are no guidelines focusing specifically on cultural places or museums for young tourists. Consequently, the majority of digital storytelling guidelines are created from experts' opinions and not through audiences. Therefore, this study set up the research question: "What is a digital storytelling for museum presentation guideline for youth from expert and audience views, and how can it be used to motivate them?" A new digital storytelling presentation guideline based on both experts' and audiences' views will be proposed to motivate young tourists to engage in museums.

Increasing and Understanding Diversity by Applying Inclusive Design

Tourists have a wide variety of needs in terms of the drivers to engaging in cultural places or museums. In order to design effective strategies, marketers and designers thus need to understand what users really need; in this case, what young tourists want to watch through digital storytelling. Waller et al. (2015) point out that a range of people (ages, capabilities, social backgrounds, and cultures) have a range of needs, desires and preferences. Therefore, inclusive design does not aim to design one product for all groups, but it can guide the development of an appropriate design for diversity. In the case of youth, they are not attracted to museums or cultural places because they consider it is as not being related to their interests and lifestyles. Therefore, if their interests are taken into consideration, this may prompt them to visit, understand, and appreciate cultural sites and museums (Boukas 2008; Kasemsarn 2022)

Opportunities for Digital Storytelling Within Museum Presentations

Digital storytelling techniques could be applied to different kinds of cultural presentation such as stories about archaeological sites which are difficult to access physically. Kasemsarn, Harrison, and Nickpour (2023) believe that the field of virtual technology illustrates a new opportunity for online users to access the virtual recreations of different heritage and cultural sites. Furthermore, this technology can present precise data about the actual place and attract the interest of online visitors. In addition, it increases a site's accessibility to both researchers and general tourists. For example, some historical sites might be too expensive to visit, too inhospitable, too far away, too fragile, too dangerous, or no longer exist. As an alternative to cultural tourism, virtual models with digital storytelling can present interaction with historical items or fragile objects that cannot be handled in the real world (Bollati, Ilaria, and Marta 2022; Bonacini, Davide, and Paolo 2018; Giaconi et al. 2021; Perry et al. 2017; Schofield et al. 2018). This is the way in which digital storytelling and virtual technology can support museums with regard to accessibility.

Research Gaps in Content, Category, Target Group and Audience's Needs

A Gap in Category

The eight theories of creating digital storytelling shown in Table 1 primarily focus on how to create the story in terms of general, educational, journalistic, and interactive entertainment categories, not related to the culture tourism or museum category.

A Gap in Content

Research, textbooks, or studies focusing on digital storytelling presentation for museums are mainly about how to use the latest technology to support and promote museums. For example, research on the early age of digital storytelling presentations—from 2000 to 2010—reflects that most topics are about using digital storytelling for on-site visitor experiences through the presentation of 360° images, 3-D animation, graphics, movies, and high-resolution images to create realistic experiences (Hein 2004; Rizvic et al. 2012). After 2010, due to rapid changes in technology, most research studies present multiple mobile technologies applied to digital storytelling. Examples are the use of mobile GPS to present a map (Christodoulakis 2014; Jantakoon et al. 2019; Psomadaki et al. 2019) and augmented reality (AR), which illustrates stories at the real sites through the camera and screen (Floch and Jiang 2015; Jantakoon et al. 2019; Psomadaki et al. 2019). Furthermore, some studies focus on sharing and providing feedback on social media and customizing and personalizing information to match users' interests (Clarizia et al. 2017; Vrettakis et al. 2019).

A Gap in Target Group

Several studies state that tourism industries ignore the young tourist group for cultural tourism because they assume that this tourism is only for mature visitors (Boukas 2008; Kasemsarn and Nickpour 2017).

A Gap in Audience Needs

Most of the guidelines regarding creating digital storytelling works are proposed and written by experts and researchers, not audiences. Some studies try to focus on audience engagement and participation through interactive systems (Psomadaki et al. 2019). However, there is no direct guideline for creating digital storytelling works based on the audience’s perspectives and needs.

In brief, research on how to create digital storytelling reveals that it mostly addresses general categories and not museums specifically. Additionally, the majority of digital storytelling research from 2000 to the present is about how to apply the latest technology for presentation, not about creating the story structure. Most research and tourism industries do not focus on youth as the target group. There is also a lack of information regarding audience needs regarding digital storytelling. Therefore, there is an opportunity for this research to fill these gaps (in category, content, target group, and audience needs) by creating this guideline.

The Famous Guideline for Digital Storytelling Presentation

This research seeks to collect all famous digital storytelling guidelines in all categories. The criterion for selection is that each guideline has more than ten citations in academic books and journal articles; the guidelines are presented as eight digital storytelling guidelines in Table 1. However, all of them focus on general, educational, journalistic, and interactive entertainment purposes, and are not meant for museums.

Table 1: Lists of Digital Storytelling Guidelines from Eight Experts

	<i>Guidelines/Authors</i>	<i>Elements of Each Guideline</i>	<i>Category</i>	<i>Citation</i>
1.	Take six: elements (Porter 2004)	Living in your story; unfolding lessons learning; developing creative tension; economizing the story told; showing not telling; developing craftsmanship	General	12
2.	The seven elements of digital storytelling (Lambert and Hessler 2018)	A point of view; a dramatic question; emotional content; the gift of your voice; the power of the soundtrack; economy, pacing	General	631
3.	Six elements of DST (Salpeter 2005)	Personal; begin with the story or script; concise; use readily-available source materials; include universal story elements; involve collaboration	General	46
4.	Expanded and modified digital storytelling elements (Robin 2008)	The overall purpose of the story; the narrator’s point of view; a dramatic question or questions; quality of the images, video, and other multimedia elements; use of a meaningful audio soundtrack; the choice of content; pacing of the narrative; good grammar and language usage; economy of the story detail; clarity of voice	Education	289

	<i>Guidelines/Authors</i>	<i>Elements of Each Guideline</i>	<i>Category</i>	<i>Citation</i>
5.	Story elements (Ohler 2013)	Point of view; emotional engagement; tone; spoken narrative; soundtrack music; role of video and performance; creativity and originality; time; story length and economy	Education	230
6.	A ten-step development checklist for creating an interactive project (Miller 2020)	Premise and purpose; audience and market; medium, platform, and genre; narrative/ gaming elements; user’s role and point of view; characters; structure and interface; fictional world and setting; user engagement; overall look and sound	Interactive entertainment (games, applications, new technologies)	274
7.	Dimension star: models for digital storytelling and interactive narratives (Schafer 2008)	Concreteness; user contribution; coherence; continuity; (conceptual) structure; stage; virtuality; spatiality; control; interactivity; collaboration; immersion	Interactive entertainment (games, applications, new technologies)	11
8.	Five elements of DST (Paul 2014)	Media; action; relationship; context; communication	Journalism	31

The New Digital Storytelling Presentation Guideline for Museum Presentation

The process of constructing the new guideline was that each element in every guideline was initially written on a separate card. Sixty-four elements were derived from the eight original guidelines as presented in Table 1. In addition, the researcher asked three PhD students undertaking major design research in London as coders to group all digital storytelling elements according to the similarity of definitions. Elements that do not match will not be considered in this guideline. After a discussion, all the coders decided to group the elements into nine factors. The construction of this guideline is illustrated in Table 2.

Table 2: The New Digital Storytelling Presentation Guideline Composed of Eight Digital Storytelling Theories

<i>Factors</i>	<i>Explanation</i>
1. The storyteller’s point of view	What is the main point of the story and what is the perspective of the author? (Lambert and Hessler 2018)
2. A key question	A key question that keeps the viewer’s attention and will be answered by the end of the story (Lambert and Hessler 2018)
3. The purpose	Established a purpose early on and maintains a clear focus throughout (Robin 2008)
4. Story structure	What are the major events or challenges during the narrative? (Miller 2020)
5. Economy	Using just enough content to tell the story without overloading the viewer (Lambert and Hessler 2018)
6. The storyteller’s voice	Storyteller gives narrative the appropriate amount of focus in their story (Ohler 2008)
7. Soundtrack	Music or other sounds that support and embellish the story (Lambert and Hessler 2018)
8. Media	What is the media (e.g., mobile phones, TV, or the Internet)? (Miller 2020)
9. Background	What is the world and where is it set? (Miller 2020)

Method

Interviewing Seventeen Digital Storytelling Experts

After the creation of the new digital storytelling guideline, seventeen face-to-face and online interviews (Skype) were conducted from December 2015 to March 2016. The structured interviews focused on how to use each element of this digital storytelling guideline to motivate cultural tourism for the young tourist group. In addition, the seventeen interviews were separated into four groups: (1) Thai academic experts with an academic position (e.g., assistant professor, associate professor, or professor) or a doctoral degree in a related area to receive academic opinions; (2) Thai industrial experts with more than five years of experience in digital storytelling to get realistic views of the industry; (3) young Thai industrial experts with less than five years of experience in digital storytelling to get fresh ideas and trends; and (4) international academic and industrial experts with at least five international publications or worldwide broadcast experience in digital storytelling to get global points of view and trends.

Table 3: Seventeen Expert Profiles in Digital Storytelling Who Were Interviewed

No	Categories	Interviewee	Gender	Age	Occupation	Experience
1.	International academic and industrial experts	Expert 1 (Bosnia and Herzegovina)	Female	48 years	A lecturer	15 years
2.		Expert 2 (Denmark)	Male	40 years	Director and animator	19 years
3.		Expert 3 (England)	Female	40 years	A lecturer	6 years
4.		Expert 4 (Malaysia)	Male	34 years	A lecturer	5 years
5.	Thai academic experts	Expert 5	Male	62 years	A lecturer	30 years
6.		Expert 6	Female	45 years	A lecturer	20 years
7.		Expert 7	Female	51 years	A lecturer	29 years
8.		Expert 8	Male	51 years	A lecturer	15 years
9.		Expert 9	Male	39 years	A lecturer	15 years
10.	Thai industrial experts	Expert 10	Female	32 years	Art director/ story designer	10 years
11.		Expert 11	Male	33 years	Animation supervisor	10 years
12.		Expert 12	Male	30 years	Story board artist	10 years
13.		Expert 13	Female	39 years	Head of animator	15 years
14.		Expert 14	Male	31 years	Director	10 years
15.	Young Thai industrial experts	Expert 15	Female	25 years	Animator	4 years
16.		Expert 16	Female	25 years	Concept artist	4 years
17.		Expert 17	Female	27 years	Concept artist	5 years

In addition, the Item-Objective Congruence (IOC) index (Rovinelli and Hambleton 1976) was applied to test that the nine interview questions could answer the research objectives by sending an email to three experts with PhD degrees in art and design. The IOC data showed that nine questions in Table 4 satisfied the IOC criteria of over 0.5.

Table 4: All Nine Interview Questions for Experts and Audiences

No.	Elements	Questions for Interviewing Experts and Audiences
Q1	The storyteller's point of view	Experts: What "storyteller's point of view" (the first or third point of view) will you use in presentations to increase motivation in museums for youth and why?
		Audiences: Do you know the meaning of "point of view" in storytelling? Which point of view or style do you prefer watching in cultural tourism presentations and why?
Q2	A key question	Experts: What style of "a key question" (the main concept or a question that will be answered by the end; for example, what is the origin of Thai people?) will you use in presentations to increase motivation in museums for youth and why?
		Audiences: What style of story or concept of cultural tourism presentation do you like and why?
Q3	The purpose	Experts: What "purposes" (such as to initially understand the meaning of cultural tourism, to be impressed or to lead them going out...) will you set up in presentations to increase motivation in museums for youth and why?
		Audiences: What is the aim of the cultural tourism presentation you want to watch?
Q4	Story structure	Experts: What style of "story structure" (basic, one or no climax, or many climaxes) will you use in presentations to increase motivation in museums for youth and why?
		Audiences: What style of "story structure" (basic, one or no climax, or multiple climaxes) do you want to watch in cultural tourism presentations?
Q5	Economy	Experts: What "economy" (the level of amount of information—high, moderate, low) will you use in presentations to increase motivation in museums for youth and why?
		Audiences: How much information and to what degree of seriousness (low, moderate, or high) do you want in cultural tourism presentations?
Q6	The storyteller's voice	Experts: Is it necessary to use "the storyteller's voice" and what style of voice will you use in presentations to increase motivation in museums for youth and why?
		Audiences: Is it necessary to use "the storyteller's voice," and what style of voice will you prefer watching in cultural tourism presentations?
Q7	Soundtrack	Experts: What style of "soundtrack" will you use in digital storytelling presentations to increase motivation in museums for youth and why?
		Audiences: Is it necessary to use a "soundtrack" in cultural tourism presentations? If yes, what should be the style of the soundtrack?
Q8	Media	Experts: What "medium" will you use in presentations to increase motivation in museums for youth and why?
		Audiences: In which "medium" do you prefer to watch cultural tourism presentations?
Q9	Background and characters	Experts: What "background" (real, surreal, fantasy world, or locations) will you set up in presentations to increase motivation in museums for youth and why?
		Audiences: What "background" (real, surreal, fantasy world, or locations) of cultural tourism presentations do you prefer to watch?

Interviewing Youth

The population of this research was Thai youth (15–24 years) living in Bangkok. The participants had to be 15–24 years old and have an interest in storytelling presentations. The total sample size was thirty-seven young people separated into two groups. The first group, consisting of ten participants, was set up in a department store in Bangkok in 2016. In addition, the researchers conducted interviews with another twenty-seven interviewees at King Mongkut’s Institute of Technology Ladkrabang (KMITL), Bangkok, to further their research in September 2019. There were eighteen male and nineteen female participants, with an average age of 19.7. All were studying as undergraduates at that time. Nineteen participants traveled one to three days a year for cultural tourism, twelve traveled four to ten days, and six traveled more than ten days.

The interviews focused on collecting audiences’ needs and comments for cocreation of a digital storytelling approach for museum presentations. Each participant was asked to use a digital mobile device (the iPad Mini) to visit YouTube and watch examples of presentations in museums—a selected short video and an animation. They were asked to talk about what they saw, their thoughts, and their feelings; while watching, the researcher interviewed them about what they liked or disliked, their suggestions to improve the story, characters, soundtrack, or voices, and any other keywords presented in the nine elements in Table 2. The time to complete all tasks varied from 30 to 60 minutes.

Results and Discussion

After interviewing was completed, the researcher transcribed the interviews by applying the thematic framework and coding analysis (focusing on the meaning of the whole sentence) (Ryan and Bernard 2000). For the reliability test, results were coded, discussed, and categorized into themes by three coders. The results of the interviews are ranked and presented with the number of participants’ mentions in brackets in Table 5, from experts and audiences’ recommendations, and summarized into nine elements.

Table 5: Nine Guidelines from Seventeen Experts and Thirty-Seven Audience P
resented with the Number of Participants’ Mentions in Brackets

1. The storyteller’s point of view: What is the main point of the story and what is the perspective of the author? (Lambert and Hessler 2018)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
Point of view —The first-person perspective, feeling like the storytellers are talking directly to them easily connects with this group [14].	Point of view —They do not care about first- or third-person point of view; they like good storytelling, interesting plot, beautiful scenes [20].
Characters —Using a young person to relate to and interact with the characters; i.e., teenagers will believe a younger, rather than an older, guide [5].	Characters —young or the same age as themselves, and good-looking characters [16].
Story —They do not care much about family, care only about friends. So, storytellers should focus on fun, enjoyment, excitement, or adventures with friends in cultural places [2]	Story —They are interested in all types of stories but presenting and focusing on unseen and interesting locations [6].

2. A key question: A key question that keeps the viewer’s attention and will be answered by the end of the story (Lambert and Hessler 2018)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
Key questions should be set up keeping the following things in mind: 1. This could be varied, just set up a question related to their tastes and trends (e.g., Hollywood movies, games, or music videos) at that time [4] 2. Seeking a new experience and new perspective (e.g., questions such as: “seeking a slow lifestyle; getting away from the city; do you want to know new things, experiences or new perspectives?”) [3] 3. Challenging, complex, and linked to the next stage [2]	Key questions should be set up about: 1. Something new and unique—the interesting history behind the story, not the same as anything before, that no one has heard before [11] 2. Something new related to trendy games, cartoons, superheroes, or Hollywood movies [6] 3. Questions about their futures [5]
3. The purpose: Established a purpose early on and maintains a clear focus throughout (Robin 2008)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
1. To understand the meaning and importance of cultural tourism and museum presentation because this world is new and unfamiliar to others [8] 2. To perceive something that they had never known before with new experiences and perspectives [4] 3. To make them realize that Thai culture is interesting [2]	1. To present interesting history, activities, locations, and traveling with friends via social media [12] 2. To present unseen, interesting places or stories that they could share on social media [8] 3. To present what they can get from traveling to museums [4]
4. Story structure: What are the major events or challenges during the narrative? (Miller 2020)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
Types of structure: 1. Complex, strange, many peak points and climaxes [8] 2. New, innovative, and trendy structure [4] 3. Simple and basic structure [3] Types of stories: – Love, adventure, winners, and challenges [2] – Story should relate to their friends, not family [2] Recommendation: – To attract them in the first 30 seconds – Storyteller must know the latest trends of youth from advertising, viral content, social media, music videos, or Hollywood movies [2]	Types of structure: 1. Simple and basic structure; due to short-version style, no time for complex stories [14] 2. Structure should be very fast, short, and concise, just one climax point [3] 3. We do not care about structure, just fun, amusing and exciting things [2] Types of stories: – All types of stories are acceptable, if interesting Recommendation: – Just a music video or interesting clip – Focus on highlighting information – It may not necessarily have a story
5. Economy: Using just enough content to tell the story without overloading the viewer (Lambert and Hessler 2018)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
1. Less, concise, and short information, should not present them all information [9] 2. Choose only one point/concept [4] 3. Interesting information [3] Recommendation – Use a hidden story and gimmick to attract them to find out more [3] – Use environmental pictures [2] – This group has a short concentration span [2]	1. Less, concise, and short information about locations; they will become bored with more information [21] 2. No one wants in-depth information [2] 3. Do not like too serious or formal data Recommendation – It should not be serious, it’s not a textbook or documentary film [6] – They think cultural tourism is very serious and formal; so, the presentation should be different and engaging [4] – The length should be around 30 seconds [3]

6. The storyteller’s voice: Storyteller gives narrative the appropriate amount of focus in their story (Ohler 2008)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
<p>1. Voice is necessary [12] 2. Not necessary [5]</p> <p>Style of voice:</p> <ul style="list-style-type: none"> – Present positive or funny tone, Thai people always love comedy [3] – Depends on story and screenwriting [2] – Lively, swingy, and fluctuate the voice [2] <p>Recommendation:</p> <ul style="list-style-type: none"> – Use voice when pictures cannot tell the story—for example, a voice can present the information on constructing temples [3] – Thai people are familiar with having a narrator – No character—use a voice to narrate, but with characters, let them speak – For blind people, voice is significant 	<p>1. Voice is necessary [20] 2. Not necessary [7]</p> <p>Style of voices</p> <ul style="list-style-type: none"> – Not be serious or formal [12] – Use famous presenters’ voices [8] <p>Recommendation:</p> <ul style="list-style-type: none"> – They turn the volume off when using mobile phone; so, there should be captions [10] – Use a young celebrity or famous voice to engage their interest [7]
7. Soundtrack: Music or other sounds that support and embellish the story (Lambert and Hessler 2018)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
<p>1. Soundtrack is necessary [13] 2. Soundtrack is not necessary [4]</p> <p>Style of soundtrack:</p> <ol style="list-style-type: none"> 1. Contemporary or popular music, such as pop [6] 2. Soundtrack—relate to their ages, tastes, and lifestyles [5] 3. Trendy music that could stimulate emotions to feel exciting [4] 	<p>1. Soundtrack is necessary [16] 2. Soundtrack is not necessary [11]</p> <p>Style of soundtrack:</p> <ol style="list-style-type: none"> 1. Trendy, contemporary, new, and relatable [5] 2. This group is interested in love (pop music) or adventure (rock music); it could connect many people by mass music [4] 3. Whatever style, but make them feel this is cool and stylish [3]
8. Media: What is the media (e.g., mobile devices, televisions, or computers)? (Miller 2020)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
<p>1. Mobile devices [10] 2. Video games [5] 3. Website [5]</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Youth do not watch television [4] – Use only hi-tech devices to attract this group [2] 	<p>1. Mobile devices [15] 2. Social media [11] 3. Websites [5]</p> <p>Recommendation:</p> <ul style="list-style-type: none"> – Designing presentations to support several media; youth do not use just one medium [6]
9. Background: What is the world and where is it set? (Miller 2020)	
<i>Expert viewpoint</i>	<i>Audience viewpoint</i>
<p>Background:</p> <ol style="list-style-type: none"> 1. Fantasy, surreal, ideal, or imagined world [8] 2. Real, beautiful, and interesting locations, to create a real experience [8] 3. The hi-tech or virtual world with new technology, such as the 4-D movie [5] <p>Recommendation:</p> <ul style="list-style-type: none"> – Set up the location where the target group lives [3] – Present beautiful, unseen, amazing locations to stun them [2] 	<p>Background:</p> <ol style="list-style-type: none"> 1. Fantasy, surreal, ideal, or real and beautiful locations [13] 2. More interesting and beautiful than the real world [12] 3. Blending between real world and fantasy (such as, a statue could be a tour guide) or both a real movie and animation [2] <p>Recommendation:</p> <ul style="list-style-type: none"> – Create something new (style, story, technology, or technique); it can grab their attention [5] – Stylish, interesting trendy locations [3]

Point of View

Experts

The majority of experts stated that young people prefer to watch presentations from the first-person point of view. Additionally, they recommend using the same age of presenters (young or teenagers) as the target group. This technique can make the viewers feel that the storytellers are talking directly to them, facilitating connection with members of the group (Lambert and Hessler 2018). In the case of stories, experts recommend focusing on fun or exciting travel with friends, rather than family.

Audiences

However, most audiences stated contrarily that they technically do not know, or care about, the perspective of the characters (first- or third-person point of view); they just want interesting stories and beautiful locations. Moreover, they tend to be interested in the characters or storytellers who share something in common with them (e.g., age, lifestyle, or interest). This point is the same as the experts' recommendation.

The finding from these factors is very interesting, with contrasts between experts and audiences and conflicts with the original digital storytelling theories. For example, several famous experts state that the first-person point of view is the main issue in digital storytelling presentations (Lambert and Hessler 2018; Ohler 2008; Robin 2008; Sarıca and Usluel 2016). Moreover, Lambert (2013) states that digital storytelling initially focuses on personal lives and stories. It was originally used to help ordinary people, not professionals, to tell their personal stories using their own voices. Robin (2008) supports the view that the storyteller should present his or her own perspective to create a strong connection with viewers. However, these are recommendations made from the original style of storytelling—personal storytelling, not specifically about cultural tourism.

A Key Question

Experts

From the experts' views, the key question for this group is varied since the youth group always seeks new experiences and perspectives and is interested in games, cartoons, superheroes, or movie stars. Therefore, we should stay updated about their latest tastes and trends to set up key questions.

Audiences

Similarly, the audiences' view was that they could accept all types of key questions. This is because there are several styles of storytelling (e.g., comedy, horror, love), but the key question should generally present or focus on something new and unique. They also mentioned that the focus could be changed or varied depending on fashion or trends, not just one type.

The Purpose

Experts

This factor is very interesting, and results are varied because experts agree that the term “cultural tourism” or “museum presentations” is very new. Most Thai people are unfamiliar with it and do not understand its importance; therefore, we should present the meaning and importance of these words as the initial purpose. Next, we should present a story of seeking new experiences, friends, and perspectives and show them that the Thai culture is very interesting. This is because they consider museum presentations boring and old-fashioned, rather than interesting.

Audiences

From the audience’s view, the focus is not on the meaning or importance of cultural tourism or museum presentations. They would like to know about interesting activities with friends at unseen locations, or history or stories that they can share on social media.

These contrasting comments are a very interesting point that storytellers should consider before establishing their purpose. Robin (2008) also states the first factor should be setting up the purpose because the purpose can lead into ideas, stories, characters, and concepts of the whole story from beginning to end. In this case, experts mainly focus on serious issues, but young audiences just need to see unseen, interesting locations or stories.

Story Structure

Experts

They state that youth need the story to be complex, strange, have many peak points and climaxes, and be trendy to attract their interest like trendy Hollywood movies. Therefore, we should study viral and trending social media. In terms of the types of stories, youth are interested in the following themes: love, adventure, winners, challenges, and friends.

Audiences

However, from the audiences’ perspective, they prefer to watch simple and basic stories. They pointed out that these are not movies or music videos, and digital storytelling presentation is usually short. Essentially, the main purpose of this guideline is to present information and unseen cultural places. Therefore, they expect to watch interesting locations rather than an up-and-down storyline. If the storytellers use complex story structure, like movies, audiences may remember just the story instead of the cultural places. This could match with Schafer’s (2008) observation that good digital storytelling should have a very clear and simple storyline, not complicated, with a starting point, middle, climax, and end.

Economy

Experts

They observe that because of the short form of digital storytelling, storytellers do not have enough time to include much information. Therefore, we should use just a small amount of concise information for all groups. Moreover, in terms of techniques to present data, they recommend using a hidden story and gimmick to encourage them to learn more.

Audiences

This result could match the findings from audiences. They state that in today's world, searching for information is very easy, especially information about tourism. Therefore, in this brief form of media, storytellers should present short information, but in an interesting enough way to catch their interest to search for detail later.

These findings from both are reflected in several original guidelines for digital storytelling, including those for general, educational, and interactive purposes, which recommend using simple and sufficient messages (Lambert and Hessler 2018; Ohler 2008; Porter 2004; Robin 2008; Salpeter 2005). According to Salpeter (2005), digital storytelling should be short, concise, and simple, without exaggeration. Moreover, technological support should be minimal and enhance only the core idea of the story. Because of its short form, digital storytelling encourages the storyteller to eliminate unnecessary material and emphasize a simple story with a meaningful message (Lambert and Hessler 2018; Ohler 2008; Porter 2004).

Voice

Experts

They recommend that a narrative voice is necessary because people are familiar with having a narrator while watching documentaries, short films, or movies. Moreover, the voice should have a positive or funny tone because Thai people always love comedy. However, they recommend that the storyteller should use voice when pictures cannot tell the detailed story; for example, the voice can present information about constructing temples.

Audiences

From the audiences' point of view, youth still need a narrative voice, but prefer to read subtitles also. They usually turn the volume off while traveling or being in public areas to avoid disturbing other people.

These results from both are similar to the ideas of many experts on original digital storytelling, who agree that the voice is a necessary factor, especially the use of the storyteller's voice (Lambert and Hessler 2018; Ohler 2008; Pozzebon and Calamai 2015; Robin 2008). Ohler (2008) supports that the use of the voice is the original and traditional form of

storytelling. However, in this age, people prefer to watch digital storytelling on mobile devices, not just personal computers with an earphone. Consequently, storytellers should give them options with both an original narrative voice and subtitles.

Soundtrack

From experts' and audience points of view, soundtracks are still necessary; the style should be contemporary, trendy, or popular and mass music (e.g., pop or rock), or a style related to their age, taste, and lifestyle. Moreover, from audiences' views, although young people turn the volume off when watching, sometimes the volume is turned on while using desktop computers. They also confirmed that the soundtrack without vocals could lead them deeper into the story.

The findings from experts and audiences are similar. This means that the soundtrack is still necessary for digital storytelling, whether audiences turn the volume on. This could match the original digital storytelling theories. For instance, Lambert (2016) states that this element is necessary and can strengthen audiences' feelings by combining visuals and the narrative voice to enhance interest in the story. However, he also states that using an instrumental form without vocals is preferable (Lambert and Hessler 2018; Pozzebon and Calamai 2015; Robin 2008). Ohler (2008) states that music is secondary to the narrative voice and must not be louder than the voice. Moreover, if we turn off the music, the story and content should still stand strong.

Media

Experts

From the experts, there were only three answers to this question: applications on mobile devices, video games, and websites. Interestingly, experts recommend that since youth do not watch old medium like television, only hi-technology devices could attract them.

Audiences

The audience shares the same three answers for media. They mentioned that mobile devices and internet packages are affordable and there are so many cheap brands. However, designers should design the format of presentations to support several media, since the audiences switch around, not watching just one medium.

The findings from both interviews are similar to those of many studies stating that there is a trend for most people, especially for the younger generation, to watch media through mobile devices (e.g., smartphones and handheld tablet devices) rather than through laptops and personal computers (Barnard et al. 2013; Rand, Zeilig, and Kizony 2015).

Background

Experts and audiences agreed that youth are interested in fantasy, surrealism, idealism, or imagined worlds, as well as real, beautiful, and interesting locations. Therefore, we can use both reality and fantasy to attract them. The results from both experts and audiences differ

from those of original digital storytelling theories that recommend using a fantasy setting to attract audiences. Regarding this research, presenting an interesting or unseen real location is the best way to increase their interest in cultural places.

Conclusion

This study began with the first problem that young tourists are not motivated and interested in museum presentations, or in visiting actual cultural sites. Understanding this issue can lead to a good opportunity to increase youth visitors' motivations to engage in cultural tourism through the proper presentation of digital storytelling. This study consolidates eight original guidelines for digital storytelling into a single guideline for young audiences. The second problem is that the majority of previous guidelines are proposed by experts and not based on audiences' needs.

The research question for this research is: "What is a digital storytelling for museum presentation guideline for youth from expert and audience views, and how can it be used to motivate them?" The proposed guideline for digital storytelling for museum presentations, composed of nine elements, was created based on the work of eight experts (Lambert and Hessler 2018; Miller 2020; Ohler 2008; Paul 2014; Porter 2004; Robin 2008; Salpeter 2005; Schafer 2008) and is presented in Table 2. This guideline was reviewed and detailed by seventeen Thai and international experts in 2016, and thirty-seven audience representatives in 2016 and 2019. Based on the results from both experts and audiences in Table 5, it is apparent that this guideline primarily contains similar results between experts and audiences, as follows: (1) using presenters of the same age as the audience; (2) setting up a key question that is trendy and unique; (3) presenting less, concise, and short information; (4) voice and soundtrack are still necessary; (5) mobile devices are suitable for this group; (6) background should be fantasy or unseen, interesting locations.

However, there are contradictions in experts' and audiences' opinions, as follows: (1) experts recommended that we should set up a first-person perspective to easily connect with audience, but audiences state it is not necessary; (2) experts state that the purpose should be about the meaning and importance of cultural tourism and museum presentations, but audiences need to know about interesting activities with friends at museums for sharing on social media; (3) experts recommend using a complex story structure with many peak points, but audiences need simple and basic structures because it is short.

To summarize, this guideline has been systematically constructed, interviewed, commented on, and reviewed from both sides. If storytellers, researchers, users, or anyone else intend to increase motivation and diversity in museums, this guideline could be used in three aspects: (1) on-site presentations at the museums; (2) virtual online presentations or mobile device technology that users can explore at home or by using mobile phones, and (3) short presentations (e.g. advertising, short stories) to attract prospective young tourists to come. However, the limitation of this research is that the interviews were conducted only among young Thai participants. As a result, the results can only be deemed valid for Thai people.

Implications

Museums

Currently, tourism industries, museums, and cultural sites are trying to develop the latest technology to present interactive data more realistically to deliver a successful visitor experience. Therefore, enhancing digital storytelling presentation and user experience, along with increased motivation, appears to be trending in the field. However, the key is how to apply and integrate these technologies effectively with good, simple content that can be reused on many platforms, resulting in meaningful, desirable, and effective museum experiences. From the results, both experts and audiences agree that the factor “economy” should consist of concise and significant information matching the needs of young tourists, not in-depth and serious data.

Personalization Technique and User Experience Design (UX)

Previous digital storytelling in museums tried to focus on the content on a device as one content for all users. Nowadays, most cultural heritage museums adopt personalization methods, tailored to what each group is interested in. Hence, designers can use this guideline to create personalized data for young tourist groups to be presented with specific information and catering to varied interests, especially points of view—leading users to choose their perspectives. For example, users can select age, gender, character, or point of view. Moreover, regarding the “voice” and “soundtrack,” designers should allow users to turn them “on” or “off” and customize them to match their preferences. Regarding “economy,” users have different needs for in-depth information. Therefore, designers should let users choose the story, length, seriousness, and amount of information they require.

Local Engagement

Going by the original purpose of digital storytelling—that of creating low-budget and non-professional projects—everyone could create their own digital stories. Moreover, creating digital storytelling does not require high-end equipment, only mobile phones, basic digital cameras, and free editing programs. There are several digital storytelling projects that support local people to create stories about their towns, lifestyles, social values, and local identities. Hence, people in any place could be trained through workshops by adapting this guideline to create simple digital stories based on their personal ideas to attract people to visit cultural places or understand local lifestyles. For example, the first-person point of view should be used, since, even if the presentation is shot with low-budget equipment, most audiences enjoy watching real-life situations with local perspectives more than those focusing just on visual quality. Moreover, if locals could learn about “story structure,” they could create more interesting stories with a better climax and pace. The projects could be personal presentations about their cities, historical places, daily life stories, cultural events, or festivals that can connect outsiders with the local community.

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Informed Consent

The authors have obtained informed consent from all participants.

Conflict of Interest

The authors declare that there is no conflict of interest.

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