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Proposal for the Design of Cultural Tourist Routes through the Use of GIS: An Applied Case

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KEYWORDS

Geographic Information System
Tourism Potential
Tourist Route
Heritage
Late Middle Age

INTRODUCTION

Historical heritage is currently presented as one of the most interesting tourism promotion resources. That is why tourist routes are an essential tool meeting the objectives of participation in the tourism sector and promotion of culture (Parrado del Olmo, 2003; López, 2006; Moreré, 2009; Hernández, 2011; Navalón, 2014, Calderón, Arcila and López Sánchez, 2018).

This work has as its main hypothesis the fact that many routes do not have a detailed methodology in their design. In addition, the low-medieval heritage of the province of Cádiz is used as an applied case, given the possibilities it presents for the development of tourism products. To test this hypothesis, a study of the literature is carried out, the late medieval heritage is analyzed and finally a methodology is applied that uses a potential index and a Geographic Information System.

OBJECTIVES

The general objective of this work is to design a tourist route, using a methodology that justifies the choice of the route and the municipalities included. To achieve this goal, they are proposed as secondary objectives:

- Study of the state of the art, referring to tourist routes and itineraries as well as to geographic information systems.
- Quantitative and qualitative study of heritage assets under study.
- Application of a tourism potential methodology, which takes into account tourism and culinary resources, allowing its mapping in a GIS.



With all this we hope to obtain results that in an analytical way facilitate the creation of tourist routes after a study of the possibilities offered by the region and heritage.

METHODOLOGY

The methodology used consists of three parts:

- a. To study in detail the geographical area: for this, bibliography, databases and institutional documents have been consulted, which enable us to know the existing cultural resources of the late Middle Ages, the hotel facilities, the means of communication, the means of transport, the heritage ethnographic, etc.
- b. Analyze the potential of the selected geographic space: a contrasted potential index is used, applied to cultural heritage and whose main tool is the use of a geographic information system.
- c. Creation of a tourist route: through the use of a GIS, the aforementioned data and elements have been interrelated, based on the previously calculated tourist potential.

The database of the Andalusian Institute of Historical Heritage is used as the main sources for the study of historical heritage while the data referring to the tourism sector are provided by the Andalusian Institute of Statistics. The design of the GIS applied in the creation of tourist routes has consisted of the following phases:

1. Elaboration of the cartographic base using a layer with the delimitation of the municipalities and the national topographic map. The use of the national topographic map is justified by the availability of most of the data that are the subject of this study.
2. Georeferencing of all those heritage assets that are tourist resources using of a point shape. In this process, a table of attributes that detail some specific data of the selected items is included in each patrimonial reference.
3. Use of a basic road layer that allows obtaining a network analysis. This layer has served as the basis for the creation of a shape of lines that has connected the different roads with the population centers, making it possible to obtain the shortest route among the selected municipalities.
4. Finally, the fieldwork has been carried out with the on-site realization of the route in order to verify its viability as well as propose an estimated time and detect the main problems that users may encounter.

RESULTS- DISCUSSION

The complete article provides cartography that summarizes the results and the proposed route itinerary. It also includes a more detailed analysis of the resulting route, indicating the route, assets and the number of overnight stays. These results have shown a series of limitations that must be taken into account. The potential of municipalities may vary depending on heritage and tourism assets (closing or opening of spaces), thus, new municipalities could be included in the itinerary or exclude some. Moreover, the statistics used are not always up to date as of the route design, so it should be considered that there may be a certain margin of error in the potential calculations.

The difficult access to information and limited opening hours is one of the problems when making a tourist route. That is why the route design must have the collaboration of public bodies or property owners. Finally, la contrastación y mejora de la metodología propuesta podría llevarse a cabo empleando otras técnicas como creation of surveys (Sagñay Ruiz, 2019), interview with experts (Munives Laya, 2019), CO2 studies to reduce the impact of routes on the environment (Rendeiro and Martínez, 2017), agrifood studies (León Gómez & Macías Sosa, 2019) or SWOT analysis (Millán Vázquez de la Torre and Dancausa Millán, 2012) among others.

CONCLUSIONS



Cultural tourist routes have experienced a notable proliferation in recent years, given their ability to relate heritage assets and malleability that they allow in their design, depending on the interests and objectives of designers (companies, institutions, etc.).

The creation of a tourist route does not always lead to the use of a methodology in which the elaboration of these products responds to a previous study in this sense is when geographic information systems become an effective tool to generate propose tourist routes, given their capacity to put multiple variables into relation.

The territory in which the route has been applied, is a tourist region widely developed, mainly by seasonal sun and beach tourism and more recently, by nature and rural tourism. This explains that in general terms, the results that have been obtained with the tourist potential have been high, taking into account in its elaboration the low-medieval heritage resources, the tourist infrastructure or the accessibility.

In recent years, there are many publications that offer and design cultural tourist routes of different types (Sariego López; 2016, Ruíz Romero de la Cruz, 2017; Noriega, 2018 etc.), however, and following the idea set out in the section of results, the contribution of this work resides in the meticulous study of the tourist resources of the municipalities (hotel, hospitality accessibility) and the medieval heritage. That is why the resulting route is novel because it is justified the choice of municipalities, the layout of the route as well as the inclusion of low-medieval goods of different types (churches, wall castles etc.) that offer the user a complete view of the period historical.