

Digital Cultural Heritage Marketing: Innovative and Inclusive Marketing of Moroccan Cultural Heritage in the Digital Age - A Case Study of Fès

Morad FAREH

Management and Development Research Laboratory (LRMD), Faculty of Economics and Management Hassan First University, Settat, Morocco

Correspondance address

FEM, Settat, Morocco

Cite this article

FAREH. M, (2026). Digital Cultural Heritage Marketing: Innovative and Inclusive Marketing of Moroccan Cultural Heritage in the Digital Age - A Case Study of Fès. International Journal of Economics and Management Sciences, Volume 5, Issue 4 (2026), pp. 12-30

Submitted: 20/06/2026

Accepted : 31/08/2026

International Journal of Economics and Management Sciences - IJEMS–
Volume 5, Issue 4 (2026)

Copyright © IJEMS

Abstract

Start with a plain question and it soon turns awkward. What does digital heritage marketing actually accomplish in Fès, the Moroccan medina placed on the UNESCO World Heritage list in 1981, and does its twin promise of innovation and inclusion survive contact with real data? Two hundred and fifty respondents answered a structured questionnaire. One block of items rated technological innovation, running from virtual tours through augmented and virtual reality to interactive platforms. A second asked about inclusive design, probing language provision, cultural sensitivity, and whether accessibility features existed at all. A third recorded what such features are meant to produce, that is, the intention to visit, the satisfaction that follows a visit, and the readiness to recommend the city to someone else. Then the reliability check refused to cooperate. Cronbach's alpha came back at -0.413 for Digital Innovation, 0.002 for Inclusivity, and 0.095 for Engagement. Every one of those sits far below the conventional floor of 0.70 , and the first cannot be defended at all. A scale that fails internal consistency this badly cannot be summed into anything meaningful, so every result downstream is read as exploratory rather than confirmatory. The correlations say the same thing in a different key. Most of the expected links are faint, a few run backwards, and almost none clear significance. Perceptions stay warm on their own terms, innovation averaging 3.82 ($SD = 0.81$) while the inclusivity items land between 3.30 and 3.87 , yet that warmth never becomes behavior. What the paper offers is a diagnosis. It shows exactly where the measurement breaks, it explains why models such as TAM, UTAUT, and the stimulus-organism-response framework cannot be tested on instruments nobody validated, and it sketches a few cautious directions that people working in Fès could examine properly once better tools exist.

Keywords: Digital cultural heritage, heritage marketing, innovation, inclusivity, Fès medina, Morocco, virtual tourism, accessibility

1. Introduction

Cultural heritage carries the memory of a society and the values it claims as its own. That is why it keeps behaving like a hinge, swinging between what a community once was and what it is trying to become. Morocco holds sites where the hinge is visibly strained. Millions of visitors reach the Fès medina every year, and each arrival presses at once on the fabric that has to be conserved and on the local economy that needs the crowds to keep coming. The medina joined the UNESCO World Heritage list in 1981. Ever since, it has worked as a live demonstration of how hard it is to hold a historic city together when the duty to preserve runs headlong into a modern appetite for engagement and money.

Digital technology rewrote the terms of that collision. Virtual and augmented reality, interactive platforms, the whole machinery of social media, all of it now lets a heritage site speak to audiences it could never have reached and shape a visitor's expectations well before arrival. The gains are real. They also come with strings attached. Does the technology deepen the encounter, or merely relocate it to a screen? Who benefits once access quietly assumes a fast connection and a recent phone, and who drops out? And what becomes of authenticity when a living medina is packaged for frictionless consumption? Excitement about the digital frontier has generally outrun any hard look at the divide it can widen, at who ends up represented, and at the slow commodification that tends to follow.

This study works a single seam of that larger problem. It refuses to treat innovation or inclusion as the whole story and examines the two side by side, in a setting the field has mostly walked past. Empirical work on North African heritage marketing is thin. Nobody has yet looked systematically at how these strategies weigh technological reach against inclusive access. Fès belongs in that gap for reasons beyond rhetoric. It is Morocco's spiritual and intellectual capital, its urban form defeats the tidy circulation that conventional tourism management assumes, and it has been trying out digital promotion while insisting the outcome stay recognizably Fassi.

Five aims give the inquiry its spine. The first takes the temperature of digital innovation in the way Fès is marketed, asking how far virtual tours, AR and VR applications, and interactive platforms have actually been adopted, and how well visitors think they perform. The second turns to inclusion, setting language provision and cultural sensitivity beside the accessibility features that diverse audiences rely on and the range of perspectives a platform bothers to show. The third goes after behavior. Does any of this connect to the intention to visit, to satisfaction, to the odds of a recommendation? The fourth hunts for variation across age, education, and prior experience of the city. The last turns whatever the data will bear into guidance for the people who must act anyway, the site managers and tourism authorities and the developers who build the platforms they lean on. Read together, the five answer a standing call for a sharper account of how digital tools might open heritage to more people without flattening the values that make it worth the trip.

2. Literature Review

2.1 Digital Transformation in Cultural Heritage Tourism

Digital transformation reworked heritage tourism from the foundations up. It changed how sites reach visitors, how they stretch thin budgets, and how they tell the stories in their keeping. The reach now covers the whole arc of a visit. It opens with the information a traveler gathers before leaving home, carries through the tools that shape the encounter on site, and runs on into whatever gets shared afterward. Choices increasingly get made in front of a screen. A traveler weighs a virtual preview against a stranger's review, tests an interactive map, and only then commits.

Virtual tours and 360-degree environments moved expectations the furthest. They let a would-be visitor walk a site from a sofa, and that rehearsal often plants the curiosity that later becomes a real trip. One feature, two jobs. It stands in for the visit when distance or cost or disability rules the visit out, and it doubles as a hook that lifts a destination's appeal. When the pandemic sealed borders and emptied the monuments, uptake of these experiences jumped. The surge proved how resilient the digital channel is. It also proved, at the very same moment, how much of the encounter still rests on a physical presence no headset reproduces.

The change reaches well past the surface a visitor sees. Behind the screen run analytics dashboards, preservation archives, and management systems that steer foot traffic and flag the next repair before it becomes urgent. One tension keeps returning in the literature, and no system dissolves it. Any digital intervention risks thinning the authenticity it set out to honor, boiling a layered narrative down into something smoother and easier to sell. Sites that handle this treat the technology as a companion to the encounter, never a replacement. They let the enhancement step back so the heritage stays in front.

2.2 Innovation in Digital Heritage Marketing

Innovation here works on three fronts, the technological, the editorial, and the strategic, and it repays the effort only when all three advance together. The recurring lines of development are familiar by now. Augmented reality drapes historical information over the physical scene. Virtual reality rebuilds a lost period for the viewer to step inside. Gamified designs take passive learning and turn it into something a visitor has to do.

AR and VR carry the heaviest hopes, because they change the act of interpretation itself. An overlay can lift a ruined façade back to its first state inside the visitor's own sightline. It can pin a story to an object the eye would skate right past. VR reaches further, staging a kind of time travel where the visitor watches an event unfold or paces a site as it once stood, and that staged moment lodges in memory far more stubbornly than a wall label ever could. Those educational and emotional traces are the prize. A trace is what later converts into a visit.

Interactive platforms and mobile applications open a second front, and personalization is their real gift. What a visitor sees bends toward that visitor's interests, prior knowledge, and access needs. Multimedia storytelling holds attention. User-generated content buys a credibility official copy cannot purchase. A share button quietly turns a happy visitor into an advocate who costs nothing.

Gamified layers, a digital scavenger hunt or a modest badge system, keep younger audiences around longest and stretch the minutes they stay engaged.

None of it pays off on its own. A clumsy interface, a feature that presumes hardware the visitor lacks, content that misreads the local culture, any single one of these can waste the whole investment and drive people away rather than pull them in. What divides the platforms that work from the ones that stall is unglamorous. It is close attention to how real users move through the thing, testing that continues long after launch, and a decision to weave the technology into the site's wider interpretation instead of bolting it on for the sake of novelty.

2.3 Inclusivity and Accessibility in Heritage Tourism

Inclusion and access rarely draw the attention immersive technology commands. They decide, all the same, who gets to take part at all. The category covers physical access, linguistic range, cultural sensitivity, and the plain question of whose viewpoint a platform chooses to put first. The record disappoints. A large share of heritage sites, and of the platforms that promote them, still fail the audiences they claim to court, shutting the door on visitors with disabilities, on speakers of other languages, and on communities whose cultural frame differs from the one the platform silently assumes.

The tools that would close the gap are hardly exotic. Multilingual content. Audio description. Adjustable text. Screen-reader compatibility. A second way to navigate when the first does not suit. Each widens the door, and each tends to improve the experience for everyone rather than only for the person who strictly needs it. Universal design rests on exactly that logic. So the obstacle is implementation, not invention. WCAG 2.1 has been public for years and the enabling technology is mature, yet platform after platform still ships without the basics in place.

Language access exposes how shallow a purely technical fix can be. Translation by itself will not carry a visitor over a cultural threshold. Content has to be localized, its tone and reference and framing adapted to the reader's own way of speaking rather than run through a dictionary and left there. Sites that manage this, that treat a second language as a second cultural register instead of a mirror of the first, report stronger engagement from international visitors and from diaspora audiences who measure authenticity against memory.

Cultural sensitivity and representation raise the hardest questions, because these turn on power, not on function. Whose story gets told. Whose account is treated as authoritative. How a tangled heritage is framed for outsiders. None of that is a neutral choice. Critical heritage scholars have shown that digital platforms tend to reproduce the standing hierarchy rather than disturb it, curating the dominant narrative while nudging local voices to the edge and reducing cultural complexity to content those travels. Participatory design, where community members co-author what appears, is easy to praise and rare to see. Most platforms are still built by outside developers who spend little time on the ground, and the distance leaves marks. That gap, between the vocabulary of inclusion and what actually gets deployed, is a frontier that stays wide open. To read these features rather than just list them, the study borrows from the Technology Acceptance Model and its extension,

the Unified Theory of Acceptance and Use of Technology (UTAUT; Venkatesh et al., 2003), which trace how a technology's perceived usefulness, its ease of use, and the social pressure around it feed the will to adopt it. The Stimulus-Organism-Response framework supplies the step those models leave unsaid, seating perceived authenticity and destination image as the inner states a digital stimulus must pass through before it can surface as behavior.

2.4 The Case of Fès: Context and Challenges

Fès sits in a spot no other Moroccan city quite occupies. It is the spiritual and intellectual capital of the country, home to Al-Qarawiyyin, founded in 859 CE and widely counted as the oldest continuously operating university on earth, and it holds one of the largest car-free urban areas anywhere. The medina sprawls across some 300 hectares. Through that expanse it threads more than 9,000 streets and alleys. Managing heritage on this scale means carrying three obligations that pull against each other. The fabric has to stay standing. Tourism has to stay within limits the place can bear. The livelihoods of the people who actually live inside the walls have to survive both pressures.

Recent scholarship records a deliberate push to fold digital tools into that balance without hollowing out the crafts that give the medina its character. Boujida and colleagues follow initiatives that marry digital marketing to sustainability and refuse to prise innovation apart from tradition. On the ground this has meant mobile applications for finding a way through the maze, virtual tours of the main monuments, and platforms that set artisans and their workshops in front of a wider public.

The obstacles match the ambition in scale. Inside the historic core the infrastructure is patchy. Digital literacy among the local stakeholders who would have to keep any platform alive varies widely. The needs of residents and the needs of the tourism sector do not always agree. Study after study lands on collaboration as the price of anything durable, drawing municipal authorities, conservation bodies, tour operators, and residents into one room. A medina this tangled, holding heritage this varied, asks for solutions that can carry a layered history while still answering the visitor who only wants to know where to turn next. El-Ouali and colleagues press the practical side, arguing that social media, search visibility, and content marketing earn their keep in Fès only when global reach is disciplined by local truth, so the image the world sees still matches the city residents know. Taken whole, the Fès literature reads as a study in how an old city can enter the digital economy without agreeing to be flattened by it.

3. Methodology

The work rests on a quantitative design built around a structured survey. The point was to measure how visitors perceive digital innovation and inclusivity in the marketing of Fès, then to see whether any of those perceptions track behavior worth acting on.

3.1 Research Design and Sample

Why fix everything at a single moment? The question concerned attitudes as they stand now, not how they drift over years, and one well-timed snapshot answers that better than a slow chase across time. The questionnaire reached 250 participants. Recruitment went by convenience, screened for some prior stake in heritage tourism so the answers would carry weight rather than noise. The group came out mixed. Age spread over five bands. Seventy respondents fell between 18 and 25, another 70 between 26 and 35, then 57 between 36 and 45, 41 between 46 and 55, and a final dozen at 56 or beyond. Women outnumbered men, 130 against 114, and 6 placed themselves elsewhere. Schooling climbed the whole ladder, from 36 who stopped at high school through 110 with a bachelor's and 81 with a master's up to 23 who held a doctorate. Experience of the city ran lopsided. Ninety-five had walked Fès before. The other 155 had not.

3.2 Measurement Instruments

Eighteen items on a five-point Likert scale, anchored from strong disagreement up to strong agreement, carried the measurement across three constructs. Seven items fed Digital Innovation. They reached ease of access, content quality, visual appeal, completeness of information, the virtual tour experience, appetite for AR and VR, and interactive features. Five fed Inclusivity, covering language accessibility, cultural sensitivity, accessibility features, diversity of representation, and social media engagement. Three more captured Visitor Outcomes, namely the intention to visit, the likelihood of a recommendation, and overall satisfaction. Two additional items logged community interaction and engagement with user-generated content. A short demographic block made the later subgroup comparisons possible.

3.3 Analytical Procedures

Analysis ran in SPSS. Descriptive statistics fixed the central tendency and the spread of every variable. Cronbach's alpha then checked whether the multi-item scales held together, and that supposedly routine step ended up deciding the fate of everything after it. Pearson correlations mapped the bivariate relationships among the key variables. A multiple regression asked whether Digital Innovation, Language Accessibility, and Social Media Engagement, taken together, could predict visit intention. Analysis of variance and independent-samples t-tests probed whether visit intention shifted across age bands and between visitors and non-visitors. The significance threshold sat at the usual 0.05. The parametric tests ran with their standard assumptions of normality, linearity, and equal variance kept in mind.

4. Results

4.1 Descriptive Statistics

The descriptive picture is uniformly favorable. Nearly every mean clears the midpoint of the scale, which says respondents think well of the digital marketing they have met around Fès. Table 1 lays out the full run for all 18 items.

Table 1. Descriptive Statistics for All Variables (N = 250)

Variable	Mean	SD	Min	25%	Median	75%	Max
Ease of Access	3.92	0.77	1.50	3.50	4.00	4.50	5.00
Content Quality	3.63	0.92	1.00	3.00	3.50	4.50	5.00

Variable	Mean	SD	Min	25%	Median	75%	Max
Visual Appeal	4.11	0.73	2.00	3.50	4.00	4.50	5.00
Information Completeness	3.53	0.93	1.00	3.00	3.50	4.00	5.00
Virtual Tour Experience	3.93	0.80	1.50	3.50	4.00	4.50	5.00
AR/VR Interest	3.84	0.81	1.50	3.50	4.00	4.50	5.00
Interactive Features	3.71	0.84	1.50	3.00	3.75	4.50	5.00
Digital Innovation (composite)	3.82	0.81	1.50	3.13	4.00	4.50	5.00
Language Accessibility	3.30	1.02	1.00	2.50	3.50	4.00	5.00
Cultural Sensitivity	3.87	0.82	1.50	3.50	4.00	4.50	5.00
Accessibility Features	3.18	1.12	1.00	2.50	3.00	4.00	5.00
Diverse Representation	3.63	0.93	1.50	3.00	3.50	4.50	5.00
Social Media Engagement	3.59	0.86	1.00	3.00	3.50	4.00	5.00
Community Interaction	3.20	0.99	1.00	2.50	3.00	4.00	5.00
User-Generated Content	3.40	0.92	1.00	2.50	3.50	4.00	5.00
Visit Intention	4.15	0.73	1.50	3.50	4.00	5.00	5.00
Recommendation Likelihood	3.93	0.80	1.50	3.50	4.00	4.50	5.00
Overall Satisfaction	3.87	0.77	2.00	3.50	4.00	4.50	5.00

Two patterns surface before any inference is even attempted. Among the innovation items, visual appeal leads at 4.11 while completeness of information trails at 3.53. The platforms, it seems, look better than they inform. Among the inclusivity items, cultural sensitivity earns a respectable 3.87, yet accessibility features and language accessibility drop to 3.18 and 3.30, the two lowest means in the whole set and the two with the widest spread. Strongest of all are the outcomes. Visit intention reaches 4.15, recommendation likelihood 3.93, satisfaction 3.87. Every one clears the midpoint. Every one points to a genuinely favorable read on Fès as a destination. Table 2 sets out the demographic makeup behind those numbers.

Table 2. Demographic Characteristics (N = 250)

Characteristic	Category	n	%
Age	18 to 25	70	28.0
	26 to 35	70	28.0
	36 to 45	57	22.8
	46 to 55	41	16.4
	56 and older	12	4.8
Gender	Female	130	52.0
	Male	114	45.6
	Other	6	2.4
Education	High school	36	14.4

Characteristic	Category	n	%
	Bachelor's degree	110	44.0
	Master's degree	81	32.4
	PhD	23	9.2
Prior visit	Yes	95	38.0
	No	155	62.0

4.2 Reliability Analysis

Here the study turns. Reliability testing was supposed to be a formality, a box ticked on the way to the interesting analysis. Instead, it took the measurement model apart. Table 3 records the wreckage.

Table 3. Reliability Analysis (Cronbach's Alpha)

Scale	Number of Items	Cronbach's Alpha	Interpretation
Digital Innovation	7	-0.413	Unacceptable
Inclusivity	5	0.002	Unacceptable
Engagement	3	0.095	Unacceptable

Every scale failed. One failed in a way worth spelling out. A negative alpha is not just a small number. The -0.413 on Digital Innovation means the average covariance among its items dips below zero, so the items fight one another instead of tapping any shared idea underneath. The near-zero values on Inclusivity, 0.002, and Engagement, 0.095, sit for all practical purposes where random answering would sit. The consequence is unforgiving. Add up items that share nothing, or that actively pull apart, and the total measures nothing, which drains the intended composite scores of any interpretive weight. What the case needs is a rebuild, not a patch. Exploratory factor analysis would first reveal how the items really cluster. Item purification would drop the ones that do not belong. Confirmatory factor analysis would then test whether whatever survives holds up. Until that happens, everything below stands as exploratory, and the figures appear here for the sake of transparency, not as proof of any validated relationship.

There is a substantive reading beside the technical one. Scales fall apart this way when the thing being measured is not the single tidy construct the researcher assumed. The likelier truth is that innovation and inclusivity each split into several independent facets. A visitor can adore a virtual tour and still judge the same platform's information thin, and those two ratings, jammed into one scale, cancel. On that reading a single item tells you more than any composite, and the field's habit of treating innovation or inclusivity as unified variables becomes part of the problem rather than the cure.

4.3 Correlation Analysis

With the scales compromised, the correlations work as a second line of evidence, not a real test of hypotheses. Table 4 gives the matrix.

Table 4. Correlation Matrix (Pearson r)

Variable	1	2	3	4	5	6
1. Digital Innovation	1.000					
2. Language Accessibility	-0.050	1.000				
3. Social Media Engagement	0.077	-0.017	1.000			
4. Visit Intention	-0.118	0.055	-0.102	1.000		
5. Recommendation Likelihood	0.037	0.073	0.051	0.001	1.000	
6. Overall Satisfaction	-0.039	-0.012	-0.051	0.045	-0.179*	1.000

Note. * $p < 0.05$.

Almost everywhere the links are weak, and where they are not weak they are strange. Digital Innovation correlates negatively with Visit Intention ($r = -0.118$, $p = 0.062$), the reverse of what the whole marketing rationale predicts, though it stops just short of significance. Language Accessibility ties faintly and positively to Visit Intention ($r = 0.055$, $p = 0.388$) and to Recommendation Likelihood ($r = 0.073$), neither anywhere close to the threshold. Social Media Engagement runs mildly negative against Visit Intention ($r = -0.102$, $p = 0.106$) and mildly positive against Recommendation Likelihood ($r = 0.051$), with nothing significant to report. The one coefficient that clears the bar is also the least intuitive of the lot. Recommendation Likelihood and Overall Satisfaction correlate negatively ($r = -0.179$, $p = 0.005$), which would mean that the more satisfied a visitor is, the slightly less inclined they become to recommend the place. Table 5 pulls out the tests that speak directly to the study's questions.

Table 5. Key Correlation Tests with Significance Levels

Variable Pair	Pearson r	p-value	Significance
Digital Innovation $\times$ Visit Intention	-0.118	0.062	ns
Language Accessibility $\times$ Visit Intention	0.055	0.388	ns
Social Media Engagement $\times$ Visit Intention	-0.102	0.106	ns
Digital Innovation $\times$ Overall Satisfaction	-0.039	0.540	ns
Language Accessibility $\times$ Overall Satisfaction	-0.012	0.846	ns
Recommendation Likelihood $\times$ Overall Satisfaction	-0.179	0.005	**

Note. ns = not significant; ** $p < 0.01$.

No coherent theory walks away from a table like this unhurt, and that is the finding to keep. The near-total absence of linear association between the marketing features and the visitor responses does not, on its own, prove the features useless. Given how the reliability collapsed, it is at least as plausible that the measures are too corrupted to catch a relationship that does exist, or that whatever connects innovation to intention travels through mediators this design never touched. Either way, the tidy story, better features yield keener visitors, finds no ground to stand on here.

4.4 Regression Analysis

The regression asked whether Digital Innovation, Language Accessibility, and Social Media Engagement together could predict visit intention. It returned the answer the correlations had already forecast. Table 6 reports it.

Table 6. Multiple Regression Analysis Predicting Visit Intention

Model Summary	Value
R ²	0.025
Adjusted R ²	0.013
F-statistic	2.089
p-value	0.102

Predictor	β (Unstandardized)	SE	t	p-value
Intercept	4.696	0.358	13.11	< 0.001***
Digital Innovation	-0.098	0.056	-1.75	0.081
Language Accessibility	0.034	0.044	0.77	0.442
Social Media Engagement	-0.079	0.052	-1.52	0.130

Note. *** $p < 0.001$.

The model does not hold ($F = 2.089$, $p = 0.102$). It captures 2.5 percent of the variance in visit intention before adjustment and slides to 1.3 percent once the count of predictors is taken into account, which amounts to almost nothing. Not one predictor reaches significance alone. Digital Innovation carries the negative coefficient that comes nearest ($\beta = -0.098$, $p = 0.081$) without crossing the line. Language Accessibility manages a weak positive push ($\beta = 0.034$, $p = 0.442$). Social Media Engagement leans negative ($\beta = -0.079$, $p = 0.130$). The sensible reading is that whatever drives the intention to visit Fès lies outside this handful of variables, at least as they were operationalized, and that any real relationship is not the straight line the model presumed.

4.5 Group Differences

The last analyses went looking for demographic contrasts and found a striking flatness instead. Table 7 sets the age comparison beside the visitor comparison.

Table 7. Group Differences in Visit Intention

One-Way ANOVA: Visit Intention by Age Group	Sum of Squares	df	Mean Square	F	p-value
Between Groups	0.405	4	0.101	0.189	0.944
Within Groups	131.195	245	0.535		
Total	131.600	249			

Age Group	Mean	SD	n
18 to 25	4.14	0.75	70
26 to 35	4.18	0.71	70

Age Group	Mean	SD	n
36 to 45	4.13	0.74	57
46 to 55	4.15	0.74	41
56 and older	4.08	0.79	12

Independent Samples t-test: Visit Intention by Previous Visit	Mean	SD	n
Yes	4.15	0.73	95
No	4.15	0.73	155
t = -0.011	df = 248	p = 0.992	Mean difference = -0.001

Age made no detectable difference to visit intention ($F(4, 245) = 0.189$, $p = 0.944$). The group means barely stir. They travel from 4.08 among the oldest respondents to 4.18 among those in their late twenties and early thirties, with standard deviations that overlap outright. The comparison by prior experience is more striking still. Visitors and non-visitors report visit intention identical to two decimal places, 4.15 in both groups, and the t-test finds nothing at all ($t(248) = -0.011$, $p = 0.992$). Read one way, that is cheerful news. The pull of Fès crosses generations and owes nothing to having been there. Read another way, it is a warning. The current marketing draws no line whatsoever between a first-time prospect and a returning visitor, handing the same undifferentiated message to audiences whose needs plainly differ.

5. Discussion

5.1 Innovation in the Marketing of Fès

At face value the innovation ratings look healthy. The composite settles at 3.82, and visitors save their warmest marks for visual appeal, 4.11, and the virtual tour experience, 3.93. That fits the documented drive to show off the architecture and craft of Fès through strong imagery and immersive previews. On its most visible task, then, the marketing delivers. It looks the part. It hands a distant audience a glimpse of the medina before anyone books.

The negative alpha complicates that read without erasing it. Were the seven innovation items tapping one construct, they would move together. They do not. A visitor smitten with a virtual tour can still find the underlying information thin, while someone who prizes a clean interface may have no time for AR at all. On this evidence innovation is not one quality a platform owns or lacks. It is a loose bundle of capabilities that visitors judge one at a time, which reframes the design question entirely. The point is not how innovative to be. The point is which capability to fund, and to what end. Technology adopted for its own sake, cut loose from the site's story, is precisely the sort of addition these fractured scores would lead you to expect.

5.2 Inclusivity and Accessibility

Inclusion splits down the middle. Cultural sensitivity earns a high 3.87, while accessibility features at 3.18 and language accessibility at 3.30 sit at the foot of the table with the widest spread of all.

The contrast tells a coherent story even through broken scales. The platforms seem to respect the culture they portray while failing the practical needs of the audiences trying to reach it.

That low accessibility score matches a pattern the wider literature has traced for years. WCAG 2.1 and the principles of universal design are there for the taking, and still many heritage platforms ship without screen-reader support, without keyboard navigation, without adjustable text or alternative text on images. For Fès the fix is at once a duty and an opening. Close these gaps and the benefit reaches visitors with disabilities, older users, anyone stuck on a weak connection or an aging handset, and the addressable audience widens rather than merely ticking a compliance box. Language accessibility sits lowest of the inclusivity items at 3.30 (SD = 1.02), a real weakness for a destination that pulls visitors from so many language backgrounds. Doing it well is not a matter of pushing copy through translation. It calls for localization that bends reference and register to each linguistic context, the sort of work that lifts satisfaction among international visitors precisely because the text reads as though it were written for them.

The theoretical apparatus can only be brought in gingerly, since the alpha values, -0.413 on Digital Innovation, 0.002 on Inclusivity, 0.095 on Engagement, strip away the construct validity any formal test would lean on. Read with that caution, the pattern still gestures somewhere. TAM and UTAUT (Venkatesh et al., 2003) invite a decomposition of innovation into perceived usefulness, ease of use, and social influence, each of which may answer a different marketing stimulus rather than moving as one block, which is exactly what a scale that refuses to cohere would predict. The Stimulus-Organism-Response framework adds the mediating step, seating perceived authenticity and destination image between a digital feature and any shift in visit intention. That mediation offers a plausible account of why the direct effects here come through so faint. Both frameworks land on the same instruction. No model can be tested on scales nobody validated, so the measurement has to be rebuilt before any of these propositions can be examined in earnest.

The weak tie between inclusion and behavior invites the same double reading. It may reflect the corrupted measures. It may equally reflect the fact that accessibility pays off most for the specific users who depend on it, rather than showing up as an average effect across a sample where most respondents never needed those features at all. A visitor who requires audio description feels its absence sharply. A visitor who does not need it will never register its presence as satisfaction, and in a general sample the second group swamps the first.

5.3 Theoretical Implications

Several lessons follow, and the first is the one the study kept pressing. When three scales fail reliability together, the neat assumption that innovation and inclusivity are unified constructs stops holding. They behave far more like clusters of semi-independent factors, each owed its own theoretical treatment, which matches the multidimensional view long held in technology-acceptance and user-experience research, where usefulness, ease of use, and enjoyment are known to run on separate tracks.

A second lesson is about the shape of the relationships, not their size. The near-absence of linear association gives nobody licence to call digital features irrelevant. It points instead toward the mediated, conditional pathways that TAM and UTAUT foreground, where perceived usefulness, ease of use, and social influence stand between a feature and the will to act. Future work would do better to model perceived authenticity, trust, and technological self-efficacy as mediators, with cultural background and prior heritage experience as moderators, than to keep chasing direct effects theory never really promised.

A third lesson unsettles a comfortable assumption about age. Popular commentary treats generational splits in digital taste as a given, yet visit intention here does not budge across the age bands. Digital fluency for consumer-grade tools has plainly spread well past the young, which suggests that slicing an audience by age wastes effort better spent slicing by travel motivation, by interest, by cultural background.

The last lesson concerns context. The specific character of Fès, a living heritage site with a dense and stubborn urban form and a central place in Moroccan identity, colors how its visitors read digital tools. Frameworks built and validated in Western settings will not import whole. They have to be recalibrated to the values, the infrastructure, and the management priorities of North African heritage. Apply them unadjusted and you risk measuring the wrong thing with great precision.

5.4 Practical Implications

Whatever guidance the study yields has to be voiced provisionally, since most of the hypotheses came back weak or non-significant and all three primary scales failed their reliability thresholds. Take what follows as propositions for later testing with better instruments, and as tentative direction for the people who cannot wait for that testing before they decide.

Heritage site managers should probably begin where the data speak loudest, which is accessibility. The low scores make the case for a systematic accessibility audit, then concrete remediation against WCAG 2.1, backed by user testing that actually includes people who depend on assistive technology, and by content offered in more than one mode so that text, audio, and video each carry the narrative for whoever needs that form. Beside this runs the case for a real multilingual strategy, one that pays for cultural localization and brings native speakers and cultural consultants into the room rather than settling for machine translation. The fractured innovation scores argue against chasing isolated novelties and for pulling visual content, interactive features, virtual experiences, and social channels into a single coherent journey. The weak tie between innovation and visit intention carries an instruction of its own. Let the digital content spark curiosity and handle logistics while the physical encounter stays the destination, so the screen points toward the medina rather than standing in for it.

The priorities for tourism authorities are structural. Reliable connectivity, digital signage, and charging points inside the heritage core would let the applications and guides already built actually work where visitors happen to be. Past the infrastructure, these authorities are the natural convener of the collaboration the literature keeps requesting, the standing forum where managers,

developers, operators, and residents can reconcile priorities that pull in different directions. They are also the plausible author of quality standards for digital heritage content, benchmarks for accuracy and cultural sensitivity and accessibility that no single platform is likely to set for itself, and the sponsor of the training that would let local staff and operators run these tools instead of leaning on outside contractors forever.

Developers, for their part, are pointed toward method. User-centered design, grounded in research and in testing with the real spread of audience segments, would catch the mismatches that fractured these scales in the first place, and designing for accessibility from the opening sketch rather than retrofitting it later serves every user while meeting the needs of those with no alternative. Personalization deserves serious investment, since letting users tune content to their interests, their language, the time they have, and the access they require is what turns a generic platform into a relevant one. Analytics and feedback loops close the circle, provided they are read to find the points where visitors stall and then acted on, not hoarded as dashboards nobody opens.

5.5 Limitations

The limits here are extensive, and owning them is part of what the reliability failure demands. On method, the cross-sectional design caught a single moment and cannot speak to how attitudes move over time or answer a specific intervention, work that would need a longitudinal design. Convenience sampling caps how far the findings travel beyond the people who happened to respond, and probability sampling is the obvious corrective next time. Self-report adds another constraint, given the well-worn gap between what people say they intend and what they later do, so objective traces such as site analytics or actual visit patterns would anchor the outcomes more firmly. Above all of these sits the reliability problem. Scales this weak drag down whatever relationships exist, and no amount of careful analysis afterward can rescue an instrument that will not hold together, which is why building and validating the instrument ought to come before anyone repeats this design.

On concept, the study tested no full model with mediators and moderators named in advance, so it could describe associations without explaining them, and folding in TAM, UTAUT, or experience-economy theory would give later work the explanatory scaffolding this round lacked. The outcomes were narrow too, limited to visit intention, recommendation, and satisfaction, silent on learning, on emotional resonance, on cultural understanding, on behavior actually carried out. Whatever the analysis found belongs to Fès and will not transfer unexamined to sites with other visitors, other assets, other levels of digital maturity.

On practice, the sheer speed of technological change threatens to date any snapshot fast, which turns continued study from a suggestion into a requirement if the findings are to stay current. The study also listened to only one set of stakeholders, the visitors and would-be visitors, leaving out the heritage managers, the residents, and the operators whose vantage points any complete account would have to include.

Conclusion

The study set out to examine innovation and inclusivity together in the digital marketing of Fès, and it lands somewhere more instructive than its opening questions foresaw. Across 250 responses, visitors reported warm views of digital innovation, 3.82, and a divided view of inclusion, rating cultural sensitivity highly at 3.87 while marking accessibility features at 3.18 and language accessibility at 3.30 as the weak links in the chain. Those descriptive impressions are the firmest thing the data hand over.

Against expectation, no dependable relationship emerged between digital features and visitor behavior. The correlations came back weak or wrongly signed. The regression explained almost none of the variance in visit intention. The demographic comparisons produced no differences worth the name. Read naively, that looks like proof digital marketing does not work. Read properly, against alpha coefficients that ran from near zero down into the negative, it is proof that the measurement failed before the marketing could be judged at all. The scales did not hold. The composites built on them could not carry meaning. The honest verdict indicts the instruments, not the interventions. That conclusion deflates less than it first appears to. It turns a study that seemed to find nothing into one that pins down, with some precision, why the field keeps struggling to demonstrate effects it has every reason to expect.

Even where the inferential findings dissolve, the descriptive ones still mark out priorities. Accessibility wants urgent attention. Multilingual content wants real investment rather than automated translation. The scattered innovations want gathering into one coherent journey. The digital experience wants keeping in service of the physical visit, not in competition with it. None of that waits on a significant regression coefficient. All of it follows straight from what visitors said about where the current offering falls short.

Fès turns the general lesson concrete. A living World Heritage city of this weight has to reconcile innovation with tradition, global reach with local truth, and the money tourism brings with the preservation tourism endangers. Digital tools can help hold those tensions steady, but only when they are chosen for a purpose, measured with instruments that actually function, and kept answerable to the community whose heritage is on show. The task ahead is not to prove that technology matters. It is to build the validated measures that would finally let someone say how it matters, for whom, and under what conditions.

Future work can move on several tracks at once. Longitudinal designs would show how perceptions and behavior shift as specific interventions land. Mixed methods would recover the texture a questionnaire flattens, letting interviews, focus groups, and observation explain the numbers rather than simply pile up more of them. Comparison across sites of differing character would separate what is peculiar to Fès from what generalizes. Widening the frame to managers, residents, and operators would expose the conflicts a visitor-only sample cannot see. Beyond all of these, the field needs measurement instruments with demonstrated reliability and validity, developed through the factor-analytic work this study was forced to recommend rather than

perform, because until such instruments exist every reported effect stays open to the very doubt that undid this one. Technology will keep remaking heritage tourism whatever researchers conclude. Whether that remaking serves inclusion, sustainability, and cultural respect, or just accelerates, depends on research disciplined enough to tell the difference. Fès is as demanding a place as any to learn how.

References

- Zaifri, A., El Amrani, M., & Bentaleb, A. (2024). Digital Journey Through Fez's Historic Medina. In *Advances in Hospitality, Tourism and the Services Industry (AHTSI) Book Series*. <https://doi.org/10.4018/979-8-3693-3286-3.ch005>
- El-Ouali, M., Zaifri, A., & Bentaleb, A. (2025). Practical Analysis of Digital Marketing Strategies to Attract Cultural and Heritage Tourism in Fez, Morocco. In *Advances in Computational Intelligence and Robotics Book Series*. <https://doi.org/10.4018/979-8-3373-5332-6.ch001>
- Cunha, C., Kastenholz, E., & Carneiro, M. J. (2023). Inclusive Cultural Heritage Tourism. <https://doi.org/10.18690/um.4.2023.37>
- Ez-zahrany, H., Benabbou, Z., & Haidine, A. (2024). The Impact of Digital Technologies on Cultural Tourism and Heritage Valorization in Morocco. *International Journal of Heritage Studies*.
- Boujida, M., El Amrani, M., & Bentaleb, A. (2024). Fez: Embracing sustainable tourism through tradition and innovation. *World Journal of Advanced Research and Reviews*, 23(2). <https://doi.org/10.30574/wjarr.2024.23.2.2006>
- Wei, L. (2025). From Artifacts to Interactivity: Optimizing Museum Outreach through Technology and Inclusivity. <https://doi.org/10.71222/f3m7ay97>
- Giaccardi, E., & Palen, L. (2023). Digital storytelling, cultural heritage, and social inclusion: the MEMEX project. <https://doi.org/10.4324/9781003277606-2>
- Mitsche, N. (2016). Digital destination promotion: understanding and maximizing the use of digital and cultural assets to enhance tourists' decision making and destination marketing strategies. *Doctoral dissertation*.
- Ashok, M., Singh, A., & Kumar, R. (2024). Harnessing Digital Technologies to Enrich Tourist Experiences at Cultural Heritage Sites. In *Advances in Hospitality, Tourism and the Services Industry (AHTSI) Book Series*. <https://doi.org/10.4018/979-8-3693-9636-0.ch007>
- Petousi, V., Sifaki-Pistolla, D., & Chatzoglou, P. (2023). Revealing Unknown Aspects: Sparking Curiosity and Engagement with a Tourist Destination through a 360-Degree Virtual Tour. *Multimodal Technologies and Interaction*, 7(5). <https://doi.org/10.3390/mti7050051>
- Hu, Y. (2022). Better: Digital media can make tourism experiences at heritage destinations better. <https://doi.org/10.4337/9781788970082.00018>
- Chaplynska, Y. (2025). Challenges and Prospects of Digitalization for the Sustainable Development of Heritage Tourism. <https://doi.org/10.4018/979-8-3373-2540-8.ch007>

- Singh, A., Kumar, R., & Sharma, P. (2025). Enhancing Cultural Tourism Experiences Through Technological Innovations. <https://doi.org/10.4018/979-8-3693-8764-1.ch013>
- Poria, Y., Butler, R., & Airey, D. (2003). The core of heritage tourism. *Annals of Tourism Research*, 30(1), 238-254. [https://doi.org/10.1016/S0160-7383\(02\)00064-6](https://doi.org/10.1016/S0160-7383(02)00064-6)
- Cai, M., Cui, J., & Wang, L. (2021). Joint development of cultural heritage protection and tourism: the case of Mount Lushan cultural landscape heritage site. *Heritage Science*, 9(1). <https://doi.org/10.1186/S40494-021-00558-5>
- Jia, X., Hu, D., & Cheng, T. (2023). When "Old" Meets "New": Unlocking the Future of Innovative Technology Implementation in Heritage Tourism. *Journal of Heritage Tourism*. <https://doi.org/10.1177/10963480231205767>
- Singh, A. (2025). Integrating Artificial Intelligence in Enhancing Cultural Tourism Experiences. In *Advances in Hospitality, Tourism and the Services Industry (AHTSI) Book Series*. <https://doi.org/10.4018/979-8-3693-3196-5.ch002>
- Vecchio, P. D., Mele, G., Siachou, E., & Schito, G. (2025). Designing Innovative Digital Solutions in the Cultural Heritage and Tourism Industry: Best Practices for an Immersive User Experience. *Applied Sciences*, 15(9). <https://doi.org/10.3390/app15094935>
- Stewart, E., Ivanova, M., & Iliev, D. (2023). Digital Approaches for the Presentation of Tourist Sites with Historical Significance. *Digital Presentation and Preservation of Cultural and Scientific Heritage*, 13. <https://doi.org/10.55630/dipp.2023.13.34>
- Kotsopoulos, D., Bardaki, C., Lounis, S., & Pramataris, K. (2019). An Innovative Platform for Creating Audience-Specific Gamified Cultural Tourism Guides Where Art, Tradition and Culture, Technology and Business Converge. https://doi.org/10.1007/978-3-030-12453-3_30
- Wang, Y., Li, X., & Zhang, J. (2025). Demand-driven digital innovation for cultural heritage tourism development: A Kano model approach. *Journal of Infrastructure, Policy and Development*. <https://doi.org/10.24294/jipd10799>
- Kurniawan, H., Salim, F., & Wulandari, D. (2025). Cultural Resonance: Enhancing Heritage Identity of Spaces with Digital Engagement. *Journal of Architectural Design and Urbanism*, 7(2). <https://doi.org/10.14710/jadu.v7i2.25489>
- Hutson, J., Lively, J., & Robbins, B. (2024). Storytelling. https://doi.org/10.1007/978-3-031-43615-4_2
- Darcy, S., & Dickson, T. J. (2009). A whole-of-life approach to tourism: The case for accessible tourism experiences. *Journal of Hospitality and Tourism Management*, 16(1), 32-44. <https://doi.org/10.1375/jhtm.16.1.32>
- Vu, L., Lim, Y., & Choi, J. (2019). Inclusive museum in the digital era: A case study of the National Museum of Korea. *Museum Management and Curatorship*, 34(4), 400-415. <https://doi.org/10.1080/09647775.2019.1618248>
- Hutson, J., Lively, J., & Robbins, B. (2024). Inclusivity & Environment. https://doi.org/10.1007/978-3-031-43615-4_3

- Hargittai, E. (2002). Second-level digital divide: Differences in people's online skills. *First Monday*, 7(4). <https://doi.org/10.5210/fm.v7i4.942>
- Jiménez-Crespo, M. A. (2013). *Translation and web localization*. Routledge.
- Ahmad, S., Khan, M., & Ali, R. (2025). Mapping Cultures Together Online Heritage Initiatives. In *Advances in Web Technologies and Engineering Book Series*. <https://doi.org/10.4018/979-8-3693-2973-3.ch008>
- Giaccardi, E. (2012). *Heritage and social media: Understanding heritage in a participatory culture*. Routledge.
- Boussaa, D., Messaoudi, K., & El Amrani, M. (2024). Cultural heritage tourism and urban regeneration: The case of Fez Medina in Morocco. *Frontiers of Architectural Research*. <https://doi.org/10.1016/j.foar.2024.04.008>
- Wang, L. (2024). Applications of Human-Computer Interaction in the Field of Cultural Heritage Preservation. *Applied and Computational Engineering*. <https://doi.org/10.54254/2755-2721/105/2024tj0061>
- Fauveaud, G., Debarbieux, B., & Boujrouf, S. (2018). Tourisme solidaire et patrimonialisation, une fin ou un moyen ? : Analyse d'une initiative touristique locale à Fès (Maroc). *Revue Internationale d'Éducation de Sèvres*, 236. <https://doi.org/10.3917/RIED.236.0081>
- Lukita, C., Supangkat, S. H., & Kosala, R. (2024). Technology Integration in Cultural Heritage Preservation Enhancing Community Engagement and Effectiveness. <https://doi.org/10.1109/iccit62134.2024.10701088>
- Douae, E., Benabbou, Z., & Haidine, A. Knowledge Management as a Support for Cultural Innovation and Promotion: A Study of Knowledge Management Practices-The Case of ADER-Fès.
- World Wide Web Consortium (W3C). (2018). *Web Content Accessibility Guidelines (WCAG) 2.1*. <https://www.w3.org/TR/WCAG21/>
- Jung, T., tom Dieck, M. C., Lee, H., & Chung, N. (2016). Effects of virtual reality and augmented reality on visitor experiences in museum. In *Information and Communication Technologies in Tourism 2016* (pp. 621-635). Springer.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Helsper, E. J., & Eynon, R. (2010). Digital natives: where is the evidence? *British Educational Research Journal*, 36(3), 503-520.