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ECORFAN-Journal Republic of Peru

ECORFAN Journal Republic of Peru

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Presentation of the Content

Is presented an article *Implementation of a mobile application for the dissemination of tourism in México*, by Sánchez-Juárez, Ivan Rafael, Paredes-Xochihua, Maria Petra and Martínez-Pérez, José Randall, with adscription at Tecnológico Nacional de México/ ITS de San Martín Texmelucan, in the next article *Analysis of urban tourism in Chetumal, Quintana Roo,* by Nandi-Aguillón, Nallely, Meneses-Domingo, José Manuel and Lara-Vera, María Guadalupe, with adscription at Tecnológico de Chetumal, in the next section *Good practices of social responsibility for promoting sustainable development goals from the university: a case study* by Rojo-Carlón, José María, Rivera-Iribarren, Maricel and Valencia-Romero, Alexia Zoe, with adscription at Instituto Tecnológico de Sonora, in the next section *Ecotourism proposal for the Las Ventanas property of the Mineral del Chico National Park in Hidalgo, Mexico,* by Omaña-Silvestre, José Miguel & Quintero-Ramírez, Juan Manuel, with adscription at Colegio de Postgraduados and Consejo Nacional de Humanidades, Ciencia y Tecnología, in the next section *The influence of a digital promotion using Facebook on the expansion of reach in a rural market* by Rico-Ramírez, Diana Laura, Zarco-Cárdenas, César Alejandro and Jiménez-García, Martha, with adscription at Instituto Politécnico Nacional, UPIICSA, in the last article we present *Web platform for registering tourist spots in San Martín Texmelucan* by Morales-Zamora, Vianney, Paredes-Xochihua, María Petra and Sánchez-Juárez, Iván Rafael, with adscription at Tecnológico Nacional de México, Campus San Martín Texmelucan.

Content

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Implementation of a mobile application for the dissemination of tourism in México

Implementación de aplicación móvil para la difusión del turismo en México

Sánchez-Juárez, Ivan Rafael*[a], Paredes-Xochihua, Maria Petra[b] and Martínez-Pérez, José Randall [c]

a ROR Tecnológico Nacional de México/ ITS de San Martín Texmelucan • C ABW-3403-2022 • iD 0000-0001-8296-5532 • 493160

b ROR Tecnológico Nacional de México/ ITS de San Martín Texmelucan • C KVA-5814-2024 • iD 0000-0003-1753-2313 • 298117

c ROR Tecnológico Nacional de México/ ITS de San Martín Texmelucan • C KUS-4199-2024 • iD 0009-0004-3489-8637 • 1335486

Abstract

The arrival of international tourists to Mexico increased by 10% in 2023 compared to 2022, with an arrival of 42 million 153 thousand visitors in 2023 and 38 million 325 thousand in 2022, a difference of 3 million 828 thousand visitors; This reflects the growth in the tourism sector and contributing to the country's economy. The article presented below contains the implementation of a mobile application that allows the dissemination of tourist places in Mexico. The mobile application, developed for the Android operating system, has different types of users, including the owner or manager of the place and the tourist; The owner can record the information of the place such as the address, hours, services and events among others. The tourist will be able to see this information and leave comments of each place, allowing the tourist to have a better organization of the trip itinerary.

Resumen

La llegada de turistas internacionales a México aumentó un 10%, en el año 2023 con respecto al 2022, teniendo una llegada de 42 millones 153 mil visitantes en 2023 y de 38 millones 325 mil en 2022, una diferencia de 3 millones 828 mil visitantes; esto refleja el crecimiento en el sector turístico y contribuyendo en la economía del país. El artículo que se presenta a continuación contiene la implementación de una aplicación móvil que permite la difusión de lugares turísticos en México. La aplicación móvil, desarrollada para sistema operativo Android, cuenta con diferentes tipos de usuarios entre ellos están el dueño o encargado del lugar y el turista; el dueño puede registrar la información del lugar como el domicilio, horarios, servicios y eventos entre otros. El turista podrá ver dicha información dejar comentarios de cada lugar, permitiendo al turista tenga una mejor organización del itinerario del viaje.

Goals	SCRUM Methodology	Contribution
Deploy app. Spreading tourism. Tourist Experience.	Created by Runnin Studio from Noun Project	It directly applies to Sustainable Development Goal (SDG) number 8: Decent Work and Economic Growth.

Application, Implementation, Tourism dissemination

Objetivos	Metodología SCRUM	Contribución
Implementar aplicación. Difundir turismo. Experiencia turista.	. Created by Runnin Studio from Noun Project	Aplica directamente al Objetivo de Desarrollo Sostenible (ODS) numero 8: Trabajo Decente y Crecimiento Económico

Aplicación, Difusión turística, Implementación

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Introduction

By 2023, Mexico was in the top 10 of the most visited countries by tourists, with the following countries on the list: France, Spain, United States, Italy, Turkey, Mexico, United Kingdom, Germany, Greece and Austria (UN Tourism. 2024). This allowed Mexico to find itself on the list of top international tourism destinations.

In 2015, world leaders adopted a set of global goals to eradicate poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda (Nacional Monte de Piedad. 2023).

There is the national challenge for research and digitisation of tourism, which aims to: 'support entrepreneurs and new startups that contribute to the development of local tourism and support recovery'. And within the categories covered by the challenge are: Mexico's Beaches, Mexico's Archaeological Zones, Mexico's Ecotourism and Adventure, as well as Mexico's Magic Towns (UN Tourism. n.d.).

national challenge is aligned with Sustainable Development Goal (SDG) number 8: Decent Work and Economic Growth, which aims to promote inclusive and sustainable economic growth, employment and decent work for all. Since the second target states 'achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including by focusing on high value-added and labour-intensive sectors' (Sustainable Development Goals. n.d.).

There are some localities in Mexico that do not have the resources to maintain a tourist site, such as a former hacienda, an ejido or a historical monument, leaving the local population with few resources or without jobs. This is why digital tools and platforms can be used to disseminate these sites, allowing the arrival of tourists, who can have good sustainable practices, allowing the community to have a greater economy.

For this reason it was decided to implement a mobile application that can disseminate tourist sites, such as archaeological sites, ecotourism or Magical Towns. The application is designed for the following users: an administrator, site owners and tourists.

The administrator, in addition to registering the owners, will have to approve the registration of each site. If it is considered that the site should not be published, the information can be rejected and the tourist will not be able to see the site that has been tried to be added. Each site owner will register the events that will take place so that the tourist can view detailed information, the start and end date, as well as the opening hours.

The presented article has the following sections: state of the art where several works done for the tourism sector in Mexico and other countries will be described; description of the sprint planning process, in this section the activities carried out for the development of the project will be described in a general way; the third section will show a summary of the activities developed in sprint 3; the fourth section talks about the implementation of the functionalities and database in the server, finally, the fifth section describes the type of tests carried out to the application.

State of the art

This section will present an overview of different researches and works developed related to tourism, both at national and international level.

One of the works studied is 'Marketing through mobile tourism applications (m-tourism): an exploratory study' developed by the Spaniard Saura, J. R. (2017); in which an exploratory study of mobile tourism applications was developed to define how tourists use them to obtain information about their trips before, during and after their realisation.

On the other hand, it is necessary to generate in the tourism professional the possibility of creating and managing various tourism products or services through virtual agencies, meta-search engines and even the development of mobile applications, in order to generate employment opportunities in a tourism field dominated by real-time connectivity, virtual marketing dynamics and the extensive use of technological resources in all fields of tourism, especially in the field of tourism services (Castro Ricalde. 2018).

In the work carried out by Rivera Caro (2019), a mobile application was developed for Android devices that allows showing the different tourist attractions of the Lachay National Reserve (RNL), within the attractions are natural spaces, landscapes, culture and adventure and nature activities; the application will allow tourists to show the tourist attractions of the RNL. You will have the option to view maps, image galleries and information on tourist services, allowing to increase the influx of visitors and allow them to enjoy all the attractions and tourist services offered by this geographical area. It will also make it possible to see the most representative points of interest in the reserve and their location on the map, and to observe the wildlife that exists in the NLR, grouped by fauna, flora and lichens.

On the other hand, in the work presented by Aguirre Yaure (2020), a mobile application was developed using augmented reality to promote tourism in Ecuador; the application provides tourists with the useful and necessary tools to get to know the most emblematic and representative sites of five cities in Ecuador: Quito, Guayaquil, Cuenca, Riobamba and Zaruma.

Augmented reality is used so that the user can get to know and observe the history of the site they are visiting. Among its functionalities, the tourist will be able to rate the different tour guides with whom he/she has interacted. The tourist guide will be able to visualise the ratings (valuations and comments) that he/she has obtained from tourists.

The tourist will be able to see their location on a map to guide them through the city.

Finally, the study of user experiences (UX) must be present, which is why another of the works studied is the one carried out by Vega et al. (2021) whose main objective was to design UX guides that are applicable to mobile applications for cultural tourism with AR.

The activities carried out for this research were: review, grouping and selection. Resulting in a set of UX guides for tourism applications with AR.

The category and one of the UX guides are mentioned below. Usability: Provide useful messages when the user does not know how to proceed; 2. Content: Provide up-to-date content; 3. Functional relevance: Enable location identification, in map-based applications; 4. Security: Protect users' privacy; 5. Efficiency: Minimise the weight of graphics and multimedia files; Correctness: Display the 3D model overlay correctly.

Sprint planning

This section describes the steps and activities that were carried out to organise the activities and ensure that the project objectives were achieved. In the first instance a review of the Product Backlog was made, having a total of 6 activities ordered as follows: a) Design of low fidelity screens, b) Design of high fidelity screens using XML, c) Adding functionality to the screens using Java, d) Back-end development using php, e) Functional testing of the mobile application and f) Enhancements to the mobile application. Table 1 shows the activities and some of the tasks included in the project.

Box 1

Table 1

Product Backlog Review

Activity	Task
Low fidelity display design	Design low fidelity display for the New User Registration module.
	Design low-fidelity display for the Places Section
Creation of high fidelity displays using XML	Create high fidelity display for the Employee Catalogue
	Create high fidelity display for Categories module
Adding functionality to screens using Java	Create class for the Diffusion Images module
	Create class for the Events module
Back-end development using php	Create Script for the Authentication module
	Create Script for the Categories module
Functional testing of the mobile application	Test permissions for user types
	Test report generation module
Improvements to the mobile application	Active session time
	Warning and acknowledgement messages

Source: own elaboration

After the review of the product backlog, it was decided that each task would be assigned to a sprint and subsequently the effort it would take to complete each one of them was estimated. Sprint 1 will take 3 weeks, the second, third and fourth will take 4 weeks, the fifth sprint will take 3 weeks and the last one will take 2 weeks, making a total of 20 week (5 months approximately). One of the user stories that were elaborated is described in table 2 below:

Box 2

Table 2

Description of the user story: login

ID: HU-004
TITLE: As a registered user, I want to be able to log in with my username and password to access the application's functionalities.
DESCRIPTION: Registered users must be able to log in to the application using their username and password to access their profile and use the services offered by the application depending on the type of user (tourist, site owner or administrator).
CRITERIA FOR ACCEPTANCE: 1. The user can enter his or her username and password in the corresponding fields. 2. If the user name and password are correct, the application redirects the user to the home interface. 3. If the user name or password is incorrect, an error message is displayed stating "Incorrect user name and/or password! 4. The "Recover password" link correctly redirects to the password recovery interface where you will need to provide the e-mail address you registered with to have your current password sent to you.

Source: own elaboration

Summary of the activities carried out in sprint 2

The third sprint is related to the task: "Adding functionality to the screens using Java"; in order to make the user interact in a fluid way with the application, this must not only depend on the design of the application, but also on the coding of each screen, this coding is found in .java files classified as classes, these are directly related to the XML file.

In order for them to establish the relationship, it is necessary to identify the components that will serve as objects and to which specific functionality will be added.

Table 3 shows a portion of the source code for new user registration.

Box 3

Table 3

New user registration

```
private void MetodoInsertarUsuario(String URL){
StringRequest stringRequest = new
StringRequest(Request.Method.POST, URL, new
Response.Listener<String>() {
@Override
public void onResponse(String response) {
//Mensaje de estatus correcto en la operacion

Toast.makeText(getApplicationContext(),
"¡Operación exitosa!", Toast.LENGTH_SHORT).show();
 MetodoLimpiarCampos(); MetodoPoblarUsuarios();
}
}, new Response.ErrorListener() {
@Override
public void onErrorResponse(VolleyError error) {

Toast.makeText(getApplicationContext(),error.toStr
ing(), Toast.LENGTH_LONG).show();
}
}){
//Envio de la información necesaria para el
registro
protected Map<String, String> getParams() throws
AuthFailureError {
Map <String, String> parametros = new
HashMap<String,String>();
parametros.put("Usuario",
edUsuario.getText().toString());
parametros.put("Nombres",
edNombre.getText().toString());
parametros.put("ApePaterno",
edApellidoPaterno.getText().toString());
parametros.put("ApeMaterno",
edApellidoMaterno.getText().toString());
parametros.put("IdNivelAdministracion",
NivelAdministracion);
parametros.put("Correo",
edCorreo.getText().toString());
parametros.put("Telefono",
edTelefono.getText().toString());
parametros.put("Contraseña",
edContraseña.getText().toString());
return parametros;
}
};
requestQueue.add(stringRequest);
}
```

Source: own elaboration

The code contained in the table above has the following code blocks: private void MetodoInsertarUsuario(String URL): this is the method that performs the insertion of a user. It takes a URL parameter, which is the server address to which the request will be sent. StringRequest: this is a class of the Volley library (an Android library to optimise the sending of HTTP requests) that creates an HTTP request of type POST. It is used to send data to the external server.

Sánchez-Juárez, Ivan Rafael, Paredes-Xochihua, Maria Petra and Martínez-Pérez, José Randall. [2024]. Implementation of a mobile application for the dissemination of tourism in México. ECORFAN Journal Republic of Peru. 10[18]1-8: e11018108.
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Article

Request.Method.POST: specifies that the type of request will be POST, which means that data will be sent to the server to create a resource, in this case to the user. new Response.Listener<String>() { ... }: defines a listener to handle the response from the server when the request is successful. new Response.ErrorListener() { ... }: defines a listener to handle errors in the request. getParams(): this method sends the user data as a Map<String, String>, where each key is the name of the field that is sent to the server, and the value is the content entered by the user in the GUI. requestQueue.add(stringRequest): this line adds the request (stringRequest) to the requestQueue (Volley object that manages all network requests). The previous code allows to generate the user registration interface shown in figure 1, as you can see, it requests the user, name, father's surname, mother's surname, telephone, e-mail, password (it must be at least 8 characters long) and you can select between the different types of users to be registered.

Box 4

Figure 1

User registration interface

As a tourist, you will be able to see the different tourist sites with their general information, opening hours, services and events that will take place, and you will be able to leave a comment if you wish. Figure 2 shows the interface for the tourist, where he/she can see the name of the place, the image/s uploaded, address, entrance fee, opening hours, social networks and the option to leave a comment.

Box 5

Figure 2

Tourist information view of a tourist site

Implementation of the functionalities and database on the server

After coding the screens locally, they were uploaded to a host service so that the application could be accessed from anywhere. The folder with all the content of the project was uploaded, including the database connection files, authentications and operations for the different modules. Figure 3 shows the folder with all the files and subfolders within the 000webhost.com host.
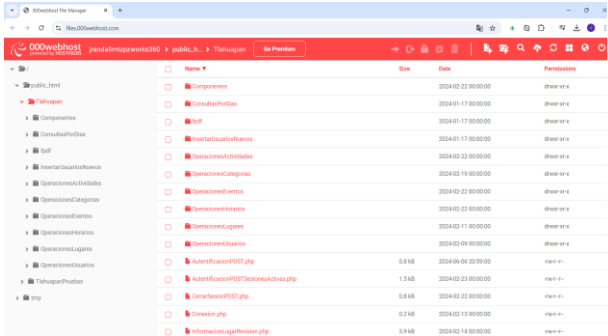
Box 6

Figure 3

Project folder on the server

Inside the subfolder "InsertNewUsers" there is a file called "InsertNewUsersPOST.php", which registers the user into the database on the server. Table 4 shows the php code for the insertion of the user in the database.

Box 7

Table 4

Inserting users into the server database

```php
<?php
    include '../Conexion.php';

    $Usuario = $_POST["Usuario"];
    $Nombre = $_POST["Nombre"];
    $ApePater = $_POST["ApePater"];
    $ApeMater = $_POST["ApeMater"];
    $Telefono = $_POST["Telefono"];
    $Correo = $_POST["Correo"];
    $Contraseña = $_POST["Contraseña"];

    $query = "INSERT INTO usuarios (Usuario, Nombres,
ApePaterno, ApeMaterno, Telefono, Correo, Contraseña,
IdNivelAdministracion)
              VALUES ('".$Usuario."', '".$Nombre."',
'".$ApePater."', '".$ApeMater."', '".$Telefono."',
'".$Correo."','".$Contraseña."','1')";
    mysqli_query($Con, $query) or die
(mysqli_error());

    mysqli_close($Con);
?>
```

The above code includes the Connection file, which contains the configuration (host, username, password and database name) to connect to the MySQL database. In the same way, the input variables identified with $_POST are received, provided from a POST request coming from the mobile application. In this case we are inserting in the field IdAdministrationLevel the value of 1, which is the lowest level (level for a tourist), level 4 would be for the Administrator. In general, the workflow for the registration of a user is that the mobile application sends a POST request with the user data (through the Volley library), then the PHP script on the server receives the data via $_POST so that PHP inserts that data into the database; finally if the operation is successful, the mobile application receives a positive response and displays the message "Successful operation! To create the database on the server, go to the Database Administrator section, this allows you to see the user with which you can enter the system and must match the one registered in the file Conexión.php.

Box 8
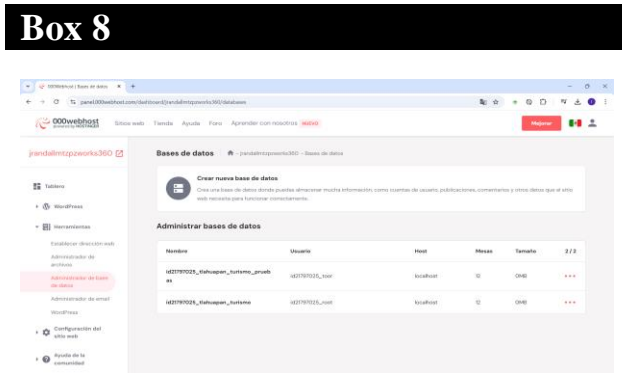
Figure 4

Implementation of the database on the server

Tests carried out on the application

The testing phase is a set of activities developed in order to detect possible errors before launching the final version of an application, within the tests that could be carried out in the development of the application are: integration, unit, system, acceptance and performance tests.

A test plan was made with the following activities: creation of test cases, selection of test data, execution of test cases and recording of results. The test case format contains the test case number, description, input data, expected output, approved (YES/NO) and remarks. In case it has not been approved, a second cycle shall be carried out in order to solve the test. Table 5 shows the test case CP007 for the registration of tourist sites.

Box 9

Table 5

Test Case CP007: Registration of Tourist Sites

Description	Registration of a tourist site in a category
Input data	Selection of the category to which it will belong, a name for the site, entry cost, address where it is located accepting string characters, outside number (required), inside number (optional), telephone and social networks.
Expected output	Add the tourist site to a selected category
Approved	Yes
Remarks	The places section retrieves the information and modifies it correctly.

Results

Based on the state of the art, where various articles related to the project were consulted, it can be identified that it is of vital importance to create mobile applications that help tourists to access information about tourist destinations through events and services offered in each place, in addition to offering updated content for tourists.

The description of the sprint planning process is a process within the SCRUM methodology, which was chosen for the development of the project, this process allowed to review the elements of the product backlog, select the highest priority activities and indicate the sprints to be performed.

The summary presented of the activities developed in sprint 3 talks about how the functionality was added to all the screens of the application using Java, choosing this programming language because it has several tools, libraries and resources for the development of Android applications.

The implementation of the functionalities and database on the server allowed the application to be uploaded to a hosting so that tourists and place owners could interact with the application in a real way, although it has not yet been published in the Playstore, the place owners can already upload their information to the server and the tourist can see it in real time.

In the testing phase of the application, some errors were identified in the application, such as the recovery of passwords that did not send the email to the user, or when uploading images to the events, the tourist could not see them.

Conclusions

Finally, the development of the application will allow the dissemination of information to tourists about sites in the municipality of Tlahuapan, as well as events that can take place throughout the year, such as firefly sightings and the sale of Christmas pines, among others.

On the other hand, it is important to mention that the estimated effort of this project was divided into the following phases: project plan, requirements specification, analysis and design, implementation, integration and testing, and finally the closure. The time spent was 30% on implementation and 20% on integration and testing.

Declarations

Conflict of interest

The authors declare that they have no conflicts of interest. They have no known competing financial interests or personal relationships that might have appeared to influence the article reported in this paper.

Authors' contribution

Sánchez-Juárez, Ivan Rafael: Contributed to the supervision, management and training of project clients.

Paredes-Xochihua, Maria Petra: Contributed to the elaboration and execution of the test plan and test cases, as well as the revision of the product backlog.

Martínez-Pérez, José Randall: Contributed to the development and programming of the interfaces as well as the implementation of the application on the hosting.

Availability of data and materials

The data obtained are available in each of the references used and if you require further information on the results, please contact the author of this article.

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Abbreviations

HTTP: HyperText Transfer Protocol
SDGS: Sustainable Development Goals
UN: United Nations
URL: Uniform Resource Locator
XML: eXtensible Markup Language

References

Background

Aguirre Yaure, J. V. and Caiza García, G.A. (2020). Mobile application with augmented reality for tourism in Ecuador. [Bachelor's thesis, Universidad de las Américas]. Digital Repository Universidad De Las Américas.

Rivera Caro, E. H. (2019). Implementation of a mobile application on Android to show the tourist attractions of the national reserve of lachay, applying the scrum methodology and devops tools.

[Bachelor's thesis, Universidad Nacional Tecnológica de Lima Sur]. Institutional Repository of the National Technological University of South Lima.

Saura, J.R., Palos Sánchez, P.R. and Reyes Menéndez, A. (2017). Marketing through mobile tourism applications (m-tourism): an exploratory study. International journal of world of tourism, 4 (8), 45-56.

Vega Alanis, L. M., Gaetan, G., & Martin, A. E. (2021). User experience guidelines for augmented reality-based cultural tourism applications. Scientific Technical Reports - UNPA, 13(2), 26-43.

Basics

Castro Ricalde, D., Peñaloza Suárez, L., & Tamayo Salcedo, A. L. (2018). Popular online technologies for travel: which ones do young university students use for tourism? Actualidades investigativas en educación, 18(2), 202-232.

National Monte de Piedad (2023). Sustainable Development Goals

Sustainable Development Goals. [n.d.]. Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all.

UN Tourism. [5 June 2024]. In 2023, with the reopening of Asia-Pacific to tourism, China regained its top position in the ranking of top-spending countries.

UN Tourism. [n.d.]. Mexico: Tourism into the Future

Analysis of urban tourism in Chetumal, Quintana Roo

Análisis del turismo urbano en Chetumal, Quintana Roo

Nandi-Aguillón, Nallely *[a], Meneses-Domingo, José Manuel [b] and Lara-Vera, María Guadalupe [c]

[a] ROR Tecnológico de Chetumal • LRB-9922-2024 • 0009-0009-9881- 0020
[b] ROR Tecnológico de Chetumal • JNS-6804-2023 • 0000-0001-5121-2933 • 808116
[c] ROR Tecnológico de Chetumal

Abstract

The objective of the study is to conduct an analysis of urban tourism in Chetumal, Quintana Roo in order to examine the current situation of tourism in this coastal city and to address the problems it faces. A comprehensive research is carried out that includes the analysis of various aspects of urban tourism in Chetumal. This ranges from the existing tourism infrastructure to the quality of services offered, as well as the perception of visitors and local residents about the tourism industry. Among the problems identified is the lack of adequate tourism infrastructure, which can range from a shortage of hotels and restaurants to deficiencies in transportation and tourist attractions available in the city. In addition, there is a deficient promotion and advertising strategy, which limits the visibility of Chetumal as a tourist destination both nationally and internationally.

Analysis of urban tourism in Chetumal, Quintana Roo		
objectives	Methodology	Contribution
To analyze the current situation of urban tourism in the city of Chetumal and its current problems.	This research uses the quantitative approach, since it allows to develop sequentially and accurately the behavior and relationship of the variables, apart from not changing the observations and measurements that are made.	Respond how urban tourism is in Chetumal, Quintana Roo

Tourism shortage, Investment deficiency and Promotion of tourism development

Resumen

El objetivo del estudio es realizar un análisis del turismo urbano en Chetumal, Quintana Roo para examinar la situación actual del turismo en esta ciudad costera y abordar las problemáticas que enfrenta. Se lleva a cabo una investigación exhaustiva que incluye el análisis de diversos aspectos del turismo urbano en Chetumal. Esto abarca desde la infraestructura turística existente hasta la calidad de los servicios ofrecidos, pasando por la percepción de los visitantes y residentes locales sobre la industria turística. Entre las problemáticas identificadas se encuentra la falta de infraestructuras turísticas adecuadas, que pueden incluir desde la escasez de hoteles y restaurantes hasta deficiencias en el transporte y las atracciones turísticas disponibles en la ciudad. Además, se observa una deficiente estrategia de promoción y publicidad, lo que limita la visibilidad de Chetumal como destino turístico tanto a nivel nacional como internacional.

Analisis del turismo urbano en Chetumal, Quintana Roo		
Objetivos	Metodología	Contribución
Analizar la situación actual del turismo urbano en la ciudad de Chetumal y sus problemáticas actuales.	Esta investigación se utiliza el enfoque cuantitativo, ya que permite desarrollar secuencialmente y con exactitud el comportamiento y la relación de las variables, aparte de no cambiar las observaciones y mediciones que se realizan	Responder como se encuentra el turismo urbano en Chetumal, Quintana Roo

Escasez turística, Deficiencia de inversión y Fomentación al desarrollo turístico

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Article

Introduction

The objective of the study is to conduct an analysis of urban tourism in Chetumal, Quintana Roo in order to examine the current state of tourism in this coastal city and to address the problems it faces. The aim is to gain an in-depth understanding of the state of urban tourism in Chetumal and to analyse the difficulties faced by the city in this area.

In order to achieve this objective, a comprehensive research is carried out that includes the analysis of various aspects of urban tourism in Chetumal. This ranges from the existing tourism infrastructure to the quality of services offered, as well as the perception of visitors and local residents of the tourism industry.

Among the problems identified is the lack of adequate tourism infrastructure, which can range from a shortage of hotels and restaurants to deficiencies in transport and tourist attractions available in the city. In addition, a deficient promotion and publicity strategy is observed, which limits the visibility of Chetumal as a tourist destination both nationally and internationally.

A detailed analysis of these issues provides an understanding of the challenges facing Chetumal in the development of its urban tourism industry and offers the opportunity to propose concrete solutions and recommendations to address them. These solutions can range from improvements in tourism infrastructure to the design and implementation of more effective promotional strategies.

Problem Statement

In the City of Chetumal the peak seasons are the Easter, summer and December holidays, as it receives national and international tourists, however, the final destination of people is not Chetumal, (Hernandez, 2015).
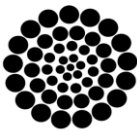
The final destination of visitors is located in sun, beach and sand, such as Cancun, Mahahual, and Cozumel to name a few, (Vargas, 2022).

Chetumal being the capital of Quintana Roo, has not obtained good strategies to implement, create and improve the few attractive sites it has, this is a consequence that there is no initiative and importance of the Tourism Sector for an improvement, (Castro, 2021). Due to this situation as there are no tourist sites, there is therefore no tourism promotion, (Martin, 2018).

Research question

Chetumal being the Capital of Quintana Roo, has not obtained good strategies to implement, create and improve the few attractive sites it has, this is a consequence that there is no initiative and importance of the Tourism Sector for an improvement, (Castro, 2021). Due to this situation as there are no tourist sites, there is therefore no tourism promotion, (Martin, 2018).

The research question is How is urban tourism in Chetumal?

Hypothesis

Currently the city of Chetumal Quintana Roo, the urban tourism that has is very little, because there is a low influx of visitors in the attractions and services with which the city has, so it is notorious that the state capital is with a shortage of tourism.

General and specific objectives

To analyse the current situation of urban tourism in the city of Chetumal and its current problems.

1. To gather information on the current situation of urban tourism in the city of Chetumal, Quintana Roo.
2. Examine the problems that cause the scarcity of urban tourism in Chetumal.
3. To recognise the low influence of visitors and the lack of tourism promotion in the state capital.

Theoretical basis

Tourism originated mainly because of business and wars, since they have existed since the beginning, due to the fact that the transfer was by obligation and / or necessity of people, so the length of stay could be short to long, (Rodriguez, 2011).

Acerenza (2006), states that the Greeks were the ones who travelled the most, because they went in a 'religious' way; however, they went to earthly festivals where they celebrated the Olympics.

Figueiras (2021) says that tourism is considered to be the activities that are carried out during the course of the trip, considering that they are activities that are normally carried out for long, undetermined periods of time, whether for business, health or family reasons. Likewise, Figueiras (2021), says that urban tourism reactivates a social relationship between different countries, so it allows to get to know different cultures and customs.

As a research problem, the situation in which Chetumal, Quintana Roo, finds itself, is like a balance due to the fact that a large part of the tourists only arrive to the city in passing, however, reactivating tourism and the economy of Quintana Roo, given that the final destination of the tourists is the northern zone of Chetumal, looking for the best and most well-known beaches such as Bacalar, Cancun, Tulum and Mahahual, to mention a few, (Vargas, 2022).

The intention of this research is to carry out a search for information regarding the different problems that damage the growth of urban tourism in the city of Chetumal, as the main objective is to identify the phenomenon that causes the tourism imbalance in the city, as well as to find the causes and effects that cause the imbalance.

Box 1

Figure 1

Tourist attraction in Chetumal, Quintana Roo

Source: Cayman Hosting: 2024

Box 2

Figure 2

Lack of tourism promotion in the capital of Quintana Roo

Source: Pérez Esquivel: 2020

Methodology

Approach

In this research the quantitative approach is used, as it allows to develop sequentially and accurately the behaviour and relationship of the variables, apart from not changing the observations and measurements that are made, (Hernández, Fernández & Baptista, 2014), it seeks to check with phenomena of different groups, (Cárdenas, 2017).

Type

The type of research used is historical and descriptive because it examines reliable information about past events through an interpretation of correct and reliable data that is carried out by researchers (Grajales, 2000). It is based on inspecting studies of events that are conducted through analysis to reason the information, (Cauas, 2015).

Design

The design used in this research is non-experimental, as it allows observing the phenomena in their natural environment without manipulating the variables, and then analysing it, (Mata, 2019). It focuses on the analysis of information through observation in a natural way and without manipulating any variable that alters the study to be carried out, (Sousa, Driessnack, & Costa, 2007).

Method

The method used is the dialectical method, since it allows us to discover the reality of tourism in the city of Chetumal and then carry out an analysis in which the effects and causes of the problem can be found, (Huaranca, 2020).

It prioritises the study of current tourism phenomena, as it is a search for information on the reality of what is happening (Vásquez, 2005).

Research Design

The research design that is carried out is non-experimental, this is based on the observation of the aspects that already exist to analyse the phenomena in depth through variables that are not manipulated and thus reach the results through the information obtained through research of facts already produced, this being the case of a determination of the factors and tourist attractions that lead to a large influx in different cities in Latin America, (Gaspar, 2011).

Population and Sample

Population

According to Bernal (2010), the population is the total set of individuals who are in a certain geographical space and which usually have characteristics and behaviours in common, these can be analysed in sampling units using techniques to carry out a specific research.

Therefore, in the present research carried out in the city of Chetumal, Quintana Roo, there is a total population of 233,648 people residing in the city.

The population with which this research is conducted is with tourists arriving in the entity of Chetumal, Quintana Roo, the population criteria taken is the 1,756, 045 tourists who arrived in the period 2019, (SEDETUR, 2020).

Sample

The sample is a tool of scientific research that allows the selection of a specific number of individuals taken from a total set of a population to be studied and analysed to obtain information, (Bernal, 2010).

In our research the sampling method used to determine the size of our sample is probabilistic, a total sample size, confidence level and margin of error were carried out to obtain the total number of people to be surveyed for our research.

The sample used for this research is statistical. With the data obtained from SEDATUR, according to the data investigated in 2019, the South of the State presented a tourist growth. Chetumal, closed with 1,756,045 visitors, the sample is 69, having a confidence level of 90% and a margin of error of 10%, according to the estimation formula applied.

Sample Estimation Formula:

$$n= \frac{Z^2 \, X \, S^2}{E^2} \qquad (1)$$

$$n= \frac{(90)^2 \, X \, (0.92)^2}{(10)^2} = 68.55 = 69$$

Technique and instruments

The technique is the process of scientific research, which is responsible for measuring and correlating data by applying statistical methods in order to achieve its objective, (Baena, 2017).

The technique used is the questionnaire, as it is used to collect information according to the variables, (Hernández, Fernández & Baptista, 2014). Its purpose is to systematically and orderly obtain information from which to work, (Meneses, 2016).

The instrument is an element in which the researcher uses to obtain and record information, being the support of the technique so that it fulfils its purpose, (Baena, 2017).

The instrument used is the semi-structured survey, because a series of options are implemented to determine some kind of information and identify hypotheses through data collection on our research problem, (López & Fachelli, 2016).

This instrument will be applied to tourists over 18 years old who are visiting the city of Chetumal, i.e. we will obtain information from tourists through online surveys that will be answered in Chetumal, Q. Roo.

This instrument promotes a better collection of information, since the data is obtained more quickly and efficiently, and it also allows us to present a sample of the population that we intend to explore (Casas, Repullo & Donado, 2003).

Dimensions and indicators

Tourism

The tourism dimension within the rational is a rest of undetermined time, deserved after a long work responsibility, it produces human happiness, (Zamorano, 2007).

Tourism is the displacements from one city to another that is understood for reasons of leisure or work, it is composed of different activities that are not usually performed, (Buhalis, Gallego, Mata, Navarro, Osorio, Ramos & Ruiz, 2018).

Tourism as a dimension in this research allows to measure and identify, (Soto, 2018) which are the places that visitors travel the most in Chetumal Quintana Roo, the tourism dimension is composed of two indicators: culture and economy.

Tourist Attractions

A tourist attraction can be defined as the materials that are transformed into a tourist product, such as an infrastructure, in order to provoke and influence the tourist's decisions to visit the place (Carvajal & Lemoine, 2018).

A tourist attraction is known as a heritage, which is fundamental to invest in infrastructure for the growth and development of cultural identity. Also to be a motivational option for tourists to visit the place, (Carvajal & Lemoine, 2018). Tourist attractions are interesting for the tourist because of the services and entertainment products, and comfort offered, as well as the history, culture, and the environment that composes it, (Carvache, Regalado & Sirkis, 2021).

Complementary attractions

Complementary attractions are an offer of activities that may or may not be included in a service.

Complementary attractions incorporate exhibitions, fairs, festivals, concerts, water parks, restaurants, and hotels, with the main objective of being an attraction and enhancing the environment, (Carvache, Regalado & Sirkis, 2021).

Environment

The environment is the condition in which a place or a group is found, i.e. it is a set of elements in natural places and in society which determines the possible circumstances, (Reborrati, 2000).

The dimension of the environment in the research is based on the knowledge that we have in the city of Chetumal, knowing the environmental elements that compose it and determining the circumstances, (Reborrati, 2000).

Results

The results obtained from the research due to the short time of the semester, as well as the time of the tourists, only 14 tourists were surveyed out of the total sample of 69.

Table 1 shows the results of the research, which represent the main problems of the shortage of tourism in Chetumal according to Mexican and foreign tourists.

Box 3

Table 1

Main problems of tourist shortages, according to tourists in Chetumal

Variables assessed	Mexicans	Foreigners	Total	
			No.	%
Underinvestment in tourism infrastructure	6	0	6	43%
Few tourist attractions	2	1	3	21%
Poor tourism strategy	5	0	5	36%
Total	13	1	14	100%
Percentage	93%	7%		

Source: Nallely Nandi: 2024

Nandi-Aguillón, Nallely, Meneses-Domingo, José Manuel and Lara-Vera, María Guadalupe. [2024]. Analysis of urban tourism in Chetumal, Quintana Roo. ECORFAN Journal Republic of Peru. 10[18]1-9: e21018109.
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The data in table 1 shows that of the total of 14 tourists surveyed in the city of Chetumal, 93% who visit the capital are Mexicans, and 6 of them consider that the main problem in the lack of tourism is due to the lack of investment in infrastructure (43%), while 2 Mexicans and 1 foreigner (21%) consider that the problem is due to the lack of tourist attractions, followed by 5 Mexican tourists (36%) who consider that it is due to a poor tourism strategy.

Conclusions

According to our results based on the surveys applied to tourists, we found a series of worrying results that reflect the main problems facing the tourist shortage in Chetumal. Among the most salient findings is the lack of investment in adequate tourism infrastructure. This includes the insufficient number of quality hotels, the shortage of restaurants and other facilities needed to meet the demands of tourists.

In addition, tourists surveyed pointed to the lack of tourist attractions as another important factor contributing to the shortage of visitors.

Contributing to the shortage of visitors to Chetumal. Although the region has rich history and natural beauty, the lack of development and promotion of these resources limits its ability to attract a number of visitors.

Limits its ability to attract significant numbers of tourists. Poor promotion and marketing strategy also emerges as a crucial problem, according to the research findings.

According to the research findings. The lack of an effective strategy to position. Chetumal as an attractive and competitive tourist destination has led to an under-utilisation of the available resources and lower visibility in the national and international tourism market.

These findings suggest the urgent need for local authorities and key stakeholders in the tourism industry to work together to address these issues in a comprehensive manner. It is essential to increase investment in tourism infrastructure, promote and develop new attractions, and design an effective marketing strategy that highlights Chetumal's strengths as a tourist destination.

Only in this way will it be possible to take advantage of all the potential that this region has to offer and reverse the situation of tourism scarcity.

In conclusion, the research on urban tourism in Chetumal, Quintana Roo, has revealed that the hypothesis put forward is valid. The city faces a notable tourism shortage, mainly attributed to the low influx of visitors and the lack of effective promotion. The analysis of the data obtained through the research instrument confirms that the current situation of urban tourism in Chetumal is not optimal, and the state capital has significant deficiencies in terms of tourism infrastructure and visitor attraction.

The objectives of the research have been largely fulfilled. Information has been collected that highlights the unfavourable circumstances of tourism in the city, underlying issues have been examined, and the low visitor influence and lack of adequate tourism promotion have been recognised. The results show that, despite some recent efforts to improve infrastructure, investments have been insufficient and have failed to attract significant numbers of tourists.

To improve the situation, it is crucial to implement strategies that include greater investment in tourism infrastructure, the development of cultural programmes and festivals, and more effective promotion of Chetumal's attractions. Only through a comprehensive approach that encompasses both infrastructure development and active promotion will it be possible to increase tourist inflows and improve the perception of the city as an attractive destination.

The resulting recommendations suggest that by strengthening these aspects, Chetumal could transform its image and attract more visitors, thus benefiting the local economy and entrepreneurs in the region.

Declarations

Conflict of interest

The authors declare that they have no conflicts of interest. They have no known competing financial interests or personal relationships that might have appeared to influence the article reported in this paper.

Nandi-Aguillón, Nallely, Meneses-Domingo, José Manuel and Lara-Vera, María Guadalupe. [2024]. Analysis of urban tourism in Chetumal, Quintana Roo. ECORFAN Journal Republic of Peru. 10[18]1-9: e21018109.
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Authors' contribution

Nandi-Aguillón, Nallely: Research approach and research development.

Meneses-Domingo, José Manuel: Analysis of the contents as well as the direction of the work and revision of the structure and contribution in the theoretical framework.

Lara-Vera, María Guadalupe: Content analysis as well as work management and structuring of the research instruments and their application.

Availability of data and materials

If you would like additional information about this research, please contact the authors at the following e-mail address: jose.md@chetumal.tecnm.mx

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References

Basics

Acerenza, M. (2006). *Conceptualización, origen y evolución del turismo.* Trillas.

Aguirre, G. (2016). Ciudad, espacio urbano y comunicación. Prácticas y hábitos en la reinvención de una conurbación. *Global Media Journal México, 14*(27), 79-106.

Arias, L., Herrero, M., Magadán, M., Murias, A., Rivas, J., & Valle, A. (2012) *Literatura y turismo*. Septem Ediciones.

Ayaviri, V., Quispe, G., & Sánchez, P. (2017). Estimación de la demanda del turismo en la comunidad Andina de Naciones. *Revista Espacios, 38*(31), 1-13.

Baena, G. (2017). *Metodología de la investigación*. Grupo editorial Patria.

Benseny, G. (2021). Centros turísticos tradicionales o espontáneos y centros turísticos integralmente planificados.

Bernal, C. (2010). Metodología de la investigación: administración, economía, humanidades y ciencias sociales. Pearson educación.

Buhalis, D., Gallego, J., Mata, J., Navarro, S., Osorio, E, Ramos, S. & Ruiz, P. (2018). Introducción al turismo.

Cabrera, B., García, G., & Pérez, J. (2001). *Apuntes de metodología de investigación.*

Cabrera, S. (2017). Análisis del turismo urbano como sistema funcional. Caso de estudio: Turismo urbano en Quito, ecuador. *Territorios en formación,* (13).

Cajal, A. (2020). *Los 12 lugares turísticos de Quintana Roo más famosos.* Lifeder.

Calle, M. (2019). Turistificación de centros urbanos: Clarificando el debate. *Boletín de la Asociación de Geógrafos Españoles, 83*(2829), 1-40.

Cárdenas, J. (2017). Investigación cuantitativa.

Caribe mexicano. (2020). *Qué hacer en Chetumal.* Caribe mexicano.

Carvache, F., Regalado, P. & Sirkis, G. (2021). Turismo urbano en Latinoamérica. Análisis de los factores determinantes en el atractivo de las ciudades. (795),1-23.

Carvajal, G., y Lemoine, F. (2018). Análisis de los atractivos y recursos turísticos del cantón San Vicente. *Revista Scielo.* (34), 164-184.

Casas, J., Repullo, J. & Donado, J. La encuesta como técnica de investigación, elaboración de cuestionarios y tratamiento estadístico de los datos *(I).*

Castillo, L. (2004). Chetumal: modelo de desarrollo urbano en el trópico húmedo mexicano. *Revista Cesla*. (6) (90-91).

Castro, E. (1 de diciembre de 2021). Sin inversión ni promoción turística reciben vuelo Chetumal-Miami. *Sol Quintana Roo.*

Cauas, D. (2015). *Definición de las variables, enfoque y tipo de investigación.*

Cerdá, E., García, B. Y Such, M. (2021). Análisis de la economía colaborativa en el turismo urbano: Estudio de la implantación de AIRBNB en Madrid y Barcelona. *Cuadernos de turismo, 47*(2021), *383-412.*

Chaux, A. (2021). *Cómo validar un instrumento de medición. Recuperado el 04 de junio del 2022.*

Coordinación general de comunicación. (2020). Recibe Quintana Roo resultados de censo 2020 del INEGI.

Crespi, M., & Mascarilla, O. (2018). La transformación y gentrificación turística del espacio urbano. El caso de Barceloneta (Barcelona). *Eure, 44*(133), 51-70.

Delgado, M. (2018). El urbanismo contra lo urbano. La ciudad y la vida urbana en Henri Lefebvre. *Revistarquis,* 7(1)(65-71).

Delgado, Y. (2014). Importancia de la confiabilidad y validez de los instrumentos de investigación. Blogger.

Dosso, R., & Muñoz, M. (2004). Turismo urbano en mar del plata: La opción por el turismo de ciudad.

El heraldo de México. (2019).¿Qué es turismo urbano y porqué lo preferimos los mexicanos?.

Esan. (2021). Importancia del análisis de datos en la toma de decisiones. Conexionesan. Recuperado el 04 de junio del 2022.

Espeso, P. (2019). Tendencias del turismo cultural. *Pasos Revista de Turismo y Patrimonio cultural, 17*(6), 1101-1112.

Figueiras, S. (2021). ¿Qué es el turismo urbano?. Ceupe. Recuperado el 12 de mayo del 2022.

Fiuza, T., Silva, L., Ardigó, C., & Limberguer, P. (2018). Análisis de las ventajas competitivas a través de la percepción de los turistas. Un estudio en Bombinhas-García, T. (2019). *Turismo.*

Flores, D. & Barroso, M. (2012). La demanda turística internacional. Medio siglo de evolución. *Revista de economía mundial,* (32), 127-149.

Gaspar, J. (2011). Métodos de investigación de enfoque experimental.

Gobierno del Estado. (2022). Panorama sociodemográfico de Othón Pompeyo Blanco. Gobierno del Estado.

Grajales, T. (2000). Tipos de investigación.

Guerrero, E. & Ramos, J. (2015). Introducción al turismo. Grupo Editorial Patria.

Guzmán, J. (2021). ¿Qué es google forms y para qué sirve?. Juan Sebastian Guzmán.

H. Ayuntamiento de Othón. Blanco, Quintana Roo. (2015). Plan de desarrollo municipal 2013-2016.

Hernández, I (3 de agosto de 2015). Por falta de promoción y atractivos, Chetumal no "retiene" a turistas que arriban a la región. *El punto sobre la I.*

Hernández, R., Fernández, C., Baptista, P. (2014). Metodología de la investigación. Mc Graw Hill.

Hiernaux, N. (2002). ¿Cómo definir el turismo? *Revista Un repaso disciplinario.*

Histormex. (2016). Turismo urbano, definición.

Huarancca, E. (2020). *Aplicación del método dialéctico en el desarrollo de habilidades investigativas.* 3ciencias.

INEGI. (2020). México en cifras.

Jafari, J. (2005). El turismo como disciplina científica. *Revista política y sociedad,* 42(1)(39-56).

López, P. & Fachelli, S. (2016). Metodología de la investigación social cuantitativa.

López, R., Avello, R., Palmero, D., Sánchez, S. & Quintana, M. (2019). Validación de instrumentos como garantía de la credibilidad en las investigaciones científicas. *Revista cubana de medicina familiar,* 48(2)(2-3).

Mantecón, A. (2006). Turismo cultural en México: ¿Un modelo alternativo? *Caderno CRH, 19*(48), 499-506.

Martín, E. (12 de enero de 2018). *Chetumal la capital con carencias.* La verdad.

Massida, L. (2018). Como nombrar la informalidad urbana: Una revisión de las definiciones en uso, sus implicaciones analíticas y su alcance. *Revista del área de estudios urbanos del instituto de investigaciones de GINO Germani de la facultad de ciencias sociales,* (10)(301-315).

Meneses, J. (2016). *El cuestionario.* https://femrecerca.cat/meneses/publication/cuestionario/cuestionario.pdf

Montero, J. (2010). Turismo metropolitano: La potencia de lo urbano. *Turismo libre Turismo y recreación, 2*(14), 121-144.

Moreno, M., & Coromoto, M. (2010). Turismo y producto turístico. Evolución, conceptos, componentes y clasificación. *Revista Visión gerencial,* (1)(1-2).

Narváez, M. & Fernández, G. (2010). El turismo desde la perspectiva de la demanda. Lugar de estudio: Península de Paraguaná-Venezuela. *Revista U.D.C.A Actualidad & divulgación científica, 13*(2), 175-183.

Othón P. Blanco QR. (2022). Información sobre Othón P. *Blanco. Municipios.*

Presidencia de la República EPN. (2013). Impulso al turismo cultural.

Prieto, G. & Delgado, A. (2010). Fiabilidad y validez.

Real academia española. (2021). Análisis. Recuperado el 02 de junio del 2022.

Reborrati, C. (2000). Ambiente y sociedad: conceptos y relaciones.

Reyes, A., Rosas, F., Pérez, C., & Calderón, J (2021). Intervención urbana y desarrollo turístico: Propuesta de un modelo de análisis en centros históricos. *Eure, 47(141),* 71-93.

Rigol, L. (2009). Conceptualización de la demanda turística. Ciencias Holguín, 15(1), 1-8.

Rizo, M. (2005). La ciudad como objeto de estudio de la comunicología. Hipótesis, preguntas y rutas para la construcción de un estado del arte sobre la línea de investigación "Ciudad y Comunicación". *Revista de investigación social, 7*(2), 197-225.

Rodríguez, E. (2011). Evolución histórica del turismo. *Revista vinculado.*

Romero, R. (2012). Chetu-mal: problemática urbana en una ciudad media en la costa sur del caribe mexicano. *Revista dialnet. 17*(17), 158-159.

Salazar, B., González, A & Macias, A. (2020). El turismo cultural y sus construcciones sociales como contribución a la gestión sostenible de los destinos turísticos. *Rosa dos vientos, 12*(2), 406-428.

Sánchez, A. (2015). Introducción a las hojas de cálculo.

Santa Catarina, Brasil. Estudios y Perspectivas en Turismo, *28*(2), 428-446.

Schettini, P & Cortazzo, I. (2015). Análisis de datos cualitativos en la investigación social.

Secretaria de turismo. (2015). *Turismo cultural.*

SEDETUR: (2020). Diversificación y desarrollo del turismo en el sur del Estado.

Serrano, G. (2018). Estudio sobre el potencial de la avenida del ferrocarril, para el fomento del turismo metropolitano en Girardot-Cundinamarca. Re-Pilo.

Soto, A. (2018). Variables, dimensiones e indicadores de una tesis. Tesisciencia.

Sousa, V., Driessnack, M. & Costa, I. (2017). Revisión de diseños de investigación resultantes para enfermería. *Parte 1: diseños de investigación cuantitativa.*

Stedman, C. (2021). *Análisis o análisis de datos. Computerweekly.* Recuperado el 04 de junio del 2022.

SurveyMonkey. (2022). Calculadora del tamaño de muestra.

Tinajero, J. (2017). *Turismo urbano, definición. Histormex.*

Vargas, D. (10 de marzo de 2022). Te decimos qué lugar ocupa Cancún en turismo a nivel mundial. *SoyNómada.*

Vásquez, I. (2005). *Tipos de estudio y métodos de investigación.*

Vázquez, J. (2017). Turismo, principal actividad económica de Quintana Roo. *El economista.*

26a reunión CSG-IUCN. (2022). Chetumal Quintana Roo.

Zamorano, F. (2007). Turismo alternativo servicios turísticos diferenciados. Editorial trillas.

Zita, A. (2021). Investigación científica. Significados. Recuperado el 02 de junio del 2022.

Universidad Nacional del Nordeste Facultad de Ingeniería. (2017). Introducción a la informática apunte Excel.

Article

Good practices of social responsibility for promoting sustainable development goals from the university: a case study

Buenas prácticas de responsabilidad social para la promoción de los objetivos de desarrollo sostenible desde la universidad: caso de estudio

Rojo-Carlón, José María*[a], Rivera-Iribarren, Maricel [b] and Valencia-Romero, Alexia Zoe [c]

[a] ROR Instituto Tecnológico de Sonora • ACQ-0210-2022 • 0000-0003-3502-3379 • 1074691
[b] ROR Instituto Tecnológico de Sonora • S-7893-2018 • 0000-0003-1823-0149 • 896629
[c] ROR Instituto Tecnológico de Sonora • LMN-6707-2024 • 0009-0000-3577-328X • 2071551

Abstract

The transformative role of universities is key to their contribution to sustainable development and the fulfillment of the UN's 2030 Agenda. University Social Responsibility, as an ethical impact management policy, promotes the implementation of good practices that have a positive impact in the formative, cognitive, social, and organizational domains. These practices enable the observation and promotion of the Sustainable Development Goals (SDGs). This article aims to identify the social responsibility good practices that affect the SDGs in a public university in southern Sonora, Mexico. The method used was qualitative and deductive, following four steps: 1) defining good USR practices, 2) developing a catalog of good practices, 3) classifying the practice based on its impact, and 4) categorizing it according to the SDG it addresses. The main results show that a significant portion of these practices focus on SDGs related to people and are primarily directed at the university's internal stakeholders

Resumen

El papel de las universidades es clave en el desarrollo sostenible y en el cumplimiento de la Agenda 2030 de la ONU. La Responsabilidad Social Universitaria (RSU), como política de gestión ética, promueve la implementación de buenas prácticas con impactos positivos en los ámbitos formativo, cognitivo, social y organizacional, alineándose a los Objetivos de Desarrollo Sostenible (ODS). Este artículo tiene como objetivo identificar las buenas prácticas de RSU que inciden en los ODS en una universidad pública del sur de Sonora, México. Se utilizó un enfoque cualitativo y deductivo, siguiendo cuatro pasos: 1) definición de buenas prácticas de RSU, 2) elaboración de un catálogo, 3) clasificación de prácticas por impacto y 4) categorización según el ODS correspondiente. Los resultados muestran que una parte considerable de estas prácticas se enfoca en ODS relacionados con el bienestar de las personas, dirigidas principalmente a los grupos de interés de la universidad.
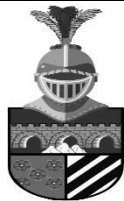
University social responsability, good practices, sustainable development

Responsabilidad social universitaria, buenas prácticas, desarrollo sostenible

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Introduction

University social responsibility (USR) is a cross-cutting management policy of higher education institutions that is focused on generating positive impacts at the organisational, social, educational and cognitive levels (Vallaeys et al., 2022). This concept implies that all activities carried out by universities are oriented towards achieving sustainable development, so there are efforts by different parts of the organisational structure as well as stakeholders to make the promotion of sustainable development a reality (Arias-Valle et al., 2021).

Sustainability is a need that has been consolidated in the 21st century as a guiding principle for international organisations. Since the Millennium Declaration, promulgated by the United Nations (UN), the interest in promoting sustainable development in different spheres of life in the world. This led to the Millennium Development Goals (MDGs), which were a set of statutes that address global issues: poverty eradication, universal primary education, gender equality and women's empowerment, reduction of child mortality, improvement of maternal health, combating diseases such as HIV, the environment and partnerships for the achievement of the goals (UN, 2000).

The background to the MDGs is related to the Universal Declaration of Human Rights, the UN Framework Convention on Climate Change, the Fourth World Conference on Women and the Kyoto Protocol to the UN Framework Convention on Climate Change.

Despite the efforts made to achieve the MDGs, in 2015 the impact of the MDGs began to be evaluated and the UN had to rethink its course and include social, economic, public health and environmental issues that were encountered along the way. As a product of this, the 2030 Agenda was created, which aims to achieve prosperity that balances five fundamental factors: people, prosperity, planet, peace and partnerships (United Nations Group for Sustainable Development, 2024). These points highlight how education is implicitly linked to the principles and goals set out in the UN Charter, even though it is not the main focus of the document. Education is essential for human development, peace and global progress, and the UN considers it a key component of its global mission.

The 2030 Agenda includes the Sustainable Development Goals, which are 17 themes that address global issues related to people, society and the planet from social, economic and environmental perspectives (Economic Commission for Latin America and the Caribbean [ECLAC], 2018).

These objectives set 169 goals to be achieved through the synergy of different stakeholders, such as countries, societies, companies and organisations, as well as international organisations.

From the perspective of University Social Responsibility (USR), universities are transformers of the context in which they are established (Universidad Iberoamericana, 2020).

Therefore, through their substantive functions, they can have a positive impact on a local, regional, national and even international scale through research and the dissemination of their practices.

Likewise, USR proposes four impacts on which Higher Education Institutions (HEIs) must manage actions and projects in order to have a positive impression on the university's internal and external stakeholders, as well as on the environment and the economy: formative, cognitive, social and organisational (Vallaeys et al., 2022). These are a reference framework for the implementation of good practices with social relevance and impact on the improvement of contextual conditions.

In Latin America, there are different universities and groups that have documented good practices of social responsibility in HEIs. According to Laurencio and Farfán (2016), good practices from the university are those activities that serve as a means to achieve established goals. Therefore, all those actions carried out by universities to comply with some strategy can be considered as good practices.

In order to delimit good practices in the field of university social responsibility, it is necessary to consider the goals of achieving the Sustainable Development Goals (SDGs), as they belong to a global agenda to which there is a commitment to contribute. Taking the SDGs as a reference point provides support for good practices in social responsibility and allows the impacts to be observable.

Rojo-Carlón, José María, Rivera-Iribarren, Maricel and Valencia-Romero, Alexia Zoe. [2024]. Good practices of social responsibility for promoting sustainable development goals from the university: a case study. ECORFAN Journal Republic of Peru. 10[18]1-6: e11018106.
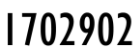https://doi.org/10.35429/EJRP.2024.10.18.1.6

In the particular case of the university under study, it has a social responsibility perspective from its philosophy, which establishes in its mission and vision the importance of training students with a social conscience through the relevance of the curricular content of the educational programmes presented. In the same way, the Institutional Development Plan (PDI) of this institution sets out different strategic objectives that focus on strengthening USR in all the substantive functions of the university, establishing mechanisms for its diagnosis, strengthening ties with stakeholders, promoting the dissemination of results in this regard, among other related aspects.

Despite the importance of having the means to make good practices of university social responsibility visible, there are no mechanisms for their dissemination. In this situation, the efforts made between the different levels of the organisational structure and the stakeholders may be dispersed and their impact may be diluted.

Furthermore, by being able to rely on the documentation of good practices, the actions carried out by the university can be seen as a reference at local, regional, national and international level in the development of actions that promote the scope of the UN's 2030 Agenda.

Other universities and research centres can even take the efforts made as a reference to be replicated in their own contexts, with the relevant adaptations.

This is why the aim of this paper is to document the good practices of social responsibility in a public university in southern Sonora, Mexico, so that by disseminating them they can be a reference for action to achieve the Sustainable Development Goals in other higher education institutions.

Method

The present research has a qualitative approach and is descriptive and documentary in nature, due to the fact that the practices carried out from January to October 2023 by an institutional programme of social responsibility in a public university in southern Sonora were analysed.

According to Hernández et al. (2014) and Valle et al. (2022), this type of study allows the systematic collection and analysis of information, facilitating a detailed understanding and description of the phenomenon studied through the systematic consultation of documents.

Likewise, the deductive method was used, which was developed from the following phases: (1) review of existing theories for the definition of good practices of university social responsibility (USR); (2) elaboration of a catalogue of good practices carried out by a University Social Responsibility programme in the Higher Education institution under study in the period January to September 2024; (3) classification of these practices according to the impacts proposed by Schwalb et al. (2019) and; (4) categorisation of these practices according to the Sustainable Development Goals (SDGs) they address.

Results

When the catalogue of good practices of social responsibility was carried out, it was found that the programme that promotes them carried out 25 practices. Most of these practices are oriented towards the SDGs that impact on people, for example, related to reducing inequalities, gender equity and health and well-being. Among the actions carried out in this area are awareness-raising campaigns on health care, promotion of gender equality and inclusion of minority groups, such as the LGBTQ+ community and adults.

On the other hand, there are those oriented towards a culture of University Social Responsibility. These include those that promote a culture of peace, the participation of internal stakeholders in the institution's democratic processes and the dissemination of the importance of contributing to the SDGs.

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Box 1

Table 1

Good MSW practices promoted by the MSW programme

Good practice	Target group	Main impact	SDG to which it contributes
Donation campaign for the event of the Fight Against Childhood Cancer to benefit an A.C.	Student body Academic and administrative staff General community	Social	Health and well-being
Talk 'Myths and realities of childhood cancer'.	Student body Academic and administrative staff	Organisational	Health and well-being
Human ribbon in commemoration of the International Day Against Childhood Cancer.	Student body Academic and administrative staff	Organisational	Health and Welfare
Stand to promote participation in a university consultation on the process of appointing a rector or rectoress	Student body Academic and administrative staff	Organisational	Peace, Justice and Strong Institutions
Panel 'STEM Women	Student body Academic and administrative staff	Formative	Gender Equality
Conference 'What is 8M all about?	Student body Academic and administrative staff	Organisational	Gender Equality
Picnic and activity 'express yourself' in commemoration of International Women's Day	Student body	Organisational	Gender Equality
Talk 'Sorority: strengthening links, transforming realities'.	Academic and administrative staff	Organisational	Gender Equality
Small entrepreneurial market aimed at female university students.	Student body	Organisational	Decent work and economic growth
Workshop 'University Social Responsibility' for the promotion of a culture of USR, aimed at students.	Academic and administrative staff	Formative	Peace, Justice and Strong Institutions
Workshop 'Introduction to the SDGs' for academic staff.	Student body	Formative	Peace, Justice and Strong Institutions
Rally of Coexistence for Peace in coordination with the ITSON-Peraj Obregón programme.	Student body	Social	Peace, Justice and Strong Institutions
LGBT+ Café and Allied People / Art Therapy.	Academic Staff	Organisational	Reducing Inequalities
Conference 'Basic concepts of sexual diversity'.	External community	Organisational	Reducing inequalities
Screening of the film 'Love, Simon'.	Student body	Organisational	Reducing inequalities
Lecture 'Inclusion work with an emphasis on gender diversity'.	Academic and administrative staff	Organisational	Reducing inequalities
Lecture 'History of the LGBTQ+ movement and university practices that promote the inclusion of gender diversity'.	Community at large	Organisational	Reducing inequalities
Conversation 'Voices and experiences'.	Student body	Organisational	Reducing inequalities
Diversidrag' Cultural Event	Academic and administrative staff	Organisational	Reducing inequalities
Workshop 'Make your poster for the march'.	Community at large	Organisational	Reducing inequalities
Taking of a photograph forming the LGBT+ Pride flag.	Student body	Organisational	Reducing inequalities
Informative talk for students interested in becoming technological literacy trainers for adults.	Academic and administrative staff	Social	Reducing inequalities
Human ribbon in commemoration of International Suicide Prevention Day	Community at large	Organisational	Health and well-being
Basic Mexican Sign Language course 'Words in silence'.	Student body	Social	Reducing inequalities
Technological Literacy Project	Academic and administrative staff	Social	Reducing inequalities
Donation campaign for the event of the Fight Against Childhood Cancer to benefit an A.C.	Community at large	Social	Health and well-being

From the perspective of the impacts of USR, a considerable part was directed towards organisational impact. These good practices are oriented towards generating inclusive spaces, promoting the human rights of internal stakeholders and caring for their physical and mental health, with a special focus on caring for the dignity of the people who coexist in university spaces.

Likewise, training is another impact towards which the good practices of the university studied are directed. These were carried out in the form of workshops that sought to ensure that the teaching-learning practices had a positive social impact. Through these, work was carried out directly with the institution's students and academic staff, who were the main beneficiaries.

Finally, from a stakeholder perspective, the main target audience was the students.

Considering them as the main stakeholder of the university, a representative part of the activities were directed towards them, in the form of workshops, talks and spaces for coexistence and expression. In turn, within the internal groups, the academic and administrative staff were the next beneficiaries. As a consideration, extending the good practices to external stakeholders could increase the impact of the actions carried out.

Conclusions

Among the challenges faced by universities is the need to reconcile the commitments that, as drivers of change, they have with their stakeholders, both internal and external; which must generate alternatives to solve the problems of an increasingly complex society, thus contributing to the common good (Olarte-Mejía and Ríos-Osorio, 2015; Rubio-Morua et al., 2022).

The above underlines the fundamental relationship between university and society, highlighting the social transcendence of the former. In this context, university extension plays a key role in addressing the needs that impact on social development.

This approach makes the role of universities in the transformation of society visible, through the various actions they carry out in their substantive functions, particularly extension and relevant and timely attention to social requirements (Olarte-Mejía and Ríos-Osorio, 2015; Pazmiño et al., 2022). Arias-Valle et al. (2021) state that university extension is associated with innovation and knowledge transfer that arises from the different disciplines and instances that make up higher education institutions (HEIs).

These seek to promote the development of the environment in which they are immersed, through innovation and social commitment, which constitutes the third mission of the university. In this context, and in the face of the growing demands of a society in constant change and evolution, a fourth mission arises that highlights the collaboration between the different stakeholders and the HEI, with the aim of promoting a transformation based on sustainable development (Gamboa et al., 2022). According to Vallaeys (2018), a university cannot be classified as socially responsible through the analysis of isolated practices, since the author considers USR as a transversal policy.

However, by promoting different activities aimed at sustainable social, economic and environmental development, their impact makes a difference, as they are based on the SDGs and promote the UN's 2030 Agenda, which extensively underpins USR. The challenge for the universities that propose good practices as a benchmark for calling themselves socially responsible is articulation. This implies the cohesion of different interest groups, that a model of social responsibility exists in the university, that it covers the good practices carried out and that they become sustainable actions. Likewise, they must take into account the contribution to the UN's 2030 Agenda, as a benchmark for development and well-being for the aspects that make up humanity.

Declarations

Conflict of interest

The authors declare that they have no conflicts of interest. They have no known competing financial interests or personal relationships that might have appeared to influence the article reported in this paper.

Authors' contribution

Rojo-Carlón, José María: Project leader, methodology and analysis of results, drafting of the article, expert translator.

Rivera-Iribarren, Maricel: Project collaborator, methodology and analysis of results, article writing, modelling expert.

Valencia-Romero, Alexia Zoe: Project fellow, state of the art study and grapher.

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Abbreviations

CEPAL	Economic Commission for Latin America and the Caribbean
IES	Higher Education Institutions
ODM	Millennium Development Goals
ODS	Sustainable Development Goals
ONU	United Nations
PDI	Institutional Development Plan
RSU	University Social Responsibility

References

Background

Arias-Valle, M., Berbegal-Mirabent, J., & Marimon, F. (2021). How much are universities engaged with their social responsibility? *Educational Policy Analysis Archives, 29*(54).

Laurencio, A., & Farfán, P. C. (2016). La innovación educativa en el ámbito de la responsabilidad social universitaria. *Revista Cubana de Educación Superior, 35*(2), 16-34.

Universidad Iberoamericana. (2020). La investigación educativa y su compromiso con la equidad, la justicia y la mejora de la política educativa. *Revista Latinoamericana de Estudios Educativos, 50*(2).

Vallaeys, F., Oliveira, M. L. S., Crissien, T., Solano, D., & Suarez, A. (2022). State of the art of university social responsibility: a standardized model and compared self-diagnosis in Latin America. *International Journal of Educational Management, 36*(3), 325-340.

Basics

Hernández, R., Fernández, C. & Baptista, M. P. Metodología de la Investigación (6° ed.). McGraw-Hill Education.

Schwalb, M. M., Prialé, M. A. & Vallaeys, F. (2019). Guía de Responsabilidad Social Universitaria (1era Ed). Perú: Universidad del Pacífico.

Valle, T., A, Manrique, V., L., & Revilla, F., D. (2022). La investigación descriptiva con enfoque cualitativo en educación. Pontificia Universidad Católica del Perú

Support

Comisión Económica para América Latina y el Caribe. (2018). La Agenda 2030 y los Objetivos de Desarrollo Sostenible: una oportunidad para América Latina y el Caribe. Organización de las Naciones Unidas.

Grupo de las Naciones Unidas para el Desarrollo Sostenible. (2024). Las 5Ps de los ODS: Personas, Planeta, Prosperidad, Paz y Pactos.

Organización de las Naciones Unidas. (2000). Declaración del Milenio.

Differences

Olarte-Mejía, D. & Ríos-Osorio, L. (2015). Enfoques y estrategias de responsabilidad social implementadas en Instituciones de Educación Superior: Una revisión sistemática de la literatura científica de los últimos 10 años. *Revista de Educación Superior, 44*(175), 19-40.

Pazmiño, L., L., Guncay, S., C., Salcedo, M., V., & Bejarano C., H. (2021). La responsabilidad social universitaria como estrategia de vinculación con el sector privado en la recuperación post pandemia en la ciudad de Machala, Ecuador. *Revista Dilemas Contemporáneos. Educación, Política y Valores, 9*(spe1).

Discussions

Gamboa, A., J., Salinas, H., L, Salcedo-Muñiz, V., & Guale, L. (2022). El Triple Bottom Line en las acciones de responsabilidad social universitaria: Caso Universidad Técnica de Machala. *Telos: Revista de Estudios Interdisciplinarios en Ciencias Sociales, 24*(2), 340-444.

Rubio-Morua, B., C., Zorrila-del Castillo, A., L., & Briseño-García, A. (2022). La responsabilidad social universitaria y sus dimensiones para las instituciones de educación superior. *Ciencias Administrativas Teoría y Praxis, 1*(18), 105-117.

Vallaeys, F. (2018). Las diez falacias de la Responsabilidad Social Universitaria. *Revista Digital de Investigación en Docencia Universitaria, 12*(1), 34-58.

Ecotourism proposal for the Las Ventanas property of the Mineral del Chico National Park in Hidalgo, Mexico

Propuesta ecoturística para el predio Las Ventanas del Parque Nacional de Mineral del Chico en Hidalgo, México

Omaña-Silvestre, José Miguel [a] & Quintero-Ramírez, Juan Manuel* [b]

[a] ROR Colegio de Postgraduados • ⓒ LNQ-6404-2024 • ⓘD 0000-0002-5356-549X • ⊛ 59890

[b] ROR Consejo Nacional de Humanidades, Ciencia y Tecnología • ⓒ AGN-5899-2022 • ⓘD 0000-0002-1040-2690 • ⊛ 292056

Abstract

Alternative ecotourism contributes to the care and preservation of a nation's natural and cultural heritage and constitutes a response to the growing and constant environmental degradation of many sites and their attractions. The objective of this proposal is to elaborate an ecotourism project as a means to take advantage of the available unused resources, according to the geographical and productive characteristics of the site, based on the principles of sustainability, as an economic alternative to the owners of the site for the generation of income and improvement of their quality of life. The proposal presents a methodology that can be reproduced for the design and implementation of an ecotourism plan and is an alternative for the diversification of activities in the rural sector. The economic-financial evaluation of projects determines the main indicators of Net Present Value, Internal Rate of Return, Benefit-Cost Ratio and Payback Period of the investment. The results indicate that the ecotourism model is economically and financially acceptable for the main indicators calculated at a discount rate of 15% over a 5-year investment recovery period.

Resumen

El ecoturismo alternativo contribuye al cuidado y preservación del patrimonio natural y cultural de una nación y constituye una respuesta a la degradación ambiental creciente y constante de muchos sitios, así como de sus atractivos. El objetivo de esta propuesta es elaborar un proyecto ecoturístico como un medio para el aprovechamiento de los recursos disponibles no utilizados, de acuerdo a las características geográficas y productivas del lugar, basado en los principios de sustentabilidad, como una alternativa económica a los dueños del lugar para la generación de ingresos y mejora de su calidad de vida. La propuesta expone una metodología que es posible reproducir para el diseño e implementación de un plan ecoturístico y es una alternativa para la diversificación de actividades del sector rural. La evaluación económico-financiera de proyectos, determina los principales indicadores de Valor Actual Neto, Tasa Interna de Retorno, Relación Beneficio-Costo y Periodo de Recuperación de la inversión. Los resultados indican que el modelo ecoturístico es económica y financieramente aceptable para los principales indicadores calculados a una tasa de descuento del 15% en un periodo de recuperación de la inversión de 5 años.
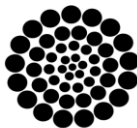
| Goals | Evaluate Economic Financial Mineral del Chico Natural Resources Sustainability | Method | Adquisition / Preprocessing / Model / Evaluation |

Findings: NPV=84,916, IRR>15%, B/C=1.018

Contributions: Environmental reactivation and conservation in economic and financial terms as a source of income for the society of a viable and sustainable Project

Images created by bsd studio from Noun Project

| Objetivos | Evaluar Económico Financiero Mineral del Chico Recursos Naturales Sustentabilidad | Método | Información / Procesamiento / Modelo / Evaluación |

Investigación: VAN=84,916, TIR>15%, R B/C=1.018

Resultados: La reactivación y conservación ambiental en lo económico y financiero como fuente de ingreso para la sociedad de un proyecto viable y sustentable

Imagenes

Ecotourism, Project Evaluation, Financial Indicators
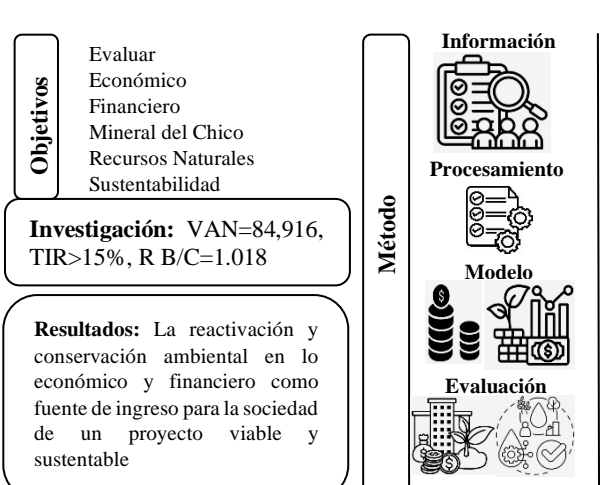
Ecoturismo, Evaluación de proyectos, Indicadores Financieros

Introduction

Ecotourism, to be understood, is that which contributes to the care and preservation of the cultural and natural heritage of a nation. It is an option to the growing and constant environmental degradation of these environments in most places, including its attractions; which offers a diversity of options different from traditional tourism, allowing tourists to have a greater interest in nature and to get to know and admire the natural landscape together with its flora and fauna, and the diverse cultural manifestations of the region. For Oxinalde (2019), 'ecotourism is a segment of nature-based tourism that emerges as an important option in the conservation of Ecological Heritage and this is the central theme of the project that will allow us to analyse the development of this activity in our country' (p.23).

The development of this project has its origin in alternative ecotourism, which is a response to the changes and transformations in the tourist profile, as new characteristics are generated in their motivations and lifestyles (Pérez de las Heras, 2019).

The general objective of the work is to evaluate a technically, economically and financially viable ecotourism alternative in the private property of ''Las Ventanas'' located within the National Park of Mineral del Chico in the state of Hidalgo as a means to take advantage of the available unused resources, according to the geographical and productive characteristics of the place, based on the principles of sustainability. This economic alternative will allow the owners of the place to generate income and improve their quality of life.

Geographical location of 'El Chico' National Park

The National Park 'El Chico', belongs to the Federal Entity of Hidalgo, Mexico, shares the jurisdiction of the municipalities of Mineral del Chico, in its largest proportion, followed by those of Pachuca and Mineral del Monte. The park of 'Las Ventanas' is a private property located within the limits of the National Park of Mineral del Chico, with an extension of 29 hectares, under private property regime, subdivided into 3 sections: the mountainous area, the valley area and the wooded area.

Natural scenic attractions

The park of 'Las Ventanas' is characterized by the mountainous relief, which is crossed by an important fluvial dynamic and covered by an exuberant forest of oyamel, which creates a wonderful natural mosaic and attractive for the visitors.

The characteristic climatological conditions are: humid temperate with a cool and long summer, where the average annual temperature is between 12°C and 30°C.

The hydrographic network has special relevance due to the low volume streams that arise in the elevated structures of the crags and that converge in the lower sector, supplying their watercourse during the wet season of the year to the 'El Cedral' Dam and to the 'El Jaramillo' Dam.

The main arboreal plant communities are coniferous forests with characteristic species such as: oyamel, cedar, oaks and pine, among others, which form an important part of the habitat of animal species such as: squirrels, field rabbits, badgers, as well as a great variety of birds and reptiles.

The 'Las Ventanas' Park has been given priority by the State of Hidalgo in order to contribute to its policy of conservation and protection of resources. Likewise, an agreement was signed with the directors of the patronage for the Protection, Management and Development of the National Park 'El Chico A.C.', with the aim of joining the efforts of both public and private institutions that seek the rescue and safeguarding of the natural wealth of the park, and as the property 'Las Ventanas' is located within the national park, it was favoured by the benefits agreed by the state, which allowed the economic support for the implementation of this project.

Ecotourism project for the Las Ventanas Park

According to the technical studies, a series of guidelines or ecotourism activities were determined, which are proposed jointly to fulfil the objective set out at the beginning, the activities contemplated to be developed are described below:

Ecological cabin. The property ''Las Ventanas'' has a space of 80 mts^2, usable for the construction of two ecological cabins, for its construction a private company was contacted. The model of cabin that manages includes: area for living room, kitchen and dining room, area for rest (bedroom), a complete bathroom (washbasin, w.c. and shower), area of tapanco (on area of bath) and a corridor of 1.50 x 5.50 mts.

Septic tank. The implementation of a septic tank as an additional ecological accessory to the cabins is added to this model; which includes the following: septic tank and exclusive Polyplas filter and anaerobic tank with natural filter, which will solve in an economical, practical and efficient way the problem of wastewater from suburban homes and country houses, where sewage systems are not available, avoiding harmful impacts on the environment.

Restaurant, toilets and parking. According to the diagnosis, a space of 28m^2 next to the road was selected for the construction of a place for the sale of food, including the construction of 2 bathrooms and the conditioning of a space for the parking of cars, for a good functioning.

Cookers and barbecues. The property ''Las Ventanas'' has traditional barbecues; however, it is intended to replace them with Patsari® cookers, which integrate technological innovations that improve the burning of firewood through a combustion chamber that separates and isolates the chemicals that produce toxicity. It is planned to build 6 cookers that will be distributed on the plain of the property.

Mist water collection. This is a proposal to capture water from the mist to be used for the park's own hygiene tasks, which is a sustainable alternative eco-technique.

Tyrolean traverse. The aim of this tourist activity is to provide tourists with an experience of adventure, contemplation and integration with the forest in order to understand the importance and balance with nature. This activity arises from the need to move and recently, it has been installed for nature tourism purposes due to the fact that it is a recreational activity.

Horses for rent. The park ''Las Ventanas'' has a relief suitable for horseback riding, both for children and adults, its rugged terrain makes this ride a recreational experience; for horse rental we have contemplated the acquisition of 2 horses by the owner and their maintenance will be from the income of the rental.

Methodology

The methodology to be used is based on the application of instruments and techniques applied to the evaluation of the investment project, from which the financial indicators are obtained that allow optimal decision making in the consolidation and viability of this project, which are mainly applied:

Net Present Value (*NPV*): It is the monetary value that results from subtracting the sum of the discounted flows to the initial investment. Adding the present discounted cash flows and subtracting the initial investment is equivalent to buying all the expected profits against all the disbursements necessary to produce those profits, in terms of their equivalent value at this moment or time zero. It is clear that for a project to be accepted, the returns must be greater than the outlays, resulting in an NPV greater than zero.

$$NPV = \sum_{t=1}^{n} \frac{BN_t}{(1+i)^t} - I_0 \qquad [1]$$

Where:

NPV: Net Present Value
BN$_t$:   Net flow benefit in period t.
i: Discount rate.
I$_0$: Initial investment

Internal Rate of Return (IRR): It is the discount rate at which the NPV equals zero. It is the rate that equals the sum of the discounted cash flows to the initial investment. It is so called the internal rate of return because it assumes that the money earned each year is reinvested in its entirety. In other words, it is the rate of return generated entirely within the company through reinvestment. The project acceptance criterion under this indicator is to accept projects whose IRR is greater than or equal to the discount rate used.

$$\sum_{t=1}^{n} \frac{BN_t}{(1+r)^t} - I_0 = 0 \qquad [2]$$

Where:

BN_t: Net flow benefit in period t.
i: The discount rate.
I_0:   Initial investment

Benefit/Cost Ratio (RB/C): It consists of assessing the costs and benefits of a project considering the evaluation horizon to determine whether or not it should be implemented. In order to accept a project, this indicator must be greater than or equal to one.

$$R\frac{B}{C} = \frac{\sum_{t=1}^{n} \frac{Y_t}{(1+i)^t}}{\sum_{t=1}^{n} \frac{E_t}{(1+i)^t}} \qquad [3]$$

Where:

R B/C: Benefit-Cost Ratio
Y_t :   Revenue in period t
E_t: Expenditure in period t (including investment I_0)
i: Discount rate.

Recovery period: This criterion measures the number of years required to recover the capital invested in the project. Break-even point: A useful technique for studying the relationships between fixed, variable and revenue costs. It is the level of production at which sales revenue equals costs.

$$PE = \frac{CF}{(PV - CVu)} \qquad [4]$$

Where:

PE: Break-even point
CF: Fixed cost
PV: Unit selling price
CVU: Variable unit cost.

Results

Unit prices and costs are governed by the Engineering Institute of Unit Pricing which in turn governs valuers. These prices are updated to September 2023.

For the development of the ecotourism project an initial investment of $1'225,097.00 is contemplated, of which 82% comes from the program of Support for the Protection, Management and Development of the National Park "El Chico A.C." of the government of the state of Hidalgo and the remaining 18% is to be paid by the owners of the property. Within the investment concepts, fixed assets represent 95% of the total investment, leaving 5% for the payment of deferred assets and working capital.

The fixed assets are destined for the construction of cabins, septic tank, restaurant, bathrooms, parking, Patsari® cookers and the fog water collection system; the amount of these assets represents an outlay of $870,345, while $101,852 was invested in equipment and the purchase of utensils for the restaurant, and $101,852 was invested in the purchase of horses and a zip line.).

Box 1

Table 1

Financial structure and sources of funding, ecotourism project

Concept	Total	Contributions	
		Partners	Programme
Fixed investment			
Civil works	870,345	67,395	802,950
Restaurant equipment and utensils	101,852	84,602	17,250
Recreational equipment	186,150	-	186,150
Subtotal Fixed Assets	1,158,347	151,997	1,006,350
Deferred investment	52,500	52,500	
Working capital	14,250	14,250	
TOTAL	1,225,097 100%	218,747 18%	1,006,350 82%

Source: Own elaboration with data from the ecotourism project

A 5-year planning horizon for the project was envisaged, based on a gradual growth of 80% in the first year, 90% in the second and 100% from the third to the fifth. During this time an average income of 1.09 million pesos was obtained, while the costs derived from the operation were $800,000, which generated profits of around $290,000.

However, when taxes are deducted, this profit does not reach $200,000 a year.

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If we consider that the project is constituted by 6 partners, each of them will receive around $20,000 per year; this indicates that the profits derived from the project, although present in terms of return on investment, are low, which could indicate an additional support scheme (Table 2).

Box 2

Table 2

Income Statement, ecotourism project

Concept/ period	Year 1	Year 2	Year 3	Year 4	Year 5
Capacity used	80%	90%	100%	100%	100%
Revenues	956,145	1,051,760	1,156,935	1,156,935	1,156,935
Variable Costs	558,313	614,144	675,558	675,558	675,558
Fixed Costs	148,926	163,818	163,809	163,809	163,809
Profit before tax	248,907	273,798	317,568	317,568	317,568
I.T. (30%)	74,672	82,139	95,270	95,270	95,270
E.P.S. (10%)	24,891	27,380	31,757	31,757	31,757
Net profit	**149,344**	**164,279**	**190,541**	**190,541**	**190,541**
Dividends (80%)	119,475	131,423	152,433	152,433	152,433
Retained earnings (20%)	29,869	32,856	38,108	38,108	38,108
No. of partners	6	6	6	6	6
Profit per partner	19,913	21,904	25,405	25,405	25,405

IT: Income Tax EPS: Employees' Statutory Profit Sharing

Source: Own elaboration with data from the ecotourism project

In determining the break-even point at which the project will operate, the calculation indicates that revenues of at least $390,000 per year are required for the enterprise to recover operating costs and start generating profits, which represents 34% to one hundred percent of the project's operating capacity (Table 3).

Box 3

Tabla 3

Balance point of the ecotourism project

Concept/ period	Año 1	Año 2	Año 3	Año 4	Año 5
Capacity used	80%	90%	100%	100%	100%
Revenue	956,145	1,051,760	1,156,935	1,156,935	1,156,935
Fixed Costs	148,926	163,818	163,809	163,809	163,809
Variable Costs	558,313	614,144	675,558	675,558	675,558
Breakeven point in pesos	357,925	393,718	393,696	393,696	393,696
Percentage break-even point	37%	37%	34%	34%	34%

Source: Own elaboration with data from the ecotourism project

With regard to the financial indicators, considering a discount rate of 15%, all the indicators comply with the project acceptance criteria, i.e. the NPV is positive at $84,916, which indicates the amount of resources additional to the 15% with which the project was evaluated. Likewise, the IRR is higher than the discount rate, which indicates that the maximum profit that the project can obtain is 23.41%, under the conditions that were evaluated. The RB/C is greater than the unit, 1.018, which indicates that for every peso invested, the peso is obtained plus 0.18 cents, considering a discount rate of 15%. Under these results, the project is financially acceptable (Table 4).

Box 4

Table 4

Financial Indicators, Ecotourism Project

Concepts	Value	Criteria
Net Present Value (NPV)	84,916	Accepted
Internal Rate of Return (IRR)	23.41%	Accepted
Benefit-Cost Ratio (R B/C)	1.018	Accepted

Source: Own elaboration with data from the ecotourism project

Regarding the payback period, this is reached after 5 years, which indicates that it takes 5 years for the initially invested resources to be recovered (Table 5).

Box 5

Table 5

Payback period for investment, Ecotourism Project

Concept / period	Year 1	Year 2	Year 3	Year 4	Year 5
Updated flow	-270,672	-36,991	-10,729	-10,729	726,990
Balance	-270,672	-307,664	-318,393	-329,122	397,868

Source: Own elaboration with data from the ecotourism project

According to the results, the project is financially viable, however, a sensitivity analysis shows that the indicators are highly sensitive to small changes in two of the main variables that can affect the results. The project is highly sensitive to changes in the level of revenues, as a decrease in revenues of 2.5% causes the project to become unprofitable; the same is true for changes in costs, as a general increase in costs of 3.4% causes the project to become financially unviable.

This indicates a level of risk that must be kept in mind when implementing the project (Table 6).

Box 6
Table 6

Comparative sensitivity analysis, ecotourism project

Indicators	Baseline situation	Cost increase 3.40%.	Decrease in income -2.50%.
NPV	84,916	-5,265	-5,687
R B/C	1.02	0.99892	0.9988
IRR	23.41%	14.51%	14.47%

Source: own elaboration with data from the ecotourism project

Conclusions

Ecotourism is a financially viable activity to reactivate the local economy and help regional development, also allowing a sustainable conservation of the environment and the participation of the communities involved. This proposal reflects the development of a project made especially under the characteristics of the property itself, as it clearly defines the point of view of the users as a fundamental part in the establishment of the activities to be implemented; which turned out to be a source of income for the owners, allowing them to define the long-term benefits, generating an engine of development under a concept of sustainability, with an integral vision of nature tourism, which involves ecotourism and adventure tourism. It should be noted that, although the financial indicators were satisfactory under the conditions under which they were evaluated, when performing a sensitivity analysis, the project is very sensitive to changes in income levels and cost increases, which is an indication of risks that must be taken into account for the implementation of the project. A relevant point in this type of project, given the low profitability of the activities, is the vital importance of financial support from the government for the conservation and development of natural resources.

Declarations

Conflict of interest

The authors declare no interest conflict. They have no known competing financial interests or personal relationships that could have appeared to influence the article reported in this article.

Authors' Contribution

Omaña-Silvestre, José Miguel: Contributed to the project idea, research method and technique. He supported the design of the field instrument. He carried out the data analysis and systematisation of results, as well as writing the article.

Quintero-Ramírez, Juan Manuel: Contributed to the research design, the type of research, the approach, the method and the writing of the article. Worked on the application of the field instrument, data collection and systematisation of the results.

Availability of data and materials

The information and data for the project were obtained from questionnaires conducted with people from the area, who provided valuable information to obtain these economic and financial indicators. The images of the Graphical Summary were obtained from the web page https://thenounproject.com/

Funding

Abbreviations

E.P.S	Employees` Statutory Profit Sharing
NPV	Net Present Value
I.T	Income tax
IRR	Internal Rate of Return
R B/C	Relation Benefit Cost
BN_t	Net flow profit for the period t
I	Discount rate
I_0	Initial investment
Y_t	Income for the period t
E_t	Expenses in the period t
PE	Break-even point
CF	Fixed cost
PV	Unit selling price
CVU	Unit cost of sale
$	Prices expressed in mexican pesos

References

Antecedents

García, J. U. (2014). Temas selectos de turismo y economía en México. México: UABCS.

Reguero Oxinalde, M. (1994). Ecoturismo: nuevas formas de turismo en el espacio rural. Barcelona: Bosch.

Pérez de las Heras, M. (2004). Manual del turismo sostenible: cómo conseguir un turismo social, económico y ambientalmente responsable. España: Mundi-Prensa. ISBN: 9788484761792

SINAP. (2019). Sistema Nacional de Áreas Protegidas (SINAP).

Unión, C. d. (agosto de 2012). LEY GENERAL DEL EQUILIBRIO ECOLÓGICO Y LA PROTECCIÓN AL AMBIENTE. Obtenido de Nueva Ley publicada en el Diario Oficial de la Federación el 28 de enero de 1988.

Basics

Baca-Urbina, G. (2013). Evaluación de proyectos. Séptima edición. Ed. Mc Graw Hill Educación. México.

Sapag-Chain, C., Sapag-Chain R., Sapag-Puelma, J.M. (2014). Preparación y Evaluación de Proyectos. Sexta edición. Ed. Mc Graw Hill Education. México.

Acosta, J. Á. (2018). Turismo, sustentabilidad y desarrollo local: tendencias del desarrollo turístico en una región del noroeste de México. México: Pearson.

OMT. (Junio de 2019). Organizacion Mundial de Turismo.

Rebollo, J. F., & Sánchez, I. R. (2012). Renovación y reestructuración de destinos turísticos en áreas costeras: Marco de análisis, procesos, instrumentos y realidades. Valencia: Universitat de València.

Reyes, M., Aranda, G., & Gallejo, E. (2017). La investigación social del turismo: perspectivas y aplicaciones. México: Editorial Paraninfo.

Rodríguez, A. R. (2020). Ecología Para Ecoturismo. Madrid: Independently Published.

Turismo, O. M. (2019). Introducción al turismo. México: Organización Mundial del Turismo.

Supports

Casal, F. M. (2017). Turismo alternativo: servicios turísticos diferenciados. México: Ed. Trillas.

Económicas, D. d. (2013). Economía mexicana, Volumen1. México: Departamento de Economía del Centro de Investigación y Docencia Económicas.

Gómez, A. S. (2012). Escenarios de violencia e inseguridad en los destinos turísticos: Mazatlán como estudio de caso. México: Silvestre Flores Gamboa.

Hidalgo, G. d. (marzo de 2019). Mineral del chico.

Llanes, C., & Nel·lo, M. (2016). Ecoturismo. México: Editorial UOC.

Mexicana, A. d. (2018). Guia y planos para el turismo en la ciudad de México, Distrito Federal y República Mexicana: historia, arte, geografia, monumentos, edificios de la ciudad de Mexico y sus alrededores, Leyendas, historias y tradiciones del México antiguo y colonial. México: The Asociación.

México, G. d. (junio de 2019). Secretaria de Turismo.

The influence of a digital promotion using Facebook on the expansion of reach in a rural market

La influencia de una promoción digital a través de Facebook en la expansión del alcance en un mercado rural

Rico-Ramírez, Diana Laura*[a], Zarco-Cárdenas, César Alejandro[b] and Jiménez-García, Martha[c]

[a] ROR Instituto Politécnico Nacional, UPIICSA • LMO-9588-2024 • 0009-0001-6859-8657 • 2047537
[b] ROR Instituto Politécnico Nacional, UPIICSA • LIF-8460-2024 • 0009-0008-4015-8562 • 800380
[c] ROR Instituto Politécnico Nacional UPIICSA • AGW-9031-2022 • 0000-0002-8556-2955 • 292983

Abstract

The use of social networks in rural communities offers benefits of social connection and promotion of products from rural areas, so the objective was to analyse the reach and impressions generated by an advertising campaign on Facebook, by age, gender and cost of the digital promotion of a jaripeo event in a community tianguis in the State of Oaxaca. The method was carried out with an advertising campaign on Facebook, and a sample of 6491 people, the data were analysed descriptively and interpreted through graphs. In the results it was found that the highest reach was in people aged 25 to 34 years and that men had a higher reach in the event. It is concluded that Facebook advertising campaigns are an effective advertising tool because of the reach presented, which improves the economic growth of rural environments.

Resumen

El uso de redes sociales en comunidades rurales ofrece beneficios de conexión social y promoción de productos de zonas rurales, por lo que el objetivo fue analizar el alcance e impresiones generadas por una campaña de publicidad en Facebook, por edad, género y costo de la promoción digital de un evento de jaripeo en un tianguis comunitario del Estado de Oaxaca. El método se realizó con una campaña de publicidad en Facebook, y una muestra de 6491 personas, se analizaron los datos de forma descriptiva y se interpretaron a través de graficas. En los resultados se encontró que el mayor alcance fue en personas de 25 a 34 años y que los hombres tuvieron mayor alcance en el evento. Se concluye que las campañas de publicidad de Facebook son una herramienta eficaz de publicidad por el alcance presentado, lo que mejora en el crecimiento económico de los entornos rurales.

The Influence of a Digital Promotion through Facebook on the Expansion of Reach in a Rural Market.

Objectives	Methodology	Contribution
Analysis of reach and impressions generated by a Facebook campaign — By age, By gender, By cost	Descriptive — Segmentation by demographics	Improving your visibility and increasing your advertising efficiency — To promote economic growth in rural areas

Influx, Rural, Communities

La Influencia de una promoción digital a través de Facebook en la Expansión del Alcance en un Mercado Rural

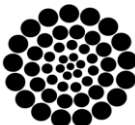| Objetivos	Metodología	Contribución
Analisis del alcance e impresiones generadas por una campaña en Facebook — Por edad, Por género, Por costo	Descriptiva — Segmentación por demografía	Mejorar su visibilidad y aumentar su eficiencia publicitaria — Para fomentar el crecimiento económico en entornos rurales

Afluencia, Rural, Comunidades

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Introduction

In the United States, five prominent platforms have been considered: Facebook, Instagram, YouTube, Twitter and TikTok (Scharlach et al., 2023).

Because Facebook and TikTok in 2022 and 2023 were the most popular social networks in several countries, as they were used for various purposes and by all age groups, social networks are platforms that can be used to create business and spread products and services (Metastasio et al., 2024). This is why the study of Facebook creates interest in any type of business.

The analysis of data coming from social networks supports in the advancement of various researches, as the content of users is analysed, which is of importance for any area (Thakur, 2023).

Theoretical framework

In Saudi Arabia, research was conducted with 433 participants in the restaurant sector on the interaction and perceived value of followers, through a quantitative method with econometric models whose results indicated that relevant, current and attractive content is perceived by Facebook users which indicates that this can increase sales in this turn of food, as the degree of interactivity and entertainment encourages customers to increase the intention to purchase, in addition to the dissemination of products through the followers themselves (Bushara et al., 2023).

In a mixed research with 34 graduate students at a public university in the United States, different patterns and correlations of data on the specific use of social networks were found and it was found that the age of 18 to 30 years influences the participation of consumption based on social networks, similarly, the objective of disseminating products or services in social networks is an experience of interest to the consumer, in addition to giving a value of identity and socialisation as motivation to individuals which facilitates marketing (Shah et al., 2023).

In Malaysia, a non-probability convenience sampling research on Facebook marketing and the use of influencers was carried out with users who already had experience of purchasing products through mobile devices, which showed that there is a significant difference in relation to gender and the relationship of social media use when handled by an influencer, which has been shown that men have a greater purchase effect on a product when it is advertised and recommended by an influencer (Ooi et al., 2023).

In Machala, Ecuador, a study was conducted with 50 participants to analyse the online purchasing behaviour of consumers in the K-pop industry. A quantitative methodology based on online surveys was used to examine how influencer marketing and perceived value influence purchasing decisions.

The findings revealed that influencer recommendations are key to consumer decision-making, with a significant relationship between perceived value and purchase intention. However, brand loyalty was identified as not having a direct impact on purchase intention, highlighting the need for more effective marketing strategies to address competitive market dynamics (Moreno-Quizhpe et al., 2024).

In Nigeria, a research study was carried out with 170 respondents from entrepreneurship activities in handicrafts with the inclusion of social media and their experience of social media, which was both quantitative and qualitative, resulting in 74% of the respondents acknowledging the importance of social media in business activities. However, several respondents showed a lack of interest in commercial use, as they used social networks for entertainment and personal use, due to the difficult maintenance costs of the platforms, as well as online fraud and connectivity problems. Therefore, support environments for entrepreneurs should be sought (Omotosho, 2023).

In Iran, research was conducted using a descriptive-correlational approach to analyse the impact of entrepreneurial thinking of 407 SME managers. To determine the sample size, Cochran's formula was used, resulting in the selection of 197 SME managers using a simple random sampling method.

The results revealed that entrepreneurial thinking is a critical element in managerial decision-making and has a significant influence on the sustainability of SMEs in Iran (Tajpour et al., 2023).

Social capital under a systemic approach in social communication is used and studied by (Kaligis et al., 2024) in a study applied in the community of Komunitas Teras Ciapus, Tamansari district, Indonesia, where mircro-entrepreneurs rely on these ecosystems under a digital approach to improve their communication skills and use of social networks in order to penetrate further into e-commerce markets.

The author concludes that the strategy of social capital promotes trust and collaboration among members, which is fundamental to promote a digital culture among colleagues or partners of small locals in rural communities, however, it identifies the need to strengthen social capital in these regions to improve the skills in handling these tools and promote digital transformation.

The study, conducted in Nkomazi, Mpumalanga (South Africa), investigated the adoption of social networking as an advisory tool among smallholder farmers using a quantitative approach applied to 217 randomly selected participants.

Analyses, based on t-tests and ANOVA, showed that factors such as gender, age, education level and cooperative membership significantly influence the adoption of these platforms according to the diffusion of innovations theory.

Farmers value the ability of social networks to improve their farming practices and facilitate access to information, although they faced challenges such as lack of technical knowledge and language barriers.

On the other hand, they recognised the advantages of social media over traditional media, which highlights the importance of receiving guidance on how to integrate social media into their activities (Zondo & Ndoro, 2023).

In an educational environment, the use of social media is also of interest because in order for marketing students to have a similar training to that expected by the industry, it is necessary to incorporate good practices through successful strategies for the implementation of Problem-Based Learning that include the use of social media, serious games, e-learning and feedback mechanisms to promote active learning and student participation (Travassos & Carmo, 2024).

In the city of Abancay, Apurímac, Peru, research was conducted in dental centres, using a non-experimental, cross-sectional and correlational design, with the objective of analysing the relationship between e-commerce solutions and the level of sales in these establishments. Classified as basic research, this study sought to deepen existing knowledge on how e-commerce influences the increase in sales in the dental sector, providing evidence on the importance of these digital tools to improve business results (Barrientos Molina, 2023).

The author Rockenbauch & Sakdapolrak, (2017) conducted a desk review of the impact of the use of social media in rural communities in Africa and its importance in communication between local areas engaged in natural resource management, agricultural activities and the management of local support in these areas.

The author collected relevant information between 2000 and 2015 focusing on the operationalisation of social networks, finding that they are used as a means of resilience in the face of the difficulties that these regions are going through, and emphasises the importance that should be given to communication technologies under an approach of interconnection between rural communities, which beyond resilience, serve to facilitate the flow of information and communication, to generate areas of opportunity and knowledge as a boost to these same communities.

The use of social networks in rural communities can have certain implications for the language of the people who use them. A study carried out in several rural communities in Brazil indicates that several technological factors can have an impact on the adoption of linguistic variants, affecting the identity of the regions.

The author indicates that the density of use of these technologies is beneficial for commercial exchange, however they have an impact on the adoption and propagation of traditional uses and customs of the native language of these communities and that factors such as gender and age reveal the importance of the relationship between these two actors, affecting their cohesion (Sharma & Dodsworth, 2020).

The use of social networks in rural communities has both positive and negative effects. A recent desk study by Ghai et al., (2022), targeted adolescents in rural communities in the Global South including regions in the Sub-Sahara, Middle East, North Africa, Latin America, China and South and Southeast Asia and found patterns and gaps in social network use, highlighting the importance of cultural and contextual factors in their use.

The findings indicate that the benefits are oriented towards social connection, social activism, work productivity and access to resources, on the other hand, negative effects are identified, such as: social comparisons, cyberbullying and family disconnection. The author emphasises the need to address and balance the advantages and disadvantages of social networking among adolescents in rural communities and evaluate them in a cultural and social context.

The author Aruleba & Jere, (2022) conducted a study in rural communities in the South African region to identify the challenges that social networks pose in terms of the digital divide in these regions, under a systematic review approach following a PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol, found that lack of infrastructure and technological skills are a determinant of access to basic, essential services and development opportunities for people in rural regions, and that inequality in access to social networks limits trade and diversification opportunities for people. The author concludes that rural communities face multiple challenges including: lack of infrastructure, shortage of technological skills, socio-economic problems or limiting commercial and social development in these areas.

Materials and methods

The research was descriptive in nature in order to analyse the reach of digital promotions through Facebook and to increase the number of visiting users in a rural community tianguis in Oaxaca.

Sample

The sample was focused on a paid promotion through Facebook on 24 August 2024 in the cultural event with the campaign 'We invite you to the Jaripeo in the Tianguis Chocholteco! This event is organised by the campesino communities of Tepelmeme Villa de Morelos, Concepción Buenavista, and San Miguel Tequixtepec. Starting at 12:00 noon on Sunday 25 August 2024, we are waiting for you! #tepelmeme #oaxacamexico #oaxacatravel #SembrandoVida #jaripeo #comidaoaxaqueña', and has a sample size of 6491 people who were Facebook users.

Data analysis

The data were collected through Facebook statistics, a data cleaning and preparation of a text file was performed and with them the graphs describing the study variables presented below were made.

Study variables:

1. **Reach:** This indicator allows us to evaluate the number of people who had some kind of contact with the promoted event. It is a key metric to evaluate the visibility of the campaign on Facebook.

2. **Impressions**: This metric allows us to know the total number of times the content was shown on the screen of a user, regardless of whether it was seen or not.

3. **Age:** It is the age range of the users participating in the study which was considered as follows 1) 18-24 years old, 2) 25-34 years old, 3) 35-44 years old, 4) 45-54 years old, 5) 55-64 years old, 6) 65+ years old.

4. **Gender:** It is important to segment people's behaviour according to their gender identification.

5.   **Cost:** This refers to the total expenditure made on the Facebook advertising campaign to promote the event. It is crucial to analyse the cost-benefit ratio and determine the efficiency of the campaign.

Results

This section presents the results of the Facebook advertising campaign, with the purpose of analysing the impact on the reach of participants and the number of visitors to the cultural event at the Tianguis Chocholteco.

Figure 1 shows the number of people who had some outreach or participation during the event.

Box 1
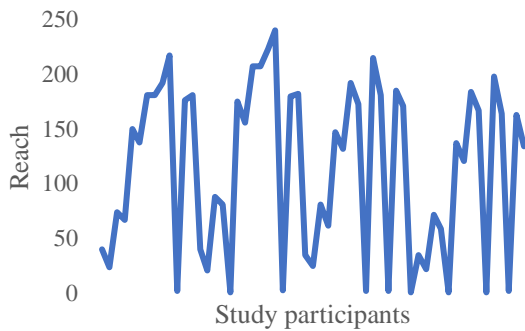
Figure 1

Reach

Source: Own elaboration

Figure 2 shows the extent and impression of the event, note that there is a correlation between the two variables, denoting a direct proportionality.

Box 2
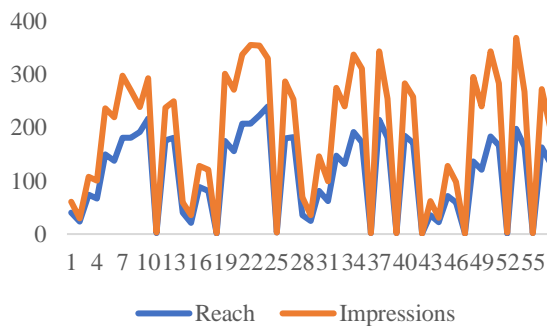
Figure 2

Outreach and printing

Source: Own elaboration

Figure 3 shows the scope and age of the people who took part in the event.

Box 3
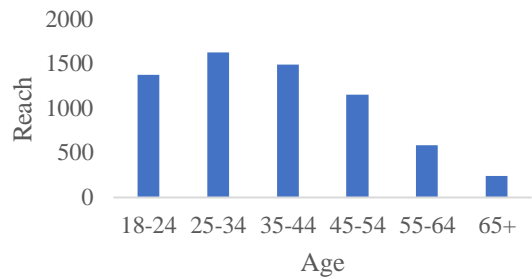
Figure 3

Reach and age

Source: Own elaboration

Figure 4 shows a relationship between outreach and gender presented during the event.

Box 4
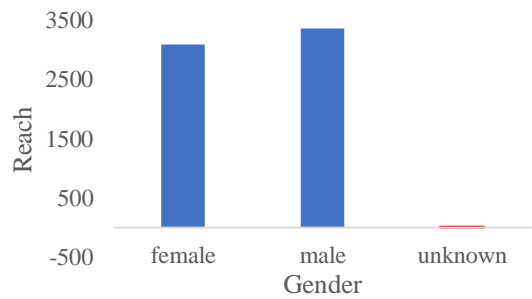
Figure 4

Reach and gender

Source: Own elaboration

Figure 5 shows a Gender and Playback relationship for the video as a whole.

Box 5
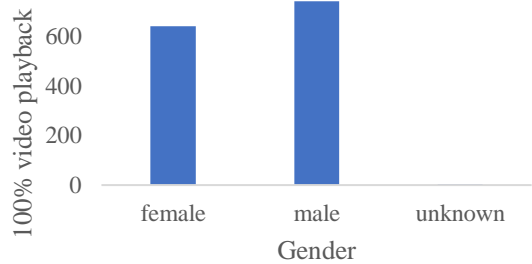
Figure 5

Gender and playback of the video in its entirety

Source: Own elaboration

Figure 6 shows the amount spent in MXN during the event.

Rico-Ramírez, Diana Laura, Zarco-Cárdenas, César Alejandro and Jiménez-García, Martha. [2024]. The influence of a digital promotion using Facebook on the expansion of reach in a rural market. ECORFAN Journal Republic of Peru. 10[18]1-7: e51018107.
https://doi.org/10.35429/EJRP.2024.10.18.5.7

Box 6
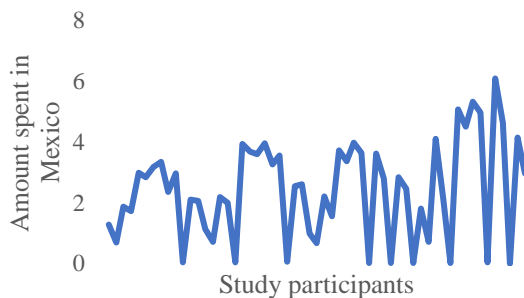
Figure 6

Amount spent (MXN)

Source: Own elaboration

Conclusions

Through this study, the positive impact of the use of the Facebook social network as a digital promotion tool in the Chocholteco community fair in the State of Oaxaca was verified. The results of Figure 1 suggest that there is effectiveness in its use because there was a significant increase in attendees at the Jaripeo event, as well as a large presence in virtual mode both in comments via Facebook Messenger, as well as in live broadcasts and publications that were given throughout the event. Figure 2 shows a positive correlation between reach and impression. Figures 3, 4 and 5 show a significant impact between the variables of reach, gender, age and number of video reproductions on the Facebook platform, and finally in Figure 6, the investment required to achieve the aforementioned results is indicated.

It is important to mention that the ease of disseminating information and encouraging social interaction in these communities where access is often difficult due to their geographical location. It also highlights the importance of direct interaction through the Facebook platform of Oaxacan migrants, who despite the distance, continue to have direct communication with their families, cultural roots, customs and traditions.

Finally, the literature consulted shows that there are various benefits to the use of social networks in rural communities, but there are also major challenges that arise, such as the digital divide and cyberbullying. This is also indicative of the importance of the digital literacy and education that these communities require in ICTs, and thus, using these tools for social and economic growth.

Declarations

Conflict of interest

The authors declare that they have no conflicts of interest. They have no known competing financial interests or personal relationships that might have appeared to influence the article reported in this paper.

Author contribution

Rico-Ramírez, Diana Laura: Contributed to internet data search, writing and translation of scientific literature and data cleaning.

Zarco-Cárdenas, César Alejandro: Contributed to the search and adjustment of the scientific literature, as well as testing of the association model.

Jiménez-García, Martha: Contributed to the introduction, search of scientific literature, data management and validation, revision and editing of the final paper, elaboration of results, interpretation of results and conclusions.

Availability of data and materials

The data obtained in this descriptive research, which aims to analyse the impact of digital promotion through Facebook to increase the reach and impression of visitors in a rural community market in Oaxaca, are available upon request. Access to the data will be granted in compliance with ethical standards, guaranteeing the confidentiality and privacy of the participants involved.

Abbreviations

TIC   Information and Communication Technologies.

References

Background

Metastasio, R., Bocci, E., Passafaro, P., Carnovale, F., & Zenone, V. (2024). The Social Representation of Sustainable Mobility: An Exploratory Investigation on Social Media Networks. *Sustainability (Switzerland)*, *16*(7).

Thakur, N. (2023). Social Media Mining and Analysis: A Brief Review of Recent Challenges. Information (Switzerland), 14(9), 5–7.

Scharlach, R., Hallinan, B., & Shifman, L. (2023). Governing principles: Articulating values in social media platform policies. *New Media and Society*.

Basics

Bushara, M. A., Abdou, A. H., Hassan, T. H., Sobaih, A. E. E., Albohnayh, A. S. M., Alshammari, W. G., Aldoreeb, M., Elsaed, A. A., & Elsaied, M. A. (2023). Power of Social Media Marketing: How Perceived Value Mediates the Impact on Restaurant Followers' Purchase Intention, Willingness to Pay a Premium Price, and E-WoM? Sustainability (Switzerland), 15(6), 1–22.

Moreno-Quizhpe, C., Ordóñez-del Rosario, A. A., & Ramón-Herrera, S. (2024). Influencia del K-pop en el comportamiento e intención de compra del consumidor en línea. 593 Digital Publisher CEIT, 9(3), 397–409.

Omotosho, B. J. (2023). Small scale craft workers and the use of social media platforms for business performance in southwest Nigeria. *Journal of Small Business and Entrepreneurship*, *35*(2), 181–196.

Ooi, K. B., Lee, V. H., Hew, J. J., Leong, L. Y., Tan, G. W. H., & Lim, A. F. (2023). Social media influencers: An effective marketing approach? *Journal of Business Research*, *160*(September 2021), 113773.

Shah, D., Webster, E., & Kour, G. (2023). Consuming for content? Understanding social media-centric consumption. *Journal of Business Research*, *155*(PB), 113408.

Tajpour, M., Hosseini, E., Ratten, V., Bahman-Zangi, B., & Soleymanian, S. M. (2023). The Role of Entrepreneurial Thinking Mediated by Social Media on the Sustainability of Small and Medium-Sized Enterprises in Iran. *Sustainability (Switzerland)*, *15*(5).

Zondo, W. N. S., & Ndoro, J. T. (2023). Attributes of Diffusion of Innovation's Influence on Smallholder Farmers' Social Media Adoption in Mpumalanga Province, South Africa. Sustainability (Switzerland), 15(5).

Support

Aruleba, K., & Jere, N. (2022). Exploring digital transforming challenges in rural areas of South Africa through a systematic review of empirical studies. *Scientific African*, *16*, e01190.

Barrientos Molina, K. N. (2023). Análisis del E-Commerce como factor relacionado con las ventas en centros odontológicos de Abancay, Apurímac. Facultad De Ciencias De La Salud Escuela Profesional De Ciencias Farmacéuticas.

Ghai, S., Magis-Weinberg, L., Stoilova, M., Livingstone, S., & Orben, A. (2022). Social media and adolescent well-being in the Global South. *Current Opinion in Psychology*, *46*, 101318.

Rockenbauch, T., & Sakdapolrak, P. (2017). Social networks and the resilience of rural communities in the Global South: A critical review and conceptual reflections. *Ecology and Society*, *22*(1).

Sharma, D., & Dodsworth, R. (2020). Language Variation and Social Networks. *Annual Review of Linguistics*, *6*, 341–361.

Diferences

Kaligis, R. A. W., Pratiwi, A., & Darmaputra, R. (2024). Utilization of Social Capital in Organizational Communication of Rural Micro-Entrepreneurs to Enter the Digital Ecosystem. *Aiccon*, *2022*, 588–599.

Travassos, R. A., & Carmo, D. J. (2024). education sciences Implementing Problem-Based Learning in Marketing Education : A Systematic Review and Analysis. *Education Sciences*.

Article

Web platform for registering tourist spots in San Martín Texmelucan

Plataforma web para el registro de lugares turísticos de San Martín Texmelucan

Morales-Zamora, Vianney *[a], Paredes-Xochihua, María Petra [b] and Sánchez-Juárez, Iván Rafael [c]

[a] **ROR** Tecnológico Nacional de México, Campus San Martín Texmelucan • LTE-6737-2024 • 0000-0002-1181-825X • 308547

[b] **ROR** Tecnológico Nacional de México, Campus San Martín Texmelucan • KVA-5814-2024 • 0000-0003-1753-2313 • 298117

[c] **ROR** Tecnológico Nacional de México, Campus San Martín Texmelucan • ABW-3403-2022• 0000-0001-8296-5532 • 493160

Abstract

The tourism industry is one of the main sources of income in many regions around the world. In this context, San Martín Texmelucan, a city located in the state of Puebla, Mexico, is emerging as a tourist destination, offering a wide variety of places and attractions to visit. However, many of these tourist spots are unknown to visitors, which limits their ability to attract tourists and generate income for the region. Therefore, the creation of a web platform for registering the tourist spots of San Martín Texmelucan is proposed. The main objective of this platform would be to provide detailed and accurate information about the tourist destinations, including images that allow tourists to explore the places in depth and enjoy an interactive and immersive experience.

Places, Platform, Tourist, Web

Resumen

La industria del turismo es una de las principales fuentes de ingresos en muchas regiones del mundo. En este contexto, San Martín Texmelucan, una ciudad ubicada en el estado de Puebla, México, se presenta como un destino turístico emergente, ofreciendo una amplia variedad de lugares y atracciones para visitar. Sin embargo, muchos de estos lugares turísticos son desconocidos para los visitantes, lo que limita su capacidad para atraer turistas y generar ingresos para la región. Por ello, se propone la creación de una plataforma web para el registro de los lugares turísticos de San Martín Texmelucan. El objetivo principal de esta plataforma sería proporcionar información detallada y precisa sobre los destinos turísticos, incluyendo imágenes que permitan a los turistas conocer a fondo los lugares y disfrutar de una experiencia interactiva e inmersita.
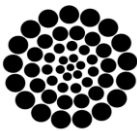
Lugares, Plataforma, Turísticos, Web

Citation: Morales-Zamora, Vianney, Paredes-Xochihua, María Petra and Sánchez-Juárez, Iván Rafael. [2024]. Web platform for registering tourist spots in San Martín Texmelucan. ECORFAN Journal Republic of Peru. 10[18]1-6: e61018106.

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Introduction

The tourism industry is one of the main sources of income in many regions of the world. In this regard, San Martin Texmelucan, a city located in the state of Puebla, Mexico, is an emerging tourist destination that offers a wide variety of tourist sites and attractions to visit.

However, many of these tourist sites are unknown to visitors, which limits their ability to attract tourists and generate income for the region. For this reason, it is proposed to introduce a web platform that allows the registration of tourist sites in San Martin Texmelucan using augmented reality technology.

The main objective of this web platform would be to provide detailed and accurate information about tourist sites, including images and videos in augmented reality, which would allow tourists to get to know the places in depth and have an interactive and interactive experience.

This initiative seeks to promote tourism in San Martín Texmelucan and provide a useful and attractive tool for tourists, as well as for entrepreneurs and companies related to the tourism sector in the region.

In order to develop this project, a review of the following projects was carried out: Azuma (1997) conducted one of the first comprehensive reviews on augmented reality, defining it as a technology that integrates virtual elements into the physical world in real time. This pioneering study laid the theoretical and methodological foundations for further research in the area, highlighting its potential applications in various fields, such as tourism and education.

Buhalis and Law (2008) explored the progress of information technology in tourism over 20 years, with an emphasis on the impact of the Internet on eTourism research and management. This work highlights how digital tools have transformed the way travellers plan and experience their trips. Al-Samarraie and Wills (2019) investigated the adoption of augmented reality technologies in tourism, analysing their benefits, challenges and future opportunities.

According to the authors, these technologies enhance the tourist experience by providing interactive and enriched information in real time, which has driven their integration in global tourism destinations. Li et al. (2021) conducted a review on tourism platforms, highlighting their evolution and future trends.

This study identifies how these platforms have enhanced the interaction between tourists and service providers, promoting personalised, data-driven experiences. Zhang et al. (2019) reviewed research related to user experience in tourism, highlighting the importance of understanding travellers' needs and preferences to design more effective services. The authors argue that a user-centred approach can increase satisfaction and loyalty in the tourism sector.

The National Institute of Statistics and Geography (INEGI, 2020) provided essential data on Mexico's national accounts, which include key tourism-related statistics. This source is fundamental to understand the economic impact of the tourism sector in the country and its contribution to GDP.

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Methodology

1.   Analysis of the current situation

Before starting the development of the web platform, it is necessary to carry out an analysis of the current situation of tourism in San Martin Texmelucan, identifying the main tourist attractions of the region, the strengths and weaknesses of the current tourist offer, and the opportunities and threats of the environment.

2.   Research on available technologies

It is important to investigate the technologies available for the development of the web platform, especially those related to augmented reality, geolocation and user interface.

3.   Definition of requirements.

The functional and non-functional requirements of the web platform should be defined, including the functionality of the augmented reality application, the database of tourist sites, the web interface, security and privacy measures, and other relevant aspects.

4.   Architecture design.

The architecture of the web platform must be designed, defining the components and modules necessary for the operation of the augmented reality application and the web interface, and establishing the interactions between them.

5.   Development of prototypes.

Prototypes of the augmented reality application and web interface can be developed to evaluate their functionality and usability, and to make adjustments and improvements if necessary.

6.   Implementation and testing.

Once the requirements have been defined, the architecture designed and the prototypes developed, the web platform can be implemented and tested to ensure that it meets the defined requirements and functions correctly.

7.   Evaluation of results.

Finally, an evaluation of the results obtained should be carried out, including the usability of the web platform, user satisfaction, impact on local tourism, and other relevant aspects. Based on this evaluation, adjustments and improvements can be made to the web platform to optimise its functioning and improve its results.
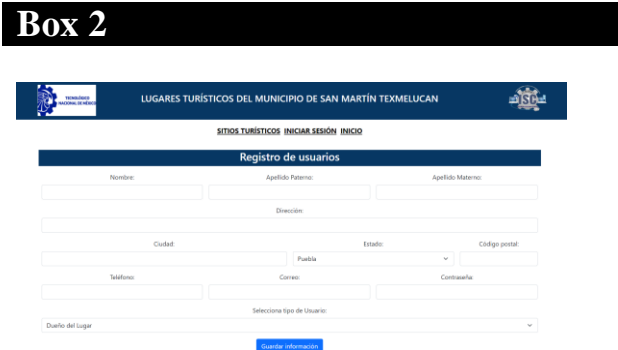
Results

Box 1

Figure 1

Shows the login for users, where they must enter their email address and password in order to log in

Source: Own elaboration

In the event that access to the system is not available, users may register, but they will be able to access the system until the administrator user validates them and gives them access.

Box 2

Figure 2

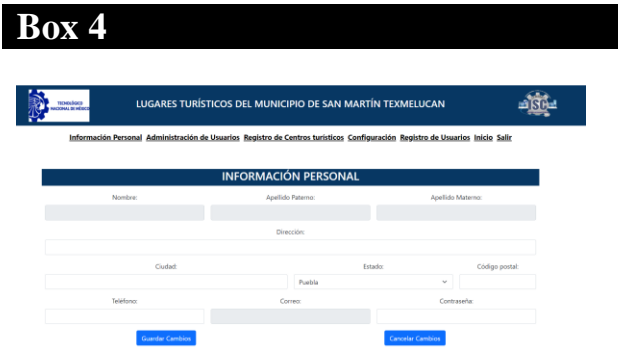User registration

Source: Own elaboration

When you start as an administrator user, you will be able to access the following options shown in figure 3, and depending on the type of user, the menu options displayed will be as follows.

Box 3

Figure 3

Menu of options

Source: Own elaboration

The personal information option will allow you to load the information of the user who has been authenticated, so that you can later modify your information, only those data that could be subject to change.

Box 4

Figure 4

User's personal information

Source: Own elaboration

Morales-Zamora, Vianney, Paredes-Xochihua, María Petra and Sánchez-Juárez, Iván Rafael. [2024]. Web platform for registering tourist spots in San Martín Texmelucan. ECORFAN Journal Republic of Peru. 10[18]1-6: e61018106.
https://doi.org/10.35429/EJRP.2024.10.18.6.6

With the user administration option, you will see all registered users and a table where you can give access to users, and/or delete them.

Box 5

Figure 5

User administration

Source: Own elaboration

In the menu for the registration of tourist sites, you can register the information of each one of them, adding them to a category. In addition, you will be able to view all those previously registered.
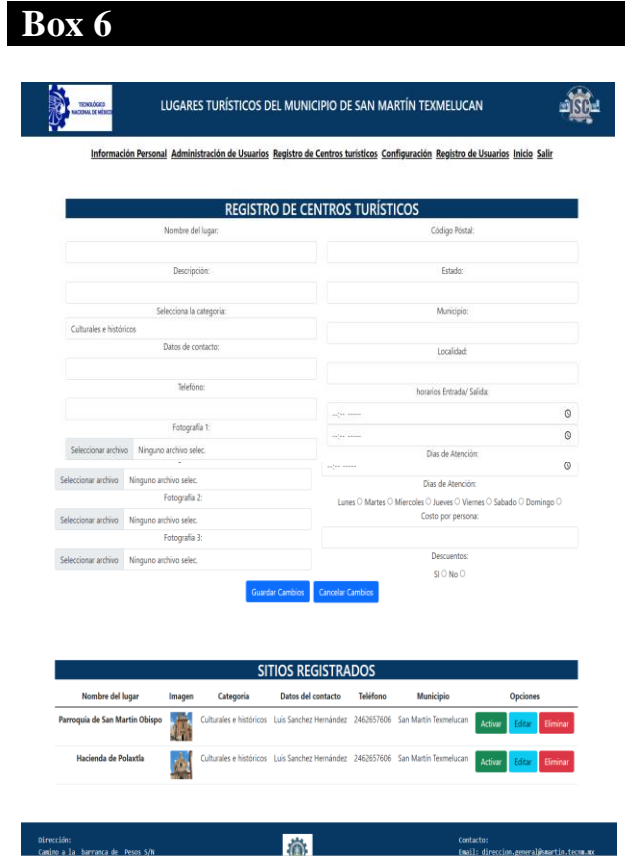
Box 6

Figure 6

Register of tourist sites

Source: Own elaboration

In the configuration part, you can change the colours of the interface, as well as select two logos, to make it adaptable to different municipalities in the region.

Box 7

Figure 7

Configuration

Source: Own elaboration

And the user registry, where the administrator can register users, and assign the user type.

Box 8

Figure 8

User Registration

Source: Own elaboration

Figure 9 shows the report interface, where you can view the report of users (figure 10), sites and categories (figure 11).
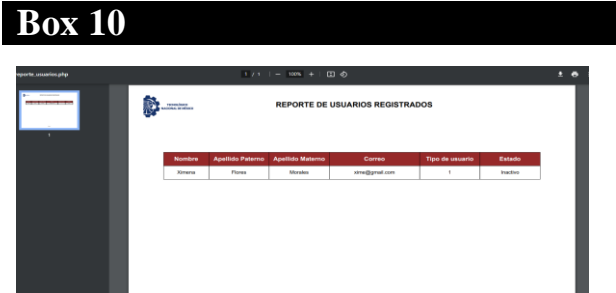
Box 9

Figure 9

Reports menu

Source: Own elaboration

Box 10

Figure 10

User reports

Source: Own elaboration

Morales-Zamora, Vianney, Paredes-Xochihua, María Petra and Sánchez-Juárez, Iván Rafael. [2024]. Web platform for registering tourist spots in San Martín Texmelucan. ECORFAN Journal Republic of Peru. 10[18]1-6: e61018106.
https://doi.org/10.35429/EJRP.2024.10.18.6.6

Box 11

Figure 11

Category report

Source: Own elaboration

In the personal information, the data of the user who is entering the system will be loaded, and only some data can be updated and others not.

Box 12

Figure 12

Personal information

Source: Own elaboration

According to the type of user, you can view the registered sites, or only the information of the site to which you belong.

Box 13

Figure 13

Registered sites

Source: Own elaboration

The customer user will be able to make search filters based on state, municipality and category.

Box 14

Figure 14

Site search

Source: Own elaboration

A list will appear with the previous filter and by clicking on the name of the place, the user will be able to download and install the application to view the site (download option), and once the App is installed, the user will have to point to the qr code.

Box 15

Figure 15

Example site

Source: Own elaboration

By pointing to the qr code, you can view the places in augmented reality, it is worth mentioning that the App is loaded from the administrator user, as well as the qr code of each place, as to date only has some places in augmented reality, and this will be added only if the site approves and requests it otherwise it will not appear, nor the qr code, nor the download link of the App.

Box 16

Figure 16

Example site

Source: Own elaboration

Morales-Zamora, Vianney, Paredes-Xochihua, María Petra and Sánchez-Juárez, Iván Rafael. [2024]. Web platform for registering tourist spots in San Martín Texmelucan. ECORFAN Journal Republic of Peru. 10[18]1-6: e61018106.
https://doi.org/10.35429/EJRP.2024.10.18.6.6

Conclusions

In conclusion, by promoting the tourist sites of San Martin Texmelucan in an innovative and attractive way, it helps to improve the image of the region as a tourist destination, which can increase the visibility and demand for local products and services.

Declarations

Conflict of interest

The authors declare that they have no conflicts of interest. They have no known competing financial interests or personal relationships that might have appeared to influence the article reported in this paper.

Authors' contribution

Morales-Zamora, Vianney: Contributed to the development and programming of the platform.

Paredes-Xochihua, Maria Petra: Contributed to the design and development of the database.

Sánchez-Juárez, Iván Rafael: Contributed to the design of the platform's interfaces.

Availability of data and materials

The data obtained for the development of this platform are reserved by the Centro de Investigación en Ciencias Biológicas of the Universidad Autónoma de Tlaxcala.

Funding

No funding was provided for the development of the platform, it was developed with own resources.

Acknowledgements

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References

Background

Azuma, R. (1997). A survey of augmented reality. Presence: Teleoperators and Virtual Environments, 6(4), 355-385.

Basics

Al-Samarraie, H., & Wills, G. (2019). The adoption of augmented reality technologies in tourism: A review paper. Journal of Hospitality and Tourism Technology, 10(3), 365-385.

Support

Zhang, Y., Zhao, X., Ma, Z., Wang, Y., & Qi, Y. (2019). User experience research in tourism field: A review. Journal of Travel Research, 58(7), 1163-1180.

Differences

National Institute of Statistics and Geography (INEGI). (2020). Mexico's System of National Accounts.

Discussions

Al-Samarraie, H., & Wills, G. (2019). The adoption of augmented reality technologies in tourism: A review paper. Journal of Hospitality and Tourism Technology, 10(3), 365-385.

Zhang, Y., Zhao, X., Ma, Z., Wang, Y., & Qi, Y. (2019). User experience research in tourism field: A review. Journal of Travel Research, 58(7), 1163-1180.

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet-The state of eTourism research. Tourism Management, 29(4), 609-623.

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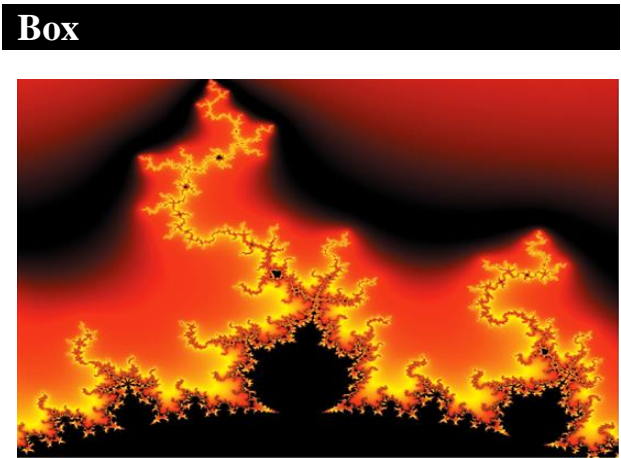[Indicating the title at the bottom with No.10 and Times New Roman Bold]

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Table 1

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Develop give the meaning of the variables in linear writing and important is the comparison of the used criteria.

Results

The results shall be by section of the article.

Conclusions

Clearly explain the results and possibilities of improvement.

Annexes

Tables and adequate sources.

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Declarations

Conflict of interest

The authors declare no interest conflict. They have no known competing financial interests or personal relationships that could have appeared to influence the article reported in this article.

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Abbreviations

List abbreviations in alphabetical order.

Prot-
  ANN   Artificial Neural Network

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1047 La Raza Avenue -Santa Ana, Cusco-Peru. Phones: +52 1 55 6159 2296, +52 1 55 1260 0355, +52 1 55 6034 9181; Email: contact@ecorfan.org www.ecorfan.org

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