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# Effectiveness and Challenges of Interpretive Media Usage at Osun Osogbo Grove and Olumirin Waterfall, Osun State, Nigeria

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## EFFECTIVENESS AND CHALLENGES OF INTERPRETIVE MEDIA USAGE AT OSUN OSOGBO GROVE AND OLUMIRIN WATERFALL, OSUN STATE, NIGERIA

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**ABSTRACT:** Nature interpretation is an important educational activity in natural and historical areas. This study examined the interpretive media used, investigated the effectiveness of the interpretive media in connecting tourists with the sites' resources and also determined the constraints limiting the effectiveness of the interpretive media used at Olumirin waterfall and Osun-Osogbo Sacred Grove in Osun State, Nigeria. Data collection was through direct observation and structured questionnaire administered to 400 respondents at the sites. Data were analysed using SPSS and results were presented using both descriptive statistics (frequency counts, percentages, mean and standard deviation) and inferential statistics (chi-square test and correlation analysis). Results indicated that the identified heritage resources at the two sites were interpreted mostly through guided talks and walks as well as signage, banners and publications. For perception on effectiveness of interpretation, majority of the respondents perceived it to be effective because interpretation at the two sites instill positive attitude in them which make heritage protection more justifiable (mean=4.58). The constraints to interpretation of resources at the heritage sites revealed "inadequacy of knowledgeable professionals in the aspect of interpretation" (mean=4.40). There is also significant relationship between interpretive media and perceived effectiveness of interpretation ( $p < 0.01$ ). This study concludes that the interpretive media at the sites are to some extent effective in interpreting the heritage resources identified, although with some minor constraints and recommends among others that the management of the two sites should therefore improve on the attractiveness of the interpretive media available while incorporating the use of more interpretive media for effective heritage preservation.

**Key Words:** Heritage resources, Interpretation, Interpretative media, Effectiveness, Values, Osun Osogbo Grove, Olumirin Waterfall

### 1. INTRODUCTION

It has been argued that tourism and conservation areas have intimately been related for centuries and that driving, walking, or travelling to experience nature-based attractions has continuously been a vital component of the operations of nature-based destinations over the years (Eagles *et al.*, 2014). Most of these conservation areas

which include sacred groves and heritage sites thrive on interpretive services for effective management of the sites as well as improvement in visitors' satisfaction. Nature interpretation has been defined as an educational activity that endeavours to reveal meanings and interrelationships through the use of objects, firsthand experiences, or by illustrative media, rather than by merely communicating factual information (Albrecht,

2017). Ham and Sandberg (2012) asserted that nature interpretation chooses and delivers messages while appreciating the impact this communication can have on protected areas and its visitors. Conservation education and nature interpretation are fundamental tools used by managers in attraction and destination areas to regulate visitors to attractions in a non-intrusive or non-obstructive manner, thereby reducing negative impacts while increasing the positive effects (Buckley *et al.*, 2017). Similarly, Bhati and Pearce (2017) affirmed that diligent application of nature interpretation programs significantly enhances the visitor experiences, thus making the attraction area more competitive.

Interpretation in heritage contexts refers to the process of presenting information in ways that enhance visitors' appreciation and understanding of cultural and historic artifacts and events. Interpretive strategies typically encountered at heritage sites include signs, exhibits and guided tours, though audio-visual presentations, interactive storytelling and re-enactments also feature (Almuhriez *et al.*, 2019). Interpretation in natural and cultural resource settings include, ranger-led walks, campfire talks, brochures and newsletters, museum exhibits, living history enactments; which is commonly provided by managers in an effort to engage visitors, encourage attention to particular features of or stories about a site and influence on-site behaviors (Ham, 2013). In addition to the goals of improving visitor appreciation and understanding, resource managers also use interpretation to accomplish managerial objectives (reducing vandalism or coordinating visitor use patterns) and to promote their agency's public image (Beck and Cable, 2011).

In order to captivate audiences, interpretation often seeks to engage visitors by personalizing messages, encouraging sensory engagement, and moving beyond basic information and instruction to "provoke" and "reveal" meanings and connections (Ballantyne *et al.*, 2011). In recent years, this suite of techniques has been augmented by the provision of virtual and augmented reality visitor experiences. The advantage of these is that not only do they more closely align with today's society's reliance on technology for everyday living; they also allow visitors to navigate freely around heritage sites (Dueholm & Smed, 2014). When nature interpretation successfully provokes individuals to have independent thinking and to attach separate meanings about an object or place, it helps in shaping that person's experience with an entity or site if these thoughts are pleasing or gratifying, thereby enhancing a person's experience (Ham & Sandberg, 2012). The importance of interpretation at tourism destinations cannot be over-emphasized as well-designed interpretation has the potential to connect visitors cognitively and emotionally

to events, issues and places that may be far removed from their everyday lives and experiences. The provision of satisfying and memorable visitor experiences is also considered to be vital in gaining a competitive advantage in today's economic conditions (Kim *et al.*, 2012).

Protected areas, which are mostly known for their significant tangible and intangible values, have thus become attractive settings for tourism and recreation (Ababneh, 2016). As a result of rapid heritage tourism all over the world today, there has been a growing interest in the interpretation of natural and cultural sites in order to enable the visitors to understand the unique features of the sites and to spend enjoyable and rewarding time during their visit. However, proper resource interpretation has become an important issue these days in heritage management and planning, although the interpretation of these resources is mostly seen as a complex and problematic one because inappropriate assignment of the rightful interpretive media to resources can easily lead to a controversial story of these resources (Ababneh, 2016; Australia ICOMOS 2000).

For interpretive media to be effective in carrying out the aforementioned functions, they must therefore be used properly and appropriately in relation to the valuable resources at the heritage sites. Apart from using these media, it is equally important that they are used in such a way as to capture tourists' attention thereby creating the chance of conveying an interpretive message to them. When the interpretive media are effectively applied at the sites, the potential socio-economic gains and benefits derivable from such sites can be fully harnessed leading to societal growth and development. Tourist imagination and curiosity can be stimulated and aroused with the use of appropriate interpretive media. According to Nowacki (2021), interpretive media aims to provide emotions and experiences as well as engage visitors in the heritage discourse. The site managers must come to the realizations of the fact that interpretive media is a means of enhancing the quality of heritage sites and also contribute to the satisfaction and enjoyment of the visitors.

A number of studies have been done on interpretive media usage in heritage sites such as Ababneh (2016) who studied and analyzed the signage system used at the archaeological site of Umm Qais in Northern Jordan. Ajayi and Ayodele (2014) also studied ecotourism and community development using a case study of Olumirin Waterfall, Erin-Ijesha, Osun State, Nigeria. Almuhriez *et al.* (2019) explored arab and western visitors' interpretive experiences at an Omani heritage site. Adeyemi and Oyinloye (2020) explored the effectiveness of alternative conservation means in protecting the Osun-osogbo Sacred Grove in South-West, Nigeria. However, no study

has examined the effectiveness and challenges of interpretive media usage at Osun Osogbo Sacred Grove and Oluminrin Waterfall. Hence, this study aimed to examine the interpretive media used, investigate the effectiveness of the interpretive media in connecting tourists with the sites' resources and also determine the constraints limiting the effectiveness of the interpretive media used at Oluminrin waterfall and Osun-Osogbo Sacred Grove in Osun State, Nigeria.

## 2. MATERIALS AND METHODS

### 2.1. The Study Area

**Osun-Osogbo Sacred Grove** is located along the bank of Osun River in Osogbo Local Government Area of Osun State in South western Nigeria. It is situated approximately between latitudes 7°44' and 7°46' N, and longitudes 4°32' and 4°33' E. The sacred grove is located on the margin of the southern forests of Nigeria on a raised parcel, which is about 350 m above sea level.

**Oluminrin Waterfalls** is situated within latitude 7°30' and 8°45' North and longitude 4°31' and 5° East. It has seven levels and the climb up is adventurous and serves well as a mountaineering exercise with the absence of steps and clear-cut trails but tree roots and branches as foot and hand holds. The water flows among rocks and splashes down with great force to the evergreen vegetation around, copulated with refreshing air ambience.

To select a representative sample for the study, an on-site intercept survey was conducted and a total of 400 visitors were randomly sampled at the sites. A portion of 120 visitors were sampled at Osun Osogbo Sacred Grove while 280 visitors were sampled at Oluminrin waterfall and these numbers were determined proportionately according to the visitors' influx of both sites obtained from their records. The study employed personal observation (Field survey) and a well-structured questionnaire to collect the necessary data for the study. Data obtained were analysed using SPSS 21 (Statistical Package for Social Sciences) and results were presented using both descriptive statistics (frequency counts, percentages, mean and standard deviation) and inferential statistics (chi-square test and correlation test).

## 3. RESULTS

### 3.1. Socio-demographic Characteristics of the Respondents

Table 1 shows that majority of the respondents were male (54.8%) while 45.2% were female. Majority of them were also in the age range of 25-54 years (44.5%), 34.5% belonged to the age group of 15-24 years, 19.8% belonged to the age range 55-64 years and 1.3% were above 65 years. Also, majority of the respondents were single (55.3%), 38.5% were married, 4.5% were divorced, 1.8% were widowed. Their educational background revealed majority had tertiary education (71.3%), 21.5% had secondary education and 7.3% had primary education. 99.5% were Nigerians while 0.5% was foreigners. Furthermore, majority of the respondents were Christians (55.8%), 39.3% were Muslims and 5% were traditional worshippers. Majority earned income of ₦30,000-₦60,000 (31%), 27.8% earned less than ₦30,000, 21.3% earned ₦61,000-₦90,000, 11.5% earned ₦91,000-₦120,000, 4.5% earned ₦121,000-₦150,000, 4.0% earned above ₦150,000. Majority of the respondents were students (35.8%), 17.8% were civil servants, 32.8% were self-employed, 11.8% were working with private sector, 20% were unemployed. 83.2% were not members of NGOs while 16.8% were members of NGOs.

Table 1: Socio-demographic characteristics of the respondents

Variables	Frequency (N=400)	Percentage (%)
<b>Gender</b>		
Male	219	54.8
Female	181	45.2
<b>Age</b>		
15-24 years	138	34.5
25-54 years	178	44.5
55-64 years	79	19.8
Above 65 years	5	1.3
<b>Marital Status</b>		
Single	221	55.3
Married	154	38.5
Divorced	18	4.5
Widowed	7	1.8
<b>Educational Background</b>		
Primary	29	7.3
Secondary	86	21.5
Tertiary	285	71.3

Source: Field Survey, 2021

Table 1 Cont'd

Variables	Frequency (N=400)	Percentage (%)
<b>Nationality</b>		
Nigerian	398	99.5
Foreigner	2	0.5
<b>Religion</b>		
Christianity	223	55.8
Muslim	157	39.3
Traditional	20	5.0
<b>Income (₦)</b>		
Less than 30,000	111	27.8
30,000-60,000	124	31.0
61,000-90,000	85	21.3
91,000-120,000	46	11.5
121,000-150,000	18	4.5
Above 150,000	16	4.0
<b>Occupation</b>		
Civil servant	71	17.8
Self-employed	131	32.8
Student	143	35.8
Private sector	47	11.8
Unemployed	8	2.0
<b>Membership of NGO</b>		
Yes	67	16.8
No	333	83.2

Source: Field Survey, 2021

### 3.2. Resources Valuable for Interpretation at the Heritage Sites

Table 2 reveals the resources valuable for interpretation at Osun Osogbo Sacred Groves and Olumirin Waterfall. It shows that at Osun Osogbo Sacred Groves, the resources valuable for interpretation are Ile iyemo, Osun olomoyoyo, Idi egbe, First palace, Ojubo osun, monkey,

Table 3: Interpretive Media used at the Sites

Media	Yes	No
<b>Guided interpretive media</b>		
Guided walks	336(84%)	64(16%)
Guided talks	268(67%)	132(33%)
Demonstration and observation	148(37%)	252(63%)
Performance re-enactment, role plays, poetry reading, dance and music	169(42.3%)	231(57.8%)
Special events such as festival	131(32.8%)	269(67.3%)
<b>Self-guided interpretive media</b>		
Publications such as books, fliers, brochures, illustrations and worksheets	233(58.3%)	167(41.8%)
Information and site-specific interpretation boards	137(34.3%)	263(65.8%)
Signage	204(51%)	196(49%)
Banners	228(57%)	172(43%)
Flags	160(40%)	240(60%)
Special signs	126(31.5%)	274(68.5%)
Graphic Illustration (Artwork, photographs, maps and visual materials)	123(30.8%)	277(69.3%)
Computer interactives and video games	113(28.3%)	287(71.8%)
Exhibits or exhibitions	151(37.8%)	249(62.3%)

Source: Field Survey, 2021

Igbo Ifa, Suspended bridge, Iya Mapo, Osun shrine, Oja ontoto, Iledu ontoto, Soponna, Ela, Tiger and Antelope. Furthermore, at Oluminrin Waterfall, Waterfall, Hill and Steps are the resources valuable for interpretation.

Table 2: Resources valuable for interpretation at the Heritage Sites

S/N	Osun-Osogbo Sacred Grove	Oluminrin Waterfall
1	Ile Iyemo	Waterfall
2	Osun Olomoyoyo	Hill
3	Idi egbe	The Steps
4	First palace	
5	Ojubo Osun	
6	Monkey	
7	Igbo Ifa	
8	Suspended bridge	
9	Iya Mapo	
10	Osun Shrine	
11	Oja ontoto	
12	Iledu ontoto	
13	Soponna	
14	Ela	
15	Tiger	
16	Antelope	

Source: Field Survey, 2021

### 3.3. Interpretive Media used for identified resources

Table 3 shows the interpretive media used at the sites. For guided interpretive media, majority of the respondents chose guided walks (84.0%) and guided talks (67.0%) as existing at the sites. For self-guided interpretive media, majority of the respondents chose publications (58.3%), signage (51.0%), and banners (57.0%) as existing interpretive media at the sites.

## 3.4. Effectiveness of Interpretive Media Used at the Sites

Table 4 reveals the effectiveness of interpretive media at the sites. In the elaboration section, the statement “made me curious” had the highest mean value of 4.54. For relevancy, “was meaningful” had the highest mean value of 4.37. For empathy, “Impacted my view of my own life” had the highest mean value of 4.36. For positive attitude, “Made protecting heritage seem more justifiable” had the highest mean value of 4.58. For satisfaction, “was enjoyable” had the highest mean value of 4.45. For behavioral intention, “You should visit this place” had the highest mean value of 4.55. For behavioral loyalty intention, “Made me want to attend/participate in

another interpretive activity” had the highest mean value of 4.50.

## 3.5. Constraints of Interpretation of Resources at the Sites

Table 5 reveals the constraints to interpretation of resources at the heritage sites. The highest constraints of interpretation at the sites was “Inadequacy of knowledgeable professionals in the aspect of interpretation” with a mean value of 4.40, followed by “Interpretative media are not attractive and neatly placed” with a mean value of 4.09 while “Lack of awareness about interpretative media” had the lowest mean value of 3.20.

**Table 4: Effectiveness of Interpretive Media**

Indicators of effectiveness	SA	A	U	D	SD	Mean	St. Dev
<b>Cognitive interpretation outcome (formative relation with first-order constructs)</b>							
<b>Elaboration</b>							
Made me curious	259(64.8%)	110(27.5%)	20(5%)	10(2.5%)	1(0.3%)	4.54	0.728
Made me think	168(42%)	197(49.3%)	21(5.3%)	13(3.3%)	1(0.3%)	4.30	0.734
Made me want to talk about what I heard	180(45%)	176(44%)	33(8.3%)	7(1.8%)	4(1%)	4.30	0.776
Made me want to know more	172(43%)	188(47%)	28(7%)	7(1.8%)	5(1.3%)	4.29	0.775
Intrigued me	180(45%)	153(38.3%)	55(13.8%)	8(2%)	4(1%)	4.24	0.837
<b>Relevancy</b>							
Was meaningful	187(46.8%)	182(45.5%)	26(6.5%)	2(0.5%)	3(0.8%)	4.37	0.696
Was relevant to me	163(40.8%)	181(45.3%)	38(9.5%)	17(4.3%)	1(0.3%)	4.22	0.805
Was connected to things I care about	175(43.8%)	167(41.8%)	48(12%)	7(1.8%)	3(0.8%)	4.26	0.793
Was connected to things I know about	151(37.8%)	185(46.3%)	42(10.5%)	20(5%)	2(0.5%)	4.16	0.839
<b>Affective interpretation outcome (formative relation with first-order constructs)</b>							
<b>Empathy</b>							
Impacted my view of my own life	220(55%)	127(31.8%)	32(8%)	18(4.5%)	3(0.8%)	4.36	0.867
Impacted my view of today’s society	169(42.3%)	175(43.8%)	48(12%)	5(1.3%)	3(0.8%)	4.26	0.772
Impacted my ability to relate to elderly people	191(47.8%)	163(40.8%)	29(7.3%)	13(3.3%)	4(1%)	4.31	0.822
Impacted how I see some things about today’s world	166(41.5%)	193(48.3%)	33(8.3%)	6(1.5%)	2(0.5%)	4.29	0.722
Impacted how I see myself	182(45.5%)	155(38.8%)	47(11.8%)	11(2.8%)	5(1.3%)	4.25	0.858
<b>Positive attitude</b>							
Made protecting heritage seem more important	221(55.3%)	138(34.5%)	32(8%)	6(1.5%)	3(0.8%)	4.42	0.765
Made me value heritage preservation more	238(59.5%)	149(37.3%)	5(1.3%)	4(1%)	4(1%)	4.53	0.675
Made protecting heritage seem more justifiable	262(65.5%)	115(28.8%)	15(3.8%)	7(1.8%)	1(0.3%)	4.58	0.675
<b>Satisfaction</b>							
Was enjoyable	209(52.3%)	168(42%)	18(4.5%)	4(1%)	1(0.3%)	4.45	0.655
Was good	169(42.3%)	209(52.3%)	14(3.5%)	7(1.8%)	1(0.3%)	4.35	0.657
Was satisfying	184(46%)	187(46.8%)	21(5.3%)	7(1.8%)	1(0.3%)	4.37	0.688
Was interesting	190(47.5%)	188(47%)	15(3.8%)	7(1.8%)	0(0%)	4.40	0.649
Worth telling	204(51%)	171(42.8%)	18(4.5%)	5(1.3%)	2(0.5%)	4.43	0.686
<b>Behavioural intention (reflective relation with first-order constructs) Word-of-mouth (WOM) intention</b>							
You should visit this place	250(62.5%)	129(32.3%)	14(3.5%)	4(1%)	3(0.8%)	4.55	0.685
The place is interesting	197(49.3%)	181(45.3%)	14(3.5%)	5(1.3%)	3(0.8%)	4.41	0.691
Coming here is worth the money	204(51%)	167(41.8%)	20(5%)	6(1.5%)	3(0.8%)	4.41	0.723
Coming here is enjoyable	173(43.3%)	200(50%)	17(4.3%)	7(1.8%)	3(0.8%)	4.33	0.709
Coming here is worth the time	212(53%)	156(39%)	18(4.5%)	8(2%)	6(1.5%)	4.40	0.795

Keys: SA- Strongly Agree, A- Agree, U- Undecided, D- Disagree, SD- Strongly Disagree

Source: Field Survey, 2021

Table 4 Cont'd

Indicators of effectiveness	SA	A	U	D	SD	Mean	St. Dev
<i>To what extent you agree that the guide interpretation. .</i>							
<b>Behavioural loyalty intention</b>							
Made me want to attend/participate in another interpretive activity	239(59.8%)	129(32.3%)	25(6.3%)	6(1.5%)	1(0.3%)	4.50	0.704
Made me want to stay longer	167(41.8%)	205(51.3%)	19(4.8%)	8(2%)	1(0.3%)	4.32	0.682
Made me want to return for another visit in the future	205(51.3%)	166(41.5%)	22(5.5%)	7(1.8%)	0(0%)	4.42	0.678
Made me want to purchase a memento or souvenir directly related to this place	196(49%)	169(42.3%)	23(5.8%)	8(2%)	4(1%)	4.36	0.767
<b>Total effectiveness</b>						<b>135.35</b>	<b>12.86</b>

Keys: SA- Strongly Agree, A- Agree, U- Undecided, D- Disagree, SD- Strongly Disagree  
Source: Field Survey, 2021

Table 5: Constraints of interpretation of resources at heritage sites

Variables	SA	A	U	D	SD	Mean	St. Dev
Inadequacy of knowledgeable professionals at the heritage site	269(67.3%)	77(19.3%)	16(4%)	21(5.3%)	17(4.3%)	4.40	1.071
Inadequate maintenance of interpretative media	138(34.5%)	206(51.5%)	17(4.3%)	22(5.5%)	17(4.3%)	4.07	0.994
Inadequate awareness about interpretative media	99(24.8%)	126(31.5%)	33(8.3%)	38(9.5%)	104(26%)	3.20	1.552
Unfriendly taboos associated with some heritage resources	131(32.8%)	149(37.3%)	66(16.5%)	37(9.3%)	17(4.3%)	3.85	1.107
Refusal to divulge information by heritage custodians.	133(33.3%)	161(40.3%)	53(13.3%)	34(8.5%)	19(4.8%)	3.89	1.106
Inadequate detailed information from heritage staff	149(37.3%)	159(39.8%)	35(8.8%)	33(8.3%)	24(6%)	3.94	1.153
Language barrier	117(29.3%)	153(38.3%)	44(11%)	52(13%)	34(8.5%)	3.67	1.257
Dilapidated state of heritage resources	152(38%)	170(42.5%)	35(8.8%)	36(9%)	7(1.8%)	4.06	0.992
Difficulty in understanding interpretative media information	147(36.8%)	170(42.5%)	35(8.8%)	37(9.3%)	11(2.8%)	4.01	1.037
Interpretative media are not attractive and neatly placed	177(44.3%)	145(36.3%)	31(7.8%)	29(7.3%)	18(4.5%)	4.09	1.100
<b>Total constraints</b>						<b>39.16</b>	<b>7.106</b>

Keys: SA- Strongly Agree, A- Agree, U- Undecided, D- Disagree, SD- Strongly Disagree  
Source: Field Survey, 2021

### 3.6. Relationship between Interpretive Media and Perceived Effectiveness of Interpretation

Table 6 reveals that there is a significant relationship between demonstration/observation, Performance re-enactment, special events, publication, Information and site-specific interpretation boards, signage, banners, flags, special signs, graphic illustrations, computer interactives and elaboration. Also, there is a significant relationship between guided walks, demonstration/observation, Performance re-enactment, special events, publication, Information and site-specific interpretation boards, signage, banners, flags, special signs, graphic illustrations, computer interactives and relevancy. There is a significant relationship between

guided walks, demonstration/observation, Performance re-enactment, special events, publication, Information and site-specific interpretation boards, signage, banners, flags, special signs, graphic illustrations, computer interactives and empathy. There is a significant relationship between guided walks, demonstration/observation, Performance re-enactment, special events, Information and site-specific interpretation boards, signage, banners, flags, special signs, graphic illustrations, computer interactives and positive attitude. Furthermore, there is a significant relationship between guided walks, guided talks, demonstration/observation, Performance re-enactment, special events, publication, Information and site-specific interpretation boards, signage, banners, flags, special



signs, graphic illustrations, computer interactives, exhibits/ Exhibitions and satisfaction. There is a significant relationship between guided walks, demonstration/observation, Performance re-enactment, special events, publication, Information and site-specific interpretation boards, signage, banners, flags, special signs, graphic illustrations, computer interactives, exhibit/ exhibition and behavioural intention. There is a significant relationship between guided walks, demonstration/observation, Performance re-enactment, special events, publication, Information and site-specific interpretation boards, signage, banners, flags, special signs, graphic illustrations, computer interactives and behavioural loyalty intention.

### 3.7. Relationship between socio-demographic characteristics of visitors, Constraints and Perceived Effectiveness of Interpretation

Table 7 shows that there is a significant relationship between age, income, religion, occupation and elaboration. There is also a significant relationship between income, education, occupation, membership of NGO and relevancy. There is a significant relationship between education, religion, occupation, membership and empathy. There is a significant relationship between age, occupation and positive attitude. There is a significant relationship between education, religion and satisfaction. There is a significant relationship between education, religion, membership and behavioural intention. Furthermore, there is a significant relationship between education, occupation, membership and behavioural loyalty intention. There is a significant relationship between age and constraints.

**Table 6: Relationship between Interpretive Media and Perceived Effectiveness of Interpretation**

Variables	Elaboration	Relevancy	Empathy	Positive attitude	Satisfaction	Behavioural intention	Behavioural loyalty intention
	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value
Guided walks	25.06	30.36**	27.17*	29.50**	38.51**	33.82**	29.66**
Guided talks	19.46	19.93	22.91	9.50	28.87*	18.35	8.23
Demonstration and observation	37.44**	34.90**	29.77*	45.35**	33.67**	66.60**	51.77**
Performance re-enactment	55.86**	68.32**	53.22**	26.33**	48.58**	64.88**	43.37**
Special events	131.83**	229.73**	115.23**	64.48**	92.93**	452.57**	54.49**
Publication	60.47**	49.42**	44.71**	18.38	60.90**	33.85**	32.20**
Information and site-specific interpretation boards	40.54**	53.43**	45.50**	40.97**	49.33**	59.37**	42.82**
Signage	81.12**	67.37**	67.51**	37.89**	68.26**	68.78**	70.95**
Banners	119.97**	95.60**	87.63**	39.42**	86.57**	82.48**	69.65**
Flags	59.82**	66.38**	47.34**	45.52**	41.44**	52.48**	54.88**
Special Signs	45.76**	46.19**	41.60**	36.93**	45.25**	56.57**	47.36**
Graphic Illustration	47.63**	45.91**	42.54**	38.78**	44.71**	55.84**	46.90**
Computer interactive	47.20**	52.02**	39.12**	40.03**	39.22**	59.50**	47.40**
Exhibits or exhibitions	25.14	19.69	16.02	16.04	28.82*	31.67*	15.89

\*p<0.05, \*\*p<0.01,

Source: Field Survey, 2021.

**Table 7: Relationship between socio-demographic characteristics of visitors and perceived effectiveness of interpretation**

Variables	Elaboration	Relevancy	Empathy	Positive attitude	Satisfaction	Behavioural intention	Behavioural loyalty intention
	r value	r value	r value	r value	r value	r value	r value
Age	0.11*	0.08	0.07	0.12*	0.01	0.04	0.06
Income	0.10*	0.15**	0.07	0.07	0.01	0.05	0.06
	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value	$\chi^2$ value
Gender	53.81	34.93	29.77	19.50	38.77	41.44	25.76
Education	41.06	41.47*	66.10**	32.27	66.28**	52.36*	47.01**
Religion	58.91**	34.34	56.71**	22.46	41.54*	61.98**	24.17
Occupation	207.88**	85.02*	155.44**	79.59*	76.58	96.42	98.45**
Membership	43.48	41.77*	47.28*	33.11	88.92**	49.52*	57.08**

\*p<0.05, \*\*p<0.01

Source: Field Survey, 2021.



#### 4. DISCUSSIONS

Findings from this study identified heritage resources at the sites to include Ile iyemo, Osun olomoyoyo, Idi egbe, first palace, Ojubo osun, monkey, Igbo Ifa, Suspended bridge, Iya Mapo, Osun shrine, Oja ontoto, Iledu ontoto, Soponna, Ela, Tiger, Antelope, Waterfall, Hill and Steps. These identified resources were mostly interpreted through the use of media such as guided walks and guided talks during guided tours. Guided walks and talks are performed by tour guides and this avenue is an effective form of interpretation as it allows the tour guides to actively and personally connect with the audience as remarked by Nowacki (2021) that tour guides provide tourists with a high-quality experience and they affect the standard of living of local communities by appropriately targeting tourists' expenses and supporting activities that protect and preserve the natural, cultural and physical values of the area. He further stated that guides can make an important contribution to the sustainable development goals by actively managing the tourist experiences and helping to manage and protect heritage resources and promote the local economy. The respondents opined those publications, signages and banners are mostly used for the self-guided tours and this is in line with Moscardo *et al.* (2007) that non-personal media such as visual or printed media is common media at heritage sites. Printed materials serve as an everlasting source of information for the visitors.

The respondents claimed that the interpretive media used at the sites are elaborate explained by their being curious and the fact that it intrigued the audience. The respondents also claimed that the media were relevant as they were meaningful and connected to things they know and care about. This is consistent with Ham (2013) who revealed that interpretive encounters and products meet the four qualities of interpretation which are thematic, organized, relevant, and enjoyable. They also claimed that the interpretive media have an impact on view of their own life and the society which depicts that the audience had a connection with the site resources as supported by Serrell (2015) that good interpretation gives the audience the opportunity of creating their own connections and meanings about heritage. Furthermore, the respondents opined that the interpretive media made protecting heritage resources more justifiable and this has improved their attitude towards preserving heritage resources as remarked by Nowacki (2012) who claimed that the task of interpretation is to provide optimal experiences to visitors, manage the visitors' traffic and shape attitudes conducive to the protection and conservation of heritage resources. The respondents further claimed the interpretive media were enjoyable and satisfying while claiming they would spread positive word of mouth to others in visiting the sites. This is

supported by Veverka (2011) who argued that providing interpretive signage rather than informational signage helps to reveal meaning of sites and increase their enjoyment. They further claimed that the interpretive media made them want to participate in other interpretive activity which shows that it has improved their loyalty to the sites. These visitors' affirmations shows that the interpretive media have induced a positive behavioural intentions in them and this is good for heritage sites as supported by Tubb (2003) who revealed that heritage interpretation, if carefully designed, is capable of contributing to the goals of sustainable tourism development by achieving knowledge restructuring and resulting in behavioural intentions of visitors, and that "interactive material played a vital part in the effectiveness of interpretive messages".

Findings also revealed that the major constraint to interpretation of heritage resources is the inadequacy of knowledgeable professionals in the heritage sites. Knowledgeable professionals will help in passing heritage preservation lessons to audience effectively, as audience come from diverse background and thus would need diverse approach for different classes of audience; as supported by Moscardo (2014) that although interpreting heritage for well-educated people, heritage enthusiasts, is easy and pleasant, the real challenge is the interest of people with low cultural capital and poorly educated, that is, the mass tourist. The respondents also claimed that the interpretive media are not attractive and neatly placed. This could impair the effectiveness of these interpretive media as Patin (2005) states that well-designed signs have a positive impact on the aesthetic and artistic value of the tourist site.

Furthermore, findings revealed that socio-demographic characteristics are significant predictors of perceived interpretive potential of heritage resources. There is also a significant relationship between interpretive media and perceived effectiveness of interpretation signifying that the interpretive media used and the way they are used has an influence on how the audience perceives its effectiveness. Therefore, heritage site management should work on improving their interpretive media so that it can have positive effect on the audience. There is also significant relationship between socio-demographic characteristics and perceived effectiveness of interpretation. The relationship between socio-demographic characteristics and interpretation is in line with assertion by Kuo (2002) that interpretive media should be designed to encompass visitor demographic variables such as gender, nationality and age.

## 5. CONCLUSION AND RECOMMENDATIONS

1. This study concludes that there are a substantial number of notable heritage resources at the sites which include: Ile iyemo, Osun olomoyoyo, Idi egbe, First palace, Ojubo osun, monkey, Igbo Ifa, Suspended bridge, Iya Mapo, Osun shrine, Ojaontoto, Iledu ontoto, Soponna, Ela, Tiger, Antelope, Waterfall, Hill and Steps.
2. The heritage resources were also perceived to be unique, attractive, accessible to the general public, resistant to impact and have coherence to subject matter.
3. The interpretive media used at the sites were considered effective in that they are elaborate, relevant, empathetic and satisfactory.
4. There is inadequacy of knowledgeable professionals in interpretation field at the sites and this is a major challenge facing interpretation of heritage resources in the sites and that the interpretive media are not neatly placed and this could further reduce the effectiveness of heritage interpretation at the sites.
5. There is need for adequate maintenance of the interpretive media being used at the sites by the relevant stakeholders for sustainable use.

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