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Assessment of Interpretation and Presentation Methods of Archaeological Sites in Mādābā (Archaeological Park 1, Archaeological Park 2, and Visitor Center)

Introduction

Jordan has a large number of highly significant archeological sites such as Petra, Jerash, and Mādābā. Mādābā is the fifth most populous city in Jordan. It is best known for its Byzantine and Umayyad mosaics, especially the large Byzantine-era mosaic map of “the Holy Land.” Mādābā is located 30 km south-west of the capital ‘Ammān. Mādābā is a timeless city of people, cultural history, and mosaics, located in the heart of “the Holy Land” of Jordan, influencing world history for thousands of years from its first mention in the Bible, through early Roman times, into the Byzantine era, and continuing through today.

Mādābā is also one of the richest cities in Jordan in terms of archaeological monuments. It contains many different archaeological features of either historical or religious importance. All these immovable antiquities deserve augmented efforts for their protection and preservation. The

Ministry of Tourism and Antiquities (MOTA) and Department of Antiquities (DoA) would like to improve the quality of visits, and at the same time, ensure the preservation of cultural heritage for future generations. Improving interpretation at sites is one way to do this. In economic terms, good, high-quality interpretation increases visits to the site and makes the site a highly desirable destination. For the people of Jordan, interpretation allows a better understanding and appreciation of their heritage and will support the protection of the sites into the future. Jordan needs to achieve both goals.

Heritage interpretation is an educational activity, which aims at revealing meanings and relationships using original objects, illustrative media, and firsthand experience, rather than simply communicating information. When presenting and interpreting the historical development of heritage sites, it is necessary to be selective and decide which

elements will be most interesting to the kind of people that the site will attract.

Statement of the Problem

Mādābā is considered to be one of the most important examples of how methods of interpretation can be applied to archaeological sites. Hence, this study assesses the methods that were applied in Mādābā. A problem to be discussed is whether these methods, adopted according to international standards, are ideal ones for the case of this city or not? Do these methods impart the sufficient information on the site required by visitor or not? Another question to be posed is whether these methods achieve their aims and objectives at Mādābā? And, is it possible to apply the same methods to other sites in Jordan?

Aims of the Study

- To assess the methods of presentation and interpretation at Mādābā and determine whether these methods are compatible with the sites in Mādābā.
- To evaluate the success of presentation and interpretation methods at the archaeological sites of Mādābā.
- To estimate whether the local community and the visitors benefit from such a project or not.
- To calculate the impact of such a project (*i.e.*, interpretation plan) on the economy of the city of Mādābā.
- To assess the ability of the archaeological sites' staff to deal with panels and other tools of information.
- To research the possibility of the application and implementation of these methods at other sites in Jordan.
- To evaluate the visitor's opinion on the interpretation methods at Mādābā.

Methodology of Research

In this study, a literature survey, fieldwork, and interviews were conducted. Because we intend to assess the presentation and interpretation of the archaeological sites in Mādābā, it is necessary to explain the method applied there.

I. Literature Survey

The theoretical part of the study is based on a literature survey. The researcher begins by conducting a critical survey of previous studies, which are concerned with cultural resources and heritage management, as well as the presentation and interpretation of archaeological sites. This methodological step includes a survey of studies related to the methods and tools of interpretation and provides the researcher with a firm foundation of knowledge for the study.

II. Fieldwork

Fieldwork is a very important element because this study will assess the methods that are applied in archaeological sites in Mādābā. For this reason, all of the sites with interpretation (Visitor Center, Virgin Mary Church, and Archaeological Parks 1 and 2) are visited, and the various interpretive tools are compared with the ideal or standard methods applied across the world.

III. Interviews

The interviews are conducted in Mādābā city, especially in areas surrounding the sites to be studied. The main audience for this study consists of:

- Educated and non-educated visitors
- Students
- Tourists—FITs and Groups
- Local community
- Staff at the sites
- Tour guides

I. Literature Survey

The ICOMOS *Charter for the Interpretation and Presentation of Cultural Heritage Sites* (2008) defines “interpretation” as the carefully planned public explanation or discussion of a cultural heritage site, encompassing its full significance, both tangible and intangible. Interpretive communication media can range from text panels, to live guides and interpreters, to complex “Virtual Reality” applications. Whatever the choice of specific media may be, they should provide information about the site which would be otherwise unavailable. Interpretation should be a combination of the treatment of the site’s fabric, the use of the site and activities connected with it, and explanatory information based on research activities and collections.

Tilden (1957) defined six principles of interpretation that has set the standard for site interpretation. These principles are:

1. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile, therefore the interpretation tools should be match the visitor’s needs.
2. Information, as such, is not interpretation. Interpretation is revelation based on information. They are entirely different things. However, all interpretation includes information.
3. Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is in some degree teachable.
4. The chief aim of interpretation is not instruction, but provocation.
5. Interpretation should aim to present a whole rather than a part and must address itself to the whole rather than any phase.
6. Interpretation addressed to children (up to the age of twelve) should not be a dilution of the presentation to adults but should follow a fundamentally different approach. To be at its best it will require a separate program.

Following a similar approach, the *Siyaha* Project in Mādābā 2007 (interpretation and implementation) has published general guidelines for the creation of interpretation panels:

- Each panel should have only ONE message (theme) per exhibit.
- The text in each panel should be short. Make every word count. Strive for no more than 50 words per text block (divide longer text into columns or paragraphs).
- Say it with graphics. Visitors remember 30% of what they read and 50% of what they see.
- Proof-read! Make sure your spelling and grammar are correct.
- Use active verbs, encourage involvement, be specific to the site, speak to the reader.
- Avoid jargon and technical language.
- Use good interpretation: be relevant, provocative, meaningful, creative, fun.
- Assist visitors in visualizing meaning and connecting to the story and the landscape.
- Strive for 2/3 graphics and blank space, 1/3 text.
- All elements of the page-text, color blocks, graphics, even blank space, have “weight.”
- The 3-30-3 rule: 3 seconds to hook the visitor, 30 seconds to review if hooked, 3 minutes if very interested.
- Use good design: make it uncluttered, attractive, balanced, and readable.

- Use good graphics. *A picture is worth 1,000 words.*
- Use strong contrasts for text and background for readability.
- Pyramid the text: titles: 72–100 pt., main text: 32–48 pt., subtext: 24–30 pt., captions: 18 pt., no text smaller than 18 pt.
- Use no more than two typefaces: one for titles and the other for text. Pick simple styles. Use CAPS only for titles.
- Maintain consistent style for exhibits in a series.
- Seek to spark the visitor's interest and let them move on to explore the special place.

The ICOMOS *Charter for the Protection and Management of the Archaeological Heritage* (1990) Article 7 mentions that the presentation of the archaeological heritage to the general public is an essential method of promoting the understanding of the origins and development of modern societies. At the same time, it is the most important means of promoting the understanding of the need for its protection.

Presentation and information should be conceived of as a popular interpretation of the current state of knowledge, and it must therefore be revised frequently. It should take into account the multifaceted approaches to imparting an understanding of the past.

Interpretation is the art of telling a good story. But it is not as simple as it sounds! If you only list a few facts, you are not *interpreting* your resource—you are just *describing* it. Interpretation, on the other hand, helps visitors to *connect* with what they are experiencing. Interpretation does not just teach what something *is*, but what it *means*. That is the real meaning of a good story. When you tell a story about a resource in your community, and what it means to you, you are “interpreting” something. You

are making a connection between things and ideas and giving visitors an opportunity to experience something with their minds *and* their hearts (Lancaster County Planning Commission 2001).

The goal of interpretation is to engage visitors' senses while challenging them to think about what things mean—to look at them in entirely new ways. Interpretation can create memorable and meaningful experiences for visitors and inspire them to learn more. Thorsten Ludwig (2003) explains the method of writing texts for interpretive panels as below:

How Do We Find Our Theme?

- Conclude the sentence: “After reading my text, I want the visitor to understand that. . .”
- A theme is a short, essential, impressive sentence.
- A theme gets under our skin.
- A theme has a relationship to the visitor's world.
- A theme deals with objects or phenomena on site.

What Should We Keep in Mind When Preparing the Text?

- The text contains 2 to 3 short and pithy statements about the theme.
- The text should cause an impressive image to form in the visitor's head.
- The text provokes (a), relates (b), and reveals (c).
- Every fact is condensed into a story which touches the visitor.
- The text should be understandable for every 7th grader.

How Do We Make Our Texts Readable?

- Use one simple type font (e.g., Helvetica) in running text without special markings.
- Use adequate type size (about 48 pt.) and pleasant color contrasts.
- Write in a simple and stimulating

way (e.g., use humor)—and structure it clearly.

- Use words with few syllables and active verbs.
- Illustrate extraordinary sizes or periods of times.

What Should We Avoid?

- Running text in capital letters.
- Boring short sentences, secondary clauses, and convoluted sentences.
- Filler words, unnecessary adjectives, unfamiliar words, foreign words, and jargon.
- Elongated verb forms and hyphenated words.
- Numbers (when not necessary or if we cannot make them understandable).

What Makes Our Facts Easy to Remember?

- A connection to something actual.
- Staging a surprise revelation (ah ha! effect).
- Pointing out an individual (this person, this tree. . .).
- An example, metaphor, comparison, analogy, quotation from the visitor's world.

Interpretation Theories

Archaeological sites, heritage buildings, natural reserves, local museums, and visitor centers all have something in common. All of these things have something of interest to show visitors, and they all have something to say about these things. The significance of some cultural heritage items is easy to understand, but the values of others are not obvious and require interpretation. To convey information to visitors, interpretation and presentation is used and should balance the need of the visitors with the conservation of the place, which is its subject.

As previously discussed, interpretation

is the communication of ideas and feelings that enable people to enhance their understanding and appreciation of their world and their role in it (Interpretation Australia 2022).

Heritage interpretation is about sharing memories and experiences. It respects the relations between people and place, whether a place is a natural landscape, an archaeological site, or other site modified by use. It involves partnerships between interpreters and a range of different stakeholders, including Indigenous and other communities, archaeologists, historians, and artists (Australian Capital Territory Heritage Council 2007).

Interpretation and Presentation Definitions

Although there are many ways to define interpretation, all definitions convey the idea of sharing significant information with others. It is also important that people will actually see or experience for themselves the place or thing that is being interpreted. Nevertheless, these are some of the various definitions of “interpretation” and “presentation”:

Interpretation:

The full range of potential activities that aims to increase public awareness and improve understanding of cultural heritage sites through different means of presentation, such as print and electronic publications, public lectures, on-site and directly related off-site installations, educational programs, community activities, and ongoing research, training, and evaluation of the interpretation process itself (ICOMOS 2008).

Interpretation:

The way to help visitors understand the history and importance of events, people, and objects from the

site that they visited (Alderson and Low 1996).

Presentation:

Denotes, in particular, the carefully planned communication of interpretive content through the arrangement of interpretive information, physical access, and interpretive infrastructure at a cultural heritage site. It can be conveyed through a variety of technical means, including, yet not requiring, such elements as informational panels, museum-type displays, formalized walking tours, lectures and guided tours, and multimedia applications and websites (ICOMOS 2008).

Interpretation:

A process, a rendering, by which visitors see, learn, experience, and are inspired firsthand. Interpreters must be skilled in communication and knowledgeable in natural and cultural history consistent with their site's mission (Beck and Cable 2011).

Interpretation:

The National Park Service and other American agencies define interpretation as the process of providing each visitor the opportunity to connect personally with a place. Each individual may connect to the place in a different way, some may connect later, but everyone should have an opportunity to explore the importance of the place and its value (National Park Service 2021).

Interpretation:

A type of communication that goes beyond truth—a means of

communicating ideas and feelings that help people enhance their understanding and appreciation of their world, and their role in it (Interpretation Australia 2022).

Presentation:

An essential method of imparting an understanding to the general public of archaeological heritage and the origins and development of modern societies. At the same time, it is the most important means of promoting an understanding of the need for its protection (ICOMOS 1990).

Why Do We Have to Interpret Sites?

Interpretation can play an important role in heritage management and cultural sites, and all interpretation requires that the subject be something interesting. If you do not have a good story to tell, perhaps you need other solutions to meet your needs (Carter 1997).

The importance of heritage and cultural sites is often easy to understand, but the values of others are not as understandable, therefore they need interpretation because of its ability to impart understanding of heritage items to different audiences with different levels of experience and different learning styles. Interpretation strengthens and sustains the relationships between the community and its heritage and may have economic and social benefits for local people (NSW Heritage Office 2005).

The resources that we as a society preserve in archaeological sites, museums, cultural items, and heritage sites are important to many people and that importance has to be clear for all. These resources have the ability to express many different things to many different people. The reason we engage in interpretation is to help visitors discover and understand the meanings of these sites. For those visitors

who already relate to the site, interpreters offer opportunities to discover a broader understanding, to see the site with new eyes. The meanings that these sites provide can help to inspire and revive, possibly leading to an appreciation for the wealth and complexity of life (Mayo and Larsen 2009).

We interpret to:

- Improve people's lives by giving them something to consider, remember, or explore.
- Bring things to light.
- Pass on knowledge.
- Seek to change behavior (Edwards 1994).

Interpretation helps fulfill our goals and share knowledge with others. We interpret to:

- Enrich the visitors' experience, informing them about the how, what, and why of protecting special places for this and future generations.
- Raise awareness, understanding, and support for conservation.
- Promote a particular issue or message, and to foster desired visitor behavior, *e.g.*, minimal impact
- Promote positive relations with the community, understanding about programs, and facilitate volunteer involvement and engagement.

What Do You Want to Interpret?

Interpretation could cover a huge number of subjects at any place and can send a strong message to all people who visit it (Savage and James 2001). An interpretive plan must define what is important for the interpretation of the place. To do this, you need to find out what is important about it, select the features you feel visitors will find interesting, and decide what it is you want

to tell them about those features. As part of this, you must also consider how much, and where and when, to encourage access to the features you select. However, whether something is significant or not can depend on your viewpoint. You can find out what others think is significant from books. If you want your interpretation to reflect the real character of a place, it is worth getting opinions from those who live there about what they would like to show visitors. You will not be able to include every suggestion that is made, but if your interpretation can include something of what local people regard as special, it will give them a sense of ownership. It may also give visitors a greater sense of the unique character of that place (Carter 1997).

At most places there is an endless number of topics and stories which could be interpreted. Identify site features such as views, popular activities, uniqueness, stories, topics.

- Consider what is interpreted elsewhere and what links there may be to this site or topic.
- Reflect on how interpreting it will relate to achieving your overarching objectives.
- Reflect on how well any existing interpretation has worked and what may be retained.

Above all, your interpretation must be factually accurate, so record detailed references as you collate material and always reference quotes. Interpreters must concern themselves with the quantity and quality (selection and accuracy) of information presented. Focused, well-researched interpretation will be more powerful than a longer discourse (Beck and Cable 2011).

The Benefits of Interpretation

Local communities and councils, community organizations, tour operators,

and visitors can benefit from heritage interpretation. Specifically, because interpretation can:

- Make you want to return to the site again.
- Specify what is unique and special about places and things.
- Preserve environmental and cultural resources from damage by explaining the impacts of various actions, therefore encouraging visitors to care about the places they visit and to behave responsibly.
- Helps to meet the increasing demand for educational visitor experiences (Australian Capital Territory Heritage Council 2007).

Moreover, good interpretation will give us social, environmental, and economic benefits. The social benefits of good interpretation will:

- Give local people or visitors opportunities for enjoyable leisure time experiences and entertainment.
- Provide learning opportunities for audiences and staff through various media.
- Empower volunteers and paid workers through the development of skills in preparing interpretation projects and communicating with visitors.
- Allow participants to think about how a place or a community has been formed, and what it is important and unique about it (Australian Capital Territory Heritage Council 2007).

Environmental Benefits

Interpretation includes cultural and natural heritage, and natural

heritage interpretation involves very important issues concerning the protection of our environment. Therefore, good interpretation of natural heritage will increase appreciation of natural and cultural landscapes and expand understanding of the environmental issues that are now affecting all of our lives. Good interpretation can help protect ecosystems, biodiversity, and natural resources by changing attitudes and promoting suitable behavior that will minimize impact (Australian Capital Territory Heritage Council 2007).

Economic Benefits

Heritage interpretation utilizes environmental and cultural resources that offer economic benefits to governments, businesses, and communities. Our natural and cultural heritage already attracts domestic and international tourists. Tourism offers great economic opportunities and a stimulus for urban and regional renewal, which is particularly important in regional communities that are declining with the increasing centralization of population and services in the 21st century. Visitors will come and stay longer in a place if attractions and features are available, well-marketed, and have benefit through interpretation.

Visitors require services, particularly meals and accommodation, which will enhance the hospitality and business outlets to meet their demands and create new job opportunities, and this will increase income, enabling heritage councils to expand their range of services (Australian Capital Territory Heritage Council 2007).

Principles of Heritage Interpretation

At the beginning of this literature survey, Tilden's (1957) six principles of interpretation were discussed. In addition to these, others have formulated their own principles as well. For instance, the ICOMOS (2008) has seven principles:

Principle 1: Access and Understanding

The appreciation of cultural heritage sites is a universal right. The communication of their significance should be as broad as possible through effective, sustainable interpretation suited to a wide range of visitor and stakeholder groups.

Principle 2: Information Sources

The interpretation of heritage sites must be based on accepted scientific evidence, with due regard for the coexistence of alternative cultural traditions.

Principle 3: Context and Setting

The interpretation of cultural heritage sites should relate to their wider social, cultural, historical, and natural contexts and settings.

Principle 4: Authenticity

The interpretation of cultural heritage sites must respect their authenticity and seek to protect their original fabric.

Principle 5: Sustainability

The interpretation of cultural heritage sites must be well planned and sensitive to their natural and cultural environment. Social, financial, and environmental sustainability should be among the central goals of any interpretive project.

Principle 6: Inclusiveness

The interpretation of cultural heritage sites must actively involve the participation of all stakeholders and relevant communities.

Principle 7: Research, Training, and Evaluation

The interpretation of a cultural heritage site must be an ongoing evolving process of explanation and understanding that includes continuing research, training, and evaluation.

Beck and Cable (2011), on the other hand, have developed 15 principles for interpretation:

1. To spark an interest, interpreters must relate the subject to the lives of the people in their audience.
2. The purpose of interpretation goes beyond providing information to reveal deeper meaning and truth.
3. The interpretive presentation as a work of art should be designed as a story that informs, entertains, and enlightens.
4. The purpose of the interpretive story is to inspire and to provoke people to broaden their horizons.
5. Interpretation should present a complete theme or thesis and address the whole person.
6. Interpretation for children, teenagers, and seniors when these comprise uniform groups should follow fundamentally different approaches.
7. Every place has a history. Interpreters can bring the past alive to make the present more enjoyable and the future more meaningful.
8. Technology can reveal the world in exciting new ways. However,

incorporating this technology into the interpretive program must be done with foresight and thoughtful care.

9. Interpreters must concern themselves with the quantity and quality (selection and accuracy) of information presented. Focused, well-researched interpretation will be more powerful than a longer discourse.
10. Before applying the arts in interpretation, the interpreter must be familiar with basic communication techniques. Quality interpretation depends on the interpreter's knowledge and skills, which must be continually developed over time.
11. Interpretive writing should concentrate on what visitors would like to know, with authority, respect, humility, and care.
12. The interpretation programs must be capable of attracting support—financial, volunteer, political, and administrative, whatever support is needed—for the program to prosper.
13. One of the interpretation aims should be instill in people the ability, and the desire, to sense the beauty in their surroundings to provide spiritual uplift and to encourage resource preservation.
14. Interpreters can promote optimal experiences through intentional and thoughtful program and facility design.
15. Passion is the vital ingredient for powerful and effective interpretation—passion for the resource and for those people who come to be inspired by it (Beck and Cable 2011).

Interpretation and Presentation Tools

As previously discussed, presentation

is the way that all the ideas are conveyed through the use of different tools, such as those listed below:

Publications/Publicity/Souvenirs:

Posters, pamphlets, books; internet web sites, interactive search programs; videos, audios and tapes/CDs; school project material; souvenirs—postcards, models, tea towels, images (NSW Heritage Office 2005).

Events/Access:

Oral histories; video recordings; providing opportunities for people to assist with maintenance; access to the item through day-to-day use and management; access via tours, open days, events; commemorative and celebratory events; events for associated people and special interest groups; and artist in residence programs (NSW Heritage Office 2005).

Activities Away from the Item:

Events and activities related to the place; exhibitions; other media—such as radio, TV, internet, etc. (NSW Heritage Office 2005).

How to Create Interpretive Panels

Guidelines for Producing Interpretation Panels

- Keep it simple (text short): the best panels are often the simplest. A single panel should communicate one or two main messages. Panels that try to do too much will be ignored. As a guide, you should aim for a maximum of 200 words per panel, and a simple and attractive design, (divide longer text into columns or paragraphs, as suggested by the *Siyaha* Project in Mādābā in 2007).

- Layering the message: layering makes your message more accessible to everyone. Research shows that people look at adverts (and panels) in the following order:
 - The headline (use minimum 12 mm, 60–72 pt. text size).
 - The main picture.
 - Subheadings (use minimum 8 mm, 48–60 pt. text size).
 - Bullet points.
 - Further illustrations (use minimum 5 mm, 24 pt. text size).
 - The main text (use minimum 5 mm, 24 pt. text size).
 - The main text can contain all the necessary detail. The panel must look attractive and be accessible at a glance. Many people will decide in seconds whether they will read it. These few seconds are vital: provoke and stimulate their interest, and you have them! (Scottish Natural Heritage n.d.)
- Use good visuals: good visuals can make all the difference between a good and bad panel. Visuals could be photographs, drawings or illustrations, and have important roles in communicating with your audience:
 - Drawings are often better at illustrating something than photos.
 - All illustrations should have a clear relationship with the text
 - All illustrations should be clearly labeled or annotated.
 - Allow sufficient time and money to research and sources the visuals, commission drawings if necessary, and pay any copyright fees.
 - If a map is needed on an interpretive panel, it must be clear and easily understood
 - Make sure you have copyright clearance for the map.
 - Only include information that is necessary.
 - Make sure the map is large enough for the panel.
 - Make sure the design is clear and easily understood. Consider using an oblique “3-D” map if possible (Scottish Natural Heritage n.d.).
- Layout and design: good layout and design will unite the text and visuals and will ultimately dictate how well your message is putting across
 - Always involve your designer at the earliest stage and provide them with all relevant information about your panel such as why, who for, the site layout, etc.
 - At an early stage you should decide what materials you want to use for the panel by considering what will best enhance the on-site experience and blend with the surroundings.
 - A number of production techniques are available depending on your design, budget and desired lifespan of the panel. Most manufacturers can provide up-to-date technical advice on each technique they offer.
 - Make sure your panel is properly maintained by keeping its surfaces clean, tightening all fittings, and cutting encroaching vegetation, etc. (Scottish Natural Heritage n.d.).

Audiences and Their Needs

In planning your project, it is essential for you to understand your audience in order to tailor your interpretation to meet their needs. You will need to undertake surveys to tell you who your visitors are and why they visit. The range of common audiences consists of:

- General visitors: layer the interpretation so that it offers something for everyone regardless of their knowledge, ability, or interest in a subject.
- Local people: interpret the particular local significance of your heritage asset, and possibly involve them in planning and implementing the scheme.
- Children: provide activities, games and interactive displays using simple language in a bright, lively, and fun design style and which appeal to families.
- Repeat visitors: provide changing displays that offer something new on a regular basis.
- Specialist interest visitors: provide interpretation options containing more detailed, in-depth material such as printed fact sheets.
- Formal learning groups: tie the content to national curricula or to the learning programs of further, higher and adult education.

If you wish to attract new audiences, you should provide interpretation specifically for them. This is particularly relevant if you want to encourage audiences who may previously have been excluded or under-represented at your site, such as people from ethnic minority cultures, young people, and low-income visitors. For such groups you should consider the advantages of live interpretation by peers, for example an interpreter from a minority culture for an audience from the same group (Heritage

Lottery Fund 2009).

II. Fieldwork

Methodology of the Study

This study is based on the use of two approaches to scientific research methods:

- A: Descriptive and analytical approach: this approach was used to review the literature to explore the assessment of interpretations and presentations of archaeological and heritage sites. The case study: Mādābā Visitors Centre (MVC).
- B: Research field methodology: this approach was used to cover the practical side of this study, through testing the validity of hypotheses of the study, answering questions, and drawing their results out of the questionnaire that developed for the purposes of the study according to the steps of scientific norms.

The Study Population and Sample

The study population consisted of visitors, tourists, tour guides, local people, and staff in Mādābā Visitor Center in the governorate of Mādābā. The study sample consisted of 60 individuals, and after initial questionnaires, 13 were excluded to identify the lack of validity for the purposes of statistical analysis. One was the final questionnaire (n=47), representing a rate of 88% of the study sample, with the results of data analysis being used for the distribution of demographic sample of the study in order to find frequencies and percentages to characterize the study sample. TABLE 1 shows the characterization of the members of the study sample.

Validity of Study Tool

Four arbitrators from faculties of universities in Jordan verified the strength of the questionnaire's language. They gave

ASSESSMENT OF INTERPRETATION AND PRESENTATION METHODS

Variable	Frequency	Percent
Gender		
Male	25	53.2
Female	22	46.8
Age		
Less than 25	4	8.5
26-35	20	42.6
36-45	12	25.5
46-55	5	10.6
56-65	6	12.8
Greater than 65	**	**
Nationality		
Jordanian	27	57.4
Arab	1	2.1
Non-Arab	19	40.4
Education		
School education	5	10.6
Community college diploma	11	23.4
First university degree	11	23.4
Post-graduate	20	42.6
Occupation		
A public sector	17	36.2
Self-employed	15	31.9
Student	3	6.4
Unemployed	9	19.1
Retired	3	6.4
Sector		
Tourism related	24	51.1
Non tourism related	23	48.9
How many times you have been to Mādābā		
The first time	20	42.6
Twice to 3 times	8	17.0
4 times and more	19	40.4
Would you like to visit Mādābā again		
Yes	42	89.4
No	5	10.6
Would you recommend that friends visit Mādābā		
Yes	46	97.9
No	1	4.6
Did you have difficulty reaching the Mādābā Visitor Center?		
Yes	29	61.7
No	18	38.3
Total	47	100%

Table 1. Characteristics of the member study sample.

their opinions, re-worded some of the content, and suggested modifications. The questionnaire was presented to a sample test group of 20 visitors and workers in the Visitor Center in the governorate of Mādābā in order to identify the degree of responsiveness. Members of the study sample expressed their willingness to respond to the question, which confirms the utility and validity of the tool (TABLE 2).

Reliability of Study Tool

To calculate the stability of the study tool, the researcher used an equation of internal consistency using Cronbach's Alpha test shown in TABLE 3. The test results where the values of Cronbach's Alpha for all variables of the study are $\geq 60\%$ are considered acceptable, which gives the questionnaire as a whole a reliability coefficient ranging between 89-97%, as shown in TABLE 3.

Statistical Processing

To answer the questions of the study, descriptive and analytical methods were used. The statistical software SPSS, which includes standard descriptive statistics (Descriptive Statistic Measure), was used to describe the characteristics of the

Table 2. The study tool, consisting of five parts.

First Part: Demographic Variables	Gender Age Nationality Education Occupation Sector How many times you have been to Mādābā? Would you like to visit Mādābā again? Would you recommend friends visit Mādābā? Did you have difficulty reaching the Mādābā Visitor Center?
Second Part: Information on the interpretation methods at the Mādābā Visitor Center.	
Third Part: Data on the extent of the impact of methods of interpretation in the Mādābā Visitor Center on tourists and their duration of stay in Mādābā.	
Fourth Part: Data related to presentations, tour guides, and staff at the Mādābā Visitor Center.	
Fifth Part: Data on the implementation of interpretation and presentation projects and local community participation.	

Table 3. The stability of the study tool by Cronbach Alpha test.

Variables	Cronbach's Alpha
Information on the interpretation at the Mādābā Visitor Center.	0.89
Data on the extent of the impact of methods of interpretation in the Mādābā Visitor Center on tourists and their duration of stay in Mādābā.	0.90
Data related to presentations, tour guides, and staff at the Mādābā Visitor Center.	0.92
Data on the implementation of interpretation and presentation projects and local community participation.	0.97
The Total of the questionnaire statements as a whole	0.98

Table 4. Scale of weighted means of descriptive statistics used in the study.

Weighted Mean	Degree
1-2.33	Low
2.34-3.66	Medium
3.67-5.00	High

sample, such as frequencies and percentages. In order to answer the research questions of the study, means and standard deviations, as well as the Cronbach's Alpha test were used to ensure the stability of the study tool, and a one sample T-test was used to answer the hypotheses of the study.

The Results

The results of the descriptive statistical analysis of the data (which includes means and standard deviations for all independent studies, axes, and questions consisting of each axis) were graded using the scale presented in TABLE 4.

Table 5. Mean, standard deviation, and degree of information on the methods interpretation at MVC ranked in descending order.

Response Number	Information on the interpretation methods at MVC	Mean	Standard Deviation	Degree
2	Diverse and gives tourists the freedom to choose the site	3.81	0.92	High
8	Correct and easy to understand texts	3.70	0.69	High
5	Contributes to better understanding of sites	3.66	1.01	Medium
6	Contains diversity of ways of presentations	3.64	0.97	Medium
9	Properly and easily accessible interpretation panels	3.64	0.97	Medium
1	Containing sufficient tourism information	3.60	0.95	Medium
7	Suitable size of panels for all visitors	3.49	0.88	Medium
3	Available for all visitors	3.32	1.20	Medium
4	Suitable all age groups	3.11	1.18	Medium
10	Available in different languages	2.87	1.17	Medium
	Total	3.48	0.99	Medium

Table 6. Mean, standard deviation, and degree of the extent of the impact of interpretation methods in the Mādābā Visitor Center on tourists and their duration of stay in Mādābā ranked in descending order.

Response Number	Tourists are impacted by interpretation panels in many ways	Mean	Standard Deviation	Degree
3	Allows tourist a wider space to explore the city	3.83	0.60	High
1	Gives options to tourists	3.72	0.77	High
2	Prolong the stay of visitors in Mādābā	3.70	0.83	High
5	Leaves an impression on tourists about the development of tourism in Mādābā	3.55	1.02	Medium
4	Allows tourists to know more about the importance of monuments in Mādābā	3.02	1.24	Medium
	Total	3.57	0.89	Medium

III. Interviews: The Study Questions and Their Answers

Question Number One: How would you characterize the methods of interpretation in the Mādābā Visitors Center (MVC)?

The answers to this question were collated, and averages and standard deviations were calculated (TABLE 5).

It is clear that the weighted mean of this axis (i.e., information on the interpretation at MVC) ranged between 3.81–2.87, where the axis earned a weight mean of total of

3.48, which is a level of Medium on the scale. Response 2 (diverse and gives tourists the freedom to choose the site) earned the highest mean reaching 3.81 and a standard deviation of 0.92, which is a level of High. The second highest ranking was response 8 (correct and easy to understand texts) with a mean of 3.70 and a standard deviation of 0.69, which is a level of High.

Response 10 (available in different languages) was ranked last, with a mean of 2.87 and a standard deviation of 1.17, which is

a level of Medium. Next to last was response 4 (suitable for all age groups) with a mean of 3.11 and a standard deviation of 1.18

Question Number Two: How do the methods of interpretation that exist in the Mādābā Visitor Center impact the tourist?

The answers to this question were collated, and averages and standard deviations were calculated (TABLE 6).

The weighted mean of this axis (tourists are impacted by interpretation panels in many ways) ranged between 3.83–3.02, where the axis earned a weighted mean total of 3.57, which is a level of Medium. Response 3 (allows tourist a wider space to explore the city) earned the highest mean of 3.83 and a standard deviation of 0.60, which is a level of High. The second highest was response 1 (gives options to tourists) with mean of 3.72 and a standard deviation of 0.77, which is a level of High.

Response 4 (allows tourists to know

more about the importance of monuments in Mādābā) was ranked last, with a mean of 3.02 and a standard deviation of 1.24), which is a level of Medium. Next to last is response 5 (leaves an impression on tourists about the development of tourism in Mādābā) with a mean of 3.55 and a standard deviation of 1.02, which is a level of Medium.

Question Number Three: Does the guide give tourists ample opportunity to view the content of the panels?

The answers to this question were collated, and averages and standard deviations were calculated (TABLE 7).

The weighted mean of this axis (guide gives tourists ample opportunity to view the content of the panels) ranged between 3.91–2.64, where the axis earned a weighted mean of a total of 3.48, which is a level Medium. Response 2 (insufficient experience of the staff at MVC in presenting the site properly) earned the highest mean of 3.91, and with

Table 7. Mean, standard deviation, and degree of the extent of the ways of presentation and how tour guides and staff handle it at MVC ranked in descending order.

Response Number	The ways of presentation and how tour guides and staff handle it at MVC	Mean	Standard Deviation	Degree
2	Insufficient experience of the staff at MVC in presenting the site properly	3.91	1.08	High
5	The presentation methods are diverse	3.79	0.88	High
6	The methods of presentation are interactive and they encourage the visitor to care about the site	3.64	0.92	Medium
7	The methods of presentation at MVC contribute to the revival of the old neighborhood of Mādābā	3.62	0.90	Medium
8	Methods of presentation encourage visitors to preserve the site	3.47	1.00	Medium
3	The staff of MVC is well trained in how to deal with the presentation methods	3.45	1.16	Medium
4	Showing a film at MVC increases the diversity in the presentation	3.30	1.14	Medium
1	Tour guides are considered to be a significant component of the site presentation	2.64	1.24	Medium
	Total	3.48	1.04	Medium

a standard deviation of 1.08, which is a level of High. The next highest ranking was response 5 (the presentation methods are diverse) with a mean of 3.79 and a standard deviation of 0.88, which is a level of High.

Response 1 (tour guides are considered to be a significant component of the site presentation) was rated last, where it earned a mean of 2.64 and a standard deviation of 1.24, which is of the level Medium. Next to last is response 4 (showing a film at MVC increases the diversity in the presentation) with a mean of 3.30 and a standard deviation of 1.14.

Question Number Four: Is there any implementation of interpretation and presentation projects and is there local community participation?

The answers to this question were collated, and averages and standard deviations were calculated (TABLE 8).

The weighted mean of this axis (implementation of interpretation and presentation projects and local community participation) ranged between 4.38–3.85, where the axis earned an weighted mean total of 4.18, which is a level of High. Response 7 (local community participation, encourages youth in showing more interest in the implementation of these projects) had the highest mean of 4.38 with a standard deviation of 0.71, which is a level of High. The second highest was response 5 (local community participation in these projects benefits the community financially) with mean of 4.28 and a standard deviation of 0.65, which is a level of High.

Response 1 (local community participation is an essential component in project planning) was rated last, with a mean of 3.85 and a standard deviation of 0.93, which is a level of High. Response 4 (local community participation helps decreasing

Table 8. Mean, standard deviation, and degree of the extent of the ways of implementation of interpretation and presentation projects and local community participation ranked in descending order.

Response Numbers	Data on the implementation of interpretation and presentation projects and local community participation	Mean	Standard Deviation	Degree
7	Local community participation, encourages youth in showing more interest in the implementation of these projects	4.38	0.71	High
5	Local community participation in these projects benefits the community financially	4.28	0.65	High
6	Local community participation gives incentives to better protection and presentation of the site	4.28	0.77	High
2	Local community involvement is a precondition to the success of the project	4.15	0.75	High
3	Local community awareness of the importance of the project helps with the conservation and protection of the site	4.15	0.78	High
4	Local community participation helps decreasing unemployment	4.15	0.81	High
1	Local community participation is an essential component in project planning	3.85	0.93	High
	Total	4.18	0.77	High

unemployment) was next to last with a mean of 4.15 and a standard deviation of 0.81, which is a level of High.

First Hypothesis: There Are No Methods of Interpretation in the Mādābā Visitors Center

This hypothesis was tested using a one sample T-test to identify the methods of interpretation in the Mādābā Visitors Center.

The average responses of the scale (3.48) is higher than average default scale (3). The results of the T-test indicate that there are significant differences at the level of significance (0.05) between the average responses and average default scale, as the value of (T) Calculated (6.22) is more than the value (T) Tabulated, and therefore rejects the null hypothesis, so there are ways to properly impact the interpretation of Mādābā Visitors Center.

Second Hypothesis: The Methods of Interpretation in the Mādābā Visitors Center Have No Effect on Tourists and the Duration of Their Stay in Mādābā

This hypothesis was tested using a one sample T-test to identify the effects of interpretation in the Mādābā Visitors Center on tourists and the duration of their stay Mādābā.

The average responses of the scale (3.56) is higher than average default scale (3). The results of the T-test indicate that there are significant differences at the level of significance (0.05) between the average responses and average default scale, as the value of (T) Calculated (6.24) is more than the value (T) Tabulated, and therefore rejects the null hypothesis, so the interpretation methods at the Mādābā Visitor Center do have an effect on tourists and the duration of their stay in Mādābā.

Third Hypothesis: There Is No Presentation and the Tour Guides and

Staff Do Not Handle It in the Mādābā Visitors Center

This hypothesis was tested using a one sample T-test to identify if there was presentation and if the tour guides and staff handled it in the Mādābā Visitors Center.

The average responses of the scale (3.53) is higher than average default scale (3). The results of the T-test indicate that there are significant differences at the level of significance (0.05) between the average responses and average default scale, as the value of (T) Calculated (6.69) is more than the value (T) Tabulated, and therefore rejects the null hypothesis, so there are presentations handled by tour guides and staff in the Mādābā Visitors Center.

Fourth Hypothesis: There Is No Implementation of Interpretation and Presentation Projects and Participation of the Local Community

This hypothesis was tested using a one sample T-test to identify if there is implementation of interpretation and presentation projects and participation of the local community.

The average response of the scale (4.18) is higher than average default scale (3). The results of T-test indicate that there are significant differences at the level of significance (0.05) between the average responses and average default scale, as the value of (T) Calculated (13.72) is more than the value (T) Tabulated, and therefore rejects the null hypothesis, so that there is the implementation of interpretation and presentation projects and local community participation.

Summary of Results

This study explored whether the interpretation methods that were applied in Mādābā were adopted according to international standards and whether these methods provided sufficient information about the site to the visitor. Also, this study

Table 9. Mean, standard deviation, and degree of the extent of the ways of implementation of interpretation and presentation projects and local community participation ranked in descending order.

Mean	Standard Deviation	T Tabulated	T Calculated	DF	Significance
3.48	0.532	1.96	6.22	46	0.000

Table 10. Test (one sample T-test) to identify the effect of methods of interpretation in the center of Madaba visitors to the tourist and the duration of his stay in Mādābā [significant at level 0.05, (t) – (3.00)].

Mean	Standard Deviation	T Tabulated	T Calculated	DF	Significance
3.56	0.621	1.96	6.24	46	0.000

Table 11. Test (one sample T-test) to identify the ways of presentations and how the tour guides and staff handled it at MVC in the Mādābā Visitors Center [significant at level 0.05, (t) – (3.00)].

Mean	Standard Deviation	T Tabulated	T Calculated	DF	Significance
3.53	0.540	1.96	6.69	46	0.000

Table 12. Test (one sample T-test) to identify implementation of interpretation and presentation projects and participation of the local community [significant at level 0.05, (t) – (3.00)].

Mean	Standard Deviation	T Tabulated	T Calculated	DF	Significance
3.53	0.540	1.96	6.69	46	0.000

discusses whether these methods achieve their aims and objectives at Mādābā, and if it possible to apply the same methods at other sites in Jordan.

Individuals in the study sample associated with the Mādābā Visitors Center were asked 41 questions and the responses were studied using a descriptive and analytical approach. The questions focused on: 1) the methods of presentation and interpretation at Mādābā and whether these methods were compatible with the sites in Mādābā, 2) the success of presentation and interpretation methods in the archaeological sites of Mādābā, 3) whether the local

community and the visitors benefited from such a project or not, 4) the impact of such a project (interpretation plan) on the economy of the city of Mādābā, 5) the ability of the archaeological sites' staff to deal with panels and other tools of information, and 6) the visitor's opinion about the interpretation methods in Mādābā. The results the statistical analysis are described below:

- Most of the visitors prefer to visit Mādābā again and they also recommended it to their friend and relatives.
- It is difficult to reach and access the Mādābā Visitors Center.

- The information presented through interpretation methods at the Mādābā Visitors Center is diverse and gives tourists the freedom to choose the site and the text was easy to read and understandable for visitors.
- Visitors were less satisfied with the following characteristics: the contribution to better understanding of sites, containing diverse methods of presentations, properly and easily accessible interpretation panels, containing sufficient tourist information, suitable size of panels for all visitors, available for all visitors, suitable for all age groups, and available in different languages.
- The impact of interpretation panels on tourists were that they allow tourists a wider space to explore the city, provide options to tourists and prolong the stay of visitors in Mādābā.
- Member of the study sample were less satisfied with the way in which interpretation panels gave an impression to the tourists about the development of tourism in Mādābā and allowed tourists to know more about the importance of monuments in Mādābā.
- It was felt that the staff at the Mādābā Visitors Center do not have enough experience in presenting the site. However, the presentation methods are diverse and interactive, and they encourage the visitor to care about the site. Also, the methods of presentation at the Mādābā Visitors Center contribute to the revival of the old neighborhood of Mādābā and encourage visitors to preserve the site. Furthermore, showing a film at the Mādābā Visitors Center increases the diversity in

the presentation and tour guides are considered to be a significant component of the site presentation.

- Regarding the implementation of interpretation and presentation projects and the participation of the local community, community participation is deemed essential at all stages of the project because of community participation helps the project succeed and helps the community further develop socially and economically.

Recommendations

After observing the situation of interpretation and presentation in Mādābā and how this project benefits the local community and archaeological sites, the researcher would like to suggest the following recommendations:

1. Enhance the facilities and services for visitors.
2. Make a new area with shelters for presentations to accommodate a large group of visitors.
3. It is difficult to reach the Mādābā Visitors Center, so we recommend:
 - Proclaim the location of the Mādābā Visitors Center in accessible media such as publications or websites.
 - Put the Mādābā Visitors Center on tourist maps or GPS devices and distribute other basic information about the site (*e.g.*, brochures, displays, orientation lectures) to visitors.
 - Clear direction and text on the signage system..
4. The presentation methods in the Mādābā Visitors Center must:
 - Contain an interactive panels with touch screens to be more attractive, understandable, and enjoyable for visitors, and in

- particular for children.
- Contribute to revival of the heritage of Mādābā City through illustrators' panels that indicate aspects of the heritage of Mādābā and create an involvement program for visitors to engage with local community.
5. The staff and tour guides at the Mādābā Visitors Center must:
 - Be a qualified and specialist staff in the tourism field.
 - Take training courses on the interpretation and presentation methods and communication skills.
 - Tour guides must be aware of the importance of the role of interpretation tools at visitor centers and their role to help the visitor to understand the site.
 6. The interpretation panels at the Mādābā Visitors Center must be:
 - A suitable size for all visitors and easily accessible.
 - Available in different languages.
 - Distributed in probable places that are easy for the visitor to reach.
 - Text that is clear and easily readable for all ages.
 7. Participation of the local community in interpretation and presentation leads to:
 - The success of the project by raising awareness in the local community of the importance and the benefits of these projects.
 - Help in conservation and protection of the site through the explanation of the importance of the site.
 - Decreased unemployment by creating job opportunities .

- Incentives to better protection and presentation of the site.
- Encouraging youths to show more interest in the implementation of these projects.s

Finally, the interpretation and presentation project that was applied at the Mādābā Visitors Center was a good example of such a program in Jordan and should be further developed and applied at other sites in Jordan.

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