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## "AppEmprende ISTG: Plataforma para la Promoción, Gestión y Búsqueda de Emprendimientos Estudiantiles"



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## ABSTRACT

This research arose from the need to provide a digital platform that facilitates the management, promotion, and search for student entrepreneurship within the Guayaquil Higher Technological Institute. It is part of the Mobile Applications research group for the Software Development program, with the goal of developing a mobile application called "AppEmprende ISTG," which will allow students and entrepreneurs to register, promote, and manage their businesses within the educational community.

Users can access the app through their institutional account or in guest mode, gaining access to features such as searching for businesses, posting business listings, filtering categories, and managing their own businesses. The app features a moderator-managed approval system, ensuring the quality and authenticity of the businesses posted.

The agile Kanban methodology was used to develop AppEmprende ISTG, ensuring flexibility and adaptability in each iteration of the development process. This tool facilitates the integration of continuous improvements based on the needs of users and the educational community.

It is concluded that the development of this application provides a significant benefit to student entrepreneurs, allowing them to boost their businesses within the ISTG academic ecosystem. Furthermore, it strengthens the digitalization and organization of entrepreneurship at the institution, optimizing access to relevant business information for the educational community.

Keywords: mobile application, student entrepreneurship, business management, digital systems, digital tools, ISTG.

## RESUMEN

Esta investigación surge de la necesidad de proporcionar una plataforma digital que facilite la gestión, promoción y búsqueda de emprendimientos estudiantiles dentro del Instituto Superior Tecnológico Guayaquil. Forma parte del semillero de investigación en Aplicaciones Móviles de la carrera de Desarrollo de Software, con el objetivo de desarrollar una aplicación móvil llamada "AppEmprende ISTG", que permita a los estudiantes y emprendedores registrar, divulgar y gestionar sus negocios dentro de la comunidad educativa.

Los usuarios podrán acceder a la aplicación mediante su cuenta institucional o en modo invitado, teniendo acceso a funciones como la búsqueda de emprendimientos, publicación de negocios, filtrado de categorías y gestión de sus propios emprendimientos. La aplicación cuenta con un sistema de aprobación administrado por un moderador, garantizando la calidad y autenticidad de los negocios publicados.

Para el desarrollo de AppEmprende ISTG, se empleó la metodología ágil Kanban, asegurando flexibilidad y adaptabilidad en cada iteración del proceso de desarrollo. Con esta herramienta, se facilita la integración de mejoras continuas basadas en las necesidades de los usuarios y la comunidad educativa.

Se concluye que el desarrollo de esta aplicación proporciona un beneficio significativo a los estudiantes emprendedores, permitiéndoles impulsar sus negocios dentro del ecosistema académico del ISTG. Además, se fortalece la digitalización y organización de emprendimientos en la institución, optimizando el acceso a información comercial relevante para la comunidad educativa.

Palabras clave: aplicación móvil, emprendimiento estudiantil, gestión de negocios, sistemas digitales, herramientas digitales, ISTG.

## INTRODUCTION

In the field of modern education, mobile technology, data availability, and learning development have evolved to become faster and more versatile, transforming the way we engage with knowledge. The constant accessibility of smartphones has changed how individuals interact with their environment and obtain learning materials. In response to these changes, the Instituto Superior Tecnológico Guayaquil (ISTG) has launched an exciting project titled “**AppEmprende ISTG**,” developed by a team of teachers and students committed to educational innovation.

Entrepreneurship plays a fundamental role in student growth, providing them with the tools needed to succeed in today’s economic landscape. Traditionally, students and entrepreneurs have faced challenges in promoting and managing their businesses within the academic environment. However, in today’s digital world, it is essential to modernize and streamline the way students interact with entrepreneurship-related resources. For this reason, the “**AppEmprende ISTG**” project emerges as an innovative solution designed to facilitate the promotion, management, and discovery of student-led ventures at ISTG.

The **main objective** of the project is to develop a mobile application that provides students and entrepreneurs with a fast and user-friendly way to register, promote, and manage their businesses. The app will allow them to publish information about their ventures, access relevant content, search for businesses by category, and manage their personal profiles—all within an intuitive interface. This initiative seeks to encourage autonomous business development and transform the entrepreneurial experience by offering students a comprehensive tool to support both academic and professional growth through mobile technology.

This project also aims to actively engage teachers and administrators in the digital development and enrichment of entrepreneurship within ISTG. By leveraging the power of mobile technology to enhance academic excellence, “**AppEmprende ISTG**” seeks to strengthen the educational community’s commitment to entrepreneurship and provide students with a platform that fosters their business skills. According to Flores Oré (2023), this allows higher education students to effectively develop their digital entrepreneurship. As an innovative approach to the development

of educational mobile applications, this project positions itself at the forefront of educational technology at ISTG.

## METHODOLOGY

The Instituto Superior Tecnológico Guayaquil (ISTG), lacking a specific digital platform for promoting, managing, and searching for student-led entrepreneurial projects, faced difficulties in providing visibility to students' initiatives within the academic community. The objective of **"AppEmprende ISTG"** is to address this limitation by offering students a mobile application that facilitates the promotion of their ventures, access to relevant information, and management of their projects online. The application seeks to encourage autonomous entrepreneurship and foster active student engagement within ISTG's entrepreneurial ecosystem.

The development of **"AppEmprende ISTG"** was carried out in several stages:

### **First Stage: Selection of Tools and Development Environment**

Android Studio was selected as the development platform due to its accessibility and open licensing, which allowed the creation of a robust and functional application that could be easily implemented on students' mobile devices.

### **Second Stage: Analysis, Design, and Programming**

During this phase, the functional requirements of the application were defined to ensure alignment with the goals of the platform and the needs of end users. An interactive design and programming process was conducted with emphasis on user experience, ensuring that the application was simple to use, intuitive, and functional.

### **Third Stage: Integration and Deployment**

A key factor for the success of **"AppEmprende ISTG"** was its integration with ISTG's existing academic management system, enabling students to access the application through their institutional email accounts and allowing them to register, promote, or inquire about their

entrepreneurial projects quickly and efficiently. Additionally, a dissemination strategy was implemented through the **Google Play Store** to ensure easy access and widespread adoption of the application within the educational community.

In terms of required components for the project, Android mobile devices were used for testing and validation, along with a secure login system designed exclusively for ISTG students and teachers. Cloud storage was also incorporated to host entrepreneurial project information, ensuring a stable and accessible platform.

To validate the user experience of **AppEmprende ISTG**, a structured survey was administered to a sample of **26 users** (20 students and 6 teachers from ISTG), who interacted with the application for one week. The survey—conducted via Google Forms—was divided into three sections: general information, user experience (evaluated using a linear scale from 1 to 5), and open-ended feedback. The data were analyzed descriptively to obtain averages and response frequencies.

The goal of this project is to take a step toward educational innovation and the strengthening of student entrepreneurship by leveraging the potential of mobile technologies to facilitate access to resources and foster a more dynamic and accessible learning environment. This modular and adaptable methodology will enable future updates and enhancements to the platform, responding to the evolving needs of students and the entrepreneurial ecosystem.

The project also requires an analysis for projection. Quijije Roldán (2021) examines the value of entrepreneurial training in university students. Younger generations have rapidly adopted mobile technology, creating an ideal educational environment for the use of mobile applications to support autonomous learning and entrepreneurship. This demonstrates that such applications not only enhance interaction with knowledge but also improve access to valuable resources in a flexible and ubiquitous manner.

## RESULTS

A survey was administered to 26 participants from the Instituto Superior Tecnológico Guayaquil, of whom 76.9% were students ( $n = 20$ ) and 23.1% were teachers ( $n = 6$ ). The objective was to evaluate the user experience of the mobile application **AppEmprende ISTG**, developed to facilitate the registration, management, and exploration of entrepreneurial projects within the educational community.

The main findings are presented below:

### 1. Access and Use of the Application

Among the respondents:

- **69.2%** reported having used the application.
- **30.8%** indicated they had not used it, suggesting an opportunity to strengthen dissemination and training.

Regarding login mode:

- **72.2%** accessed through their institutional account, which enables full functionality.
- **27.8%** used guest mode, appreciated for its convenience but with limited access to certain features.

### 2. Functionalities Used

Users who interacted with the app identified the following as the most frequently used features:

Functionality	Percentage	Estimated No. of Users
Business registration	61.1%	11
Exploration of other projects	22.2%	4
Category filter	11.1%	2
Suggestions and comments	5.6%	1

Business registration was the primary function, confirming that the app fulfills its institutional purpose of promoting visibility for student ventures.

### 3. Evaluation of the User Experience

Participants evaluated different aspects of the app using a 1–5 scale, where 5 represents the highest level of satisfaction.

#### a. Ease of Use

##### Rating Percentage

5	66.7%
4	22.2%
3	5.6%
2	5.6%

A total of **88.9%** rated usability between 4 and 5, indicating that most users find the platform intuitive and accessible.

#### b. Response Speed

##### Rating Percentage

5	66.7%
4	22.2%
2	11.1%

A total of **88.9%** perceived the app's speed as adequate, although a small percentage reported slowness on certain devices.

#### c. Design and Appearance

##### Rating Percentage

5	66.7%
4	27.8%
2	5.6%

A total of **94.5%** expressed positive evaluations of the visual design, highlighting its simplicity, aesthetics, and organization.



#### d. Usefulness for Registering and Searching for Ventures

##### Rating Percentage

5	72.2%
4	22.2%
2	5.6%

A total of **94.4%** considered the app useful for fulfilling its purpose of promoting and managing entrepreneurial projects.

Through the open-comment section, participants suggested several improvements, including enabling editing of posts, integrating social media, and adding online support. These suggestions will be considered for future updates.

##### Summary Tables

The following tables summarize the information collected regarding participant profiles, app usage, functionalities used, and user experience evaluation. These data support the analysis of the overall perception of the system, identify strengths, and highlight areas for improvement in future platform updates.

**Table 1**

#### Participants' Roles at ISTG

*Source: Own elaboration (2025)*

Role	Frequency	Percentage
Students	20	76.9%
Teachers	6	23.1%
<b>Total</b>	<b>26</b>	<b>100%</b>

**Table 2**

**Use of the AppEmprende ISTG Application**

*Source: Own elaboration (2025)*

**Use of the app? Frequency Percentage**

Yes	18	69.2%
No	8	30.8%
<b>Total</b>	<b>26</b>	<b>100%</b>

**Table 3**

**Login Mode**

*Source: Own elaboration (2025)*

*Note: Only the 18 users who accessed the app are considered.*

**Login Mode Frequency Percentage**

Institutional account	13	72.2%
Guest mode	5	27.8%
<b>Total</b>	<b>18</b>	<b>100%</b>

**Table 4**

**Functionalities Used in the Application**

*Source: Own elaboration (2025)*

*Note: Based on the users who accessed the app.*

**Functionality Frequency Percentage**

Business registration	11	61.1%
Exploration of other ventures	4	22.2%

Functionality	Frequency Percentage	
Category filter	2	11.1%
Suggestions and comments	1	5.6%
<b>Total</b>	<b>18</b>	<b>100%</b>

**Table 5**

**User Experience: Ease of Use**  
*Source: Own elaboration (2025)*

Rating	Frequency Percentage	
5 (Excellent)	12	66.7%
4	4	22.2%
3	1	5.6%
2	1	5.6%
<b>Total</b>	<b>18</b>	<b>100%</b>

**Table 6**

**User Experience: Response Speed**  
*Source: Own elaboration (2025)*

Rating	Frequency Percentage	
5 (Excellent)	12	66.7%
4	4	22.2%
2	2	11.1%
<b>Total</b>	<b>18</b>	<b>100%</b>

**Table 7**

**User Experience: Design and Appearance**

*Source: Own elaboration (2025)*

Rating	Frequency	Percentage
5 (Excellent)	12	66.7%
4	5	27.8%
2	1	5.6%
<b>Total</b>	<b>18</b>	<b>100%</b>

**Table 8**

**Usefulness of the App for Registering and Searching for Ventures**

*Source: Own elaboration (2025)*

Rating	Frequency	Percentage
5 (Excellent)	13	72.2%
4	4	22.2%
2	1	5.6%
<b>Total</b>	<b>18</b>	<b>100%</b>

**General Interpretation**

The results of this evaluation demonstrate that **AppEmprende ISTG is a well-received tool**, with high levels of acceptance in terms of usability, functionality, and overall usefulness. Positive ratings dominate all evaluated items, especially ease of use, design, and functional utility.

Opportunities for improvement were also identified, such as enhancing performance on some devices and incorporating new user-suggested features, including post editing, social media integration, and the ability to save favorite ventures in guest mode.

These findings support the continuity and evolution of the platform as an institutional strategy to strengthen ISTG's student entrepreneurship ecosystem.

A read-only access link to the Excel document containing the full survey results has been provided to facilitate consultation:

<https://docs.google.com/spreadsheets/d/1chzFnE2bdqvC20T1EgTBdAJljZoeh2wA1-nG5HleGMM/edit?usp=sharing>

## DISCUSSION

The creation of a digital platform aimed at promoting, managing, and searching for student entrepreneurial projects represents a significant advancement within the academic community. One of the key aspects of this project is the application of the agile **Kanban methodology**, which enabled continuous adaptability throughout the development process. This methodology provides the flexibility needed to adjust platform functionalities based on user requirements. Continuous improvement ensures that *AppEmprende ISTG* remains relevant and effective in supporting student entrepreneurs.

According to Bravo Bravo, Bravo Bravo, Preciado, and Mendoza (2021), proper organizational planning when launching a business is strongly connected to the entrepreneurial intentions of higher education students.

Another relevant point is the accessibility of the application. In the survey conducted, **89% of participants (16 out of 18 users)** indicated that the platform is easy to use. Qualitative responses highlighted aspects such as the simplicity of business registration and the clarity of the design. The option to log in either with an institutional account or as a guest makes the platform accessible both to registered students and external users, thereby expanding its impact. Additionally, the implementation of a moderator-driven approval system ensures the authenticity and quality of published ventures, strengthening trust within the educational community.

The development of *AppEmprende ISTG* was made possible through the collaborative work of teachers and students belonging to the mobile applications research group. Throughout the process,

collaborative sessions were carried out for interface design, functionality implementation, and user validation. The following images document part of this participatory work.

## CONCLUSION

The *AppEmprende ISTG* application is a tool that facilitates the promotion and management of student businesses within the Instituto Superior Tecnológico Guayaquil. Through this platform, student entrepreneurs can showcase their products and services in a more organized, accessible, and efficient manner.

According to Lee and Chang (2021), mobile applications have a positive impact on students' entrepreneurial intentions. For the application to be truly effective, it is essential that it features a user-friendly design and performs well across different devices. The content must also be clear and engaging so users can easily find the information they need. Promoting the app through social media and other communication channels will help increase its visibility and encourage wider use.

It would also be advisable to incorporate features such as push notifications, a space for users to leave reviews about entrepreneurial projects, and a help system for resolving doubts. In this way, *AppEmprende ISTG* will not only serve as a support tool for student entrepreneurs but will also contribute to strengthening the entrepreneurial spirit within the academic community.

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