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Facultad de Ciencias Administrativas UNMSM

ORIGINAL ARTICLE

Technological management of the documentary process and user satisfaction in local government

ABSTRACT

This study proposes to identify the relationship between the technological management of document processing and the satisfaction of users who access this channel of attention in the public sector. The methodology used is basic, non-experimental with cross-sectional, quantitative approach, the level of study is correlational and the hypothetical-deductive method was used. Likewise, the technique used was the survey and the instrument used was the questionnaire. Cronbach's alpha was used to determine the reliability of the instrument, and a very high reliability value was obtained. In this sense, the results showed the existence of a significant relationship between the study variables, with a Spearman's Rho correlation coefficient of 0.599, that is, moderately positive. This is due to the fact that the local government adequately applies technology management in the processing of documents, and this satisfies the users. Finally, it is concluded that there is a relationship between technology management and user satisfaction in local government.

Keywords: technology; management; innovation; satisfaction; administration.

Enzo Giancarlo Yasuda Aguilar
enzoyasuda10@gmail.com
ORCID: https://orcid.org/0000-0001-7870-0275
Universidad de Lima, Facultad de Derecho, Lima, Perú

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INTRODUCTION

Currently, technology is relevant to the efficient and transparent optimization of public administrations, making public management important in today's social sector. Few local governments have managed to incorporate technological innovations in public management, adopting technological tools to streamline procedures and better distribute resources, training their servers, and increasing citizen participation through digital portals that encourage interaction and capture citizens' concerns and advice. These few governments that have embraced technology management are now reaping its benefits, creating a more modern institutional image and reducing gaps in user satisfaction. Technology helps to quickly identify shortcomings and promote a mechanism for continuous improvement (Contreras Barros, 2024).

The global economy is characterized as a digital economy that is growing dynamically and upward: from the Internet to production. Some countries are integrating plans to use digital technology in industry, so that the digital era will be deeply rooted in the economy and government of each country (Arellano Morales, 2020). Likewise, Fairlie and Portocarrero (2020) express that the countries of the region have weakly introduced science, technology and innovation relations and related them to their government policies, without obtaining significant results, which is aggravated by the low integration of government systems. For this reason, developing countries should promote the construction of technological capabilities in accordance with the requirements and needs of each nation. On the other hand, it should be noted that the main digital divide is the lack of knowledge on the part of citizens in the use of technology, so it is necessary to specify which digital skills are important for citizens to be able to use electronic media effectively and access government services correctly (Morte-Nadal & Esteban-Navarro, 2022).

Peru's digital development situation is critical in the region, ranking 49th. This problem is largely due to gaps in infrastructure and internet access. According to Jaramillo (2019), 44.5% of people who use the internet in Peru belong to the youth population; therefore, more awareness is needed for adults to use new technologies. In every public institution, the awareness should be raised that the main objective is citizen satisfaction. Therefore, Jaramillo (2019) considers it necessary to optimize and automate procedures through digital mechanisms and technologies to provide an improvement in management, and in this way information would be achieved in an agile, total and quality way, which will generate a better database to make better decisions at all levels.

This paper examines the relationship between technology management and user satisfaction in local government. As mentioned in the introduction, few local governments adopt technology management, and there are not many governors and leaders who are able to manage technology in their government regime with a vision of social satisfaction. If it is indeed true that technology brings important benefits in terms of citizen satisfaction, why is technology not being adopted in governments on a significant scale? The reality may indicate that not all local governments are concerned with technology management in relation to citizen satisfaction. In this sense, the question arises as to how technology management affects the perception of user satisfaction in this specific context. For this reason, the general objective of this study is to determine the relationship between technology management and user satisfaction in the local government setting. Two specific problems are divided: the first investigates the relationship between technological innovation and user satisfaction, while the second focuses on the relationship between the administrative process and user satisfaction. As for the hypothesis, the existence of a relationship between technological management and user satisfaction in local government is posed in a general way. Therefore, two specific hypotheses are formulated: the first hypothesis states that there is a relationship between technological innovation and user satisfaction, while the second hypothesis postulates a relationship between the administrative process and user satisfaction in the local government context.

The background research identified previous scientific studies that support the correlation between technology management and user satisfaction. In order to ensure effective control and operation, the public administration must adhere to document processing guidelines and use document processing systems. These measures aim to simplify procedures and increase transparency in the availability of information, in accordance with the regulations established in this area.

Cerrillo Martínez and Casadesús de Mingo (2018) state in their study that document processing systems help to optimize and improve the active image of the institution, as well as to manage the accessibility of information in the best way, which guarantees transparency and protects the personal data of users; therefore, there will be a more dynamic and open way to serve the community.

Díaz-Calderón (2021) in his research clearly shows that the adoption of electronic technological management is directly related to citizen satisfaction, mentioning the case of the state of emergency due to COVID-19, a context in which personal processing of documents was prevented; however, digital management became a very useful tool for citizens and achieved the objectives of a transparent government with greater service value, improving efficiency levels. Likewise, the management of a technological government reflects a modern and interactive image with citizens.

Likewise, Gómez *et al.* (2018) express in their study that for a proper practice of information technology, it is important to choose a technological strategy that makes technology the main bulwark of the institutional strategy and allows the improvement of attention to the community. In addition, these strategies and technology must be aligned in their execution and prioritize the satisfaction of citizens and other users who need public services. The study shows that there are no significant improvements in technology and its relationship with the technological service strategy, because both work independently and without collaboration; therefore, it is necessary to resort to a technological reference framework or ISO standards. A cause of the correlative absence of technology and service strategy is the lack of training and follow-up in the implementation of technological practices by the government.

An evaluation of twenty municipal web platforms in a Mexican state highlighted the speed with which each municipality uses these channels to provide open attention, not only to inform citizens, but also to provide services. The interaction between citizens and their local government is remarkable; however, in the category of political participation, there is still much to be done. Municipalities must rely on technology to achieve greater competence and effectiveness in providing quality information and, through it, quality services and welfare to the population, either by reducing costs, paperwork and the time of public servants to provide solutions to users, i.e. to adequately satisfy the citizens who pay for the services of each municipality.

Falco and Kleinhans (2018) highlight that previous studies have shown a lack of adequate modern technological tools to facilitate participation, both for the government and for citizens. However, they emphasize that digital participation spaces are widely available and accessible to municipalities and the general population. They conclude that the inefficiency of citizen participation and cooperation with municipalities is not due to the lack of advanced technologies; on the contrary, technological advances have shown that digital platforms can be effective tools to promote citizen action and facilitate interaction with the government.

In addition, Polanco Carrillo *et al.* (2022) show the positive influence of the use of technology and its benefits on users' perceptions of service quality. Beneficiaries expressed a high level of satisfaction with the service they received, particularly valuing aspects such as the physical environment, the organization, the availability of modern equipment, and the use of security cameras.

The integration of technology into the state machinery is changing the dynamics of communication between society and government. Despite the significant digital challenges, they do not overcome the problems of bureaucracy. Therefore, it is imperative that the new public administration take advantage of the be-

nefits of technology in terms of efficiency and productivity, as Montalbá Ocaña and Russo Botero (2021) point out.

There are also precedents in the literature review that show that the digital divide is a latent problem that affects technology management. Huamán Coronel and Medina Sotelo (2022) argue that the adoption of digital technologies improves the living conditions of citizens and that their lack contributes to the deepening of social gaps. The digitization of service mechanisms benefits the government, since the restructuring of public service channels through the use of technology increases the efficiency of service delivery and generates savings. They also argue that the reduction of social inequalities depends on the quality and accessibility of communications infrastructure. However, they point to the existence of latent gaps that indicate that digital citizenship is still evolving in Peru.

On the other hand, Arango Morales *et al.* (2018) point out that technology is essential because it is versatile and deeply rooted in the daily lives of citizens, who use it to gather information, complete formalities, or for entertainment. Moreover, despite the fact that technology is available to the majority of the population, there are still constraints in certain sectors where there is no access to the Internet. However, as citizens become increasingly integrated with technology, it is essential to explore its innovative potential.

Defining Technology Management

Restrepo-Gónzalez (2000) postulates that technology management is an interdisciplinary field that combines aspects of engineering and administration with the purpose of carrying out plans, development and implementation of technological infrastructures that contribute to the achievement of the primary and secondary objectives of an institution. For their part, Ramírez Molina *et al.* (2019) define it as a process of integration of strategic, operational and decision-making aspects in an institution with competitive representativeness. They emphasize its importance in strategic planning, which includes development and research roles, innovative capacity, strategic management of resources and strengthening of operational processes, leading to an increase in user expectations and satisfaction.

Terán Bustamante *et al.* (2019) expand this definition by describing technology management as a procedure that generates innovative ideas for the organization, increases the efficiency of administrative processes, and promotes the creation of technological value and innovative products. On the other hand, Escorza and Valls (2005) emphasize that technology management involves the identification, procurement, research, development and adaptation of new technologies in an institution, covering both product and process aspects, and playing a crucial role in promoting and monitoring technological change, as well as in integrating and coordinating different areas such as strategy, training, marketing, research and development.

For Castellanos (2007), this management focuses on the creation and implementation of technological changes in an organization, facilitating innovation processes in structures and institutional culture. Finally, Medellín Cabrera (2010) argues that technological management seeks to generate competitive opportunities and strengthen processes through the implementation of new technologies, which promotes a relationship between technological capacity, management and the learning process.

Technology Management and Innovation

Escorsa Castells and Valls Pasola (1996) argue that technology management is closely related to innovation management, since their boundaries are not clearly defined and they are often associated as synonyms when trying to address issues related to improving the use of technology in an organization. On the other hand, technological innovation, according to Martínez Pávez (2011), can be understood as a radical change in technology that is imposed in a sector or field and is constantly used in a social structure with the aim of improving the progress of production and services and improving the quality of life of people through the distribution of better services and goods.

Morin and Seurat (1987) describe six basic functions in the technological innovation

process. First, monitoring, which involves obtaining the most complete information about the environment, detecting strong or critical signals that later become threats or opportunities, and obtaining information about improvements or new technologies used by suppliers or competitors and their impact on organizational tasks. Second, technological enrichment involves identifying, acquiring, or contracting for technology and research in order to invest time and resources and avoid disproportionate efforts on innovations that have already been created. Third, protection consists in safeguarding the technological resources acquired or developed by the institution, as well as the protection of intellectual property and copyrights, brand identity, slogans, logos, labels of origin and emblems. Fourth, the inventory with the identification and registration of important technologies found in the institution, as well as the registration of technologies available and controlled by the institution that are part of the patrimony. Fifth, the evaluation, on the other hand, is to examine the potential of each technological resource to assess the gaps and improvement programs through accurate judgments.

Alvarenga *et al.* (2020) emphasize that efficient knowledge management provides optimal strategies and techniques for the successful management of digital governance, ensuring that knowledge is available, accessible and always up to date. In this context, in order to achieve success in the implementation of technological governance, it is paramount to conduct research with appropriate methodologies and propose models that focus on knowledge management.

In a complementary approach, Benayas (2020) adds that digital interagency diplomacy involves taking advantage of the Internet and information and communication technologies (ICTs) to maintain an effective dialogue between two or more government agencies. This change in the dynamics of communication facilitates a broader interaction with foreign citizens and in international events, as the Internet expands the scope and improves the ability to share information in a transparent manner. Likewise, Guerrero-Bayona and Rosado-Gómez (2020) argue that an efficient digital government guarantees security and transparency by providing up-to-date information, equal access for all, and dynamic management of public resources. The efficient use of digital government procedures not only increases trust, but also the perceived security of citizens.

Technology Management and Administrative Processes

The relevance of technology, according to Espinosa Tigre and Cevallos Jiménez (2022), is significantly manifested by facilitating the generation of a solid information base for institutions. This database becomes a fundamental pillar for strategic decisions and the formulation of long-term objectives. In this context, technology has proven to be a decisive factor in improving administrative efficiency by reducing operating costs and optimizing the allocation of available resources. A key contributor to this improvement is the IT function, which simplifies daily activities and executes tasks in a more practical and efficient manner, eliminating redundant and irrelevant roles and allowing a more focused approach to organizational objectives.

On the other hand, the management process, as described by Chiavenato (2005), involves a complete cycle of activities that includes planning, organizing, directing, and controlling efforts to achieve the goals set by an institution. Specifically, the planning stage involves the precise definition of goals, strategies, and plans, as well as their harmonization with operational actions. Management involves active leadership, where managers motivate their employees, manage conflicts, and influence daily activities by identifying the most effective channels of communication. Finally, control consists of constant monitoring, comparison with established standards, and correction of deviations in work activities, as noted by Robbins and Coulter (2014).

The starting point of any administrative process is the communication activity, the transfer of information to a specific audience, whether internal or external. In this regard, Urizar and Insfrán Román (2017) explain that the new generations are basically integrated in technological natives, that is, users who regu-

larly use digital platforms to be able to interact, dialogue and share information, users who are constantly connected based on these technological spaces. Considering these aspects, the administrative process must link its information transfer process to digital media, creating more structured content, with simple and attractive language that generates interest. The use of these technological tools is very useful.

From the point of view of Aguirre Sala (2021), the democratic exercise with the help of digital technology is broad and does not always achieve the same importance. Although the Internet can contribute to strengthening democracy in some aspects, it does not cover all areas. Where it is useful is in expanding the public sphere to make citizens more participatory, and in promoting cooperation with other institutions by supporting campaigns. Aminah and Saksono (2021) point out that there are factors that hinder the incorporation of technological management in a government. In many cases, e-government regulations and policies are slow to respond to the use of ICT and the digital demands of citizens. Another problem is the lack of data integration; in other words, digital government applications in administrative services and procedures are minimal.

Updating government services based on the digitization process requires a focus on the interaction and performance of technology in reality when providing services to the community, as expressed in Andersson *et al.* (2022). It is in this area that the work towards a closer and more collaborative link with the organization can be shaped.

On the other hand, Cāne (2021) argues that a fundamental requirement for achieving digital transformation is the formation of a digitally literate society. A smart community strategy ensures that the digital needs, priorities, and opportunities of a rural community are linked to key digitization activities. Finally, Carrera-Mora *et al.* (2019) argue that a large amount of resources must be invested in operational administrative processes that have not yet been mechanized by digital government. Increasing the number of users of digital media is one of the biggest challenges for public administration.

Defining User Satisfaction

Ramírez-Asís *et al.* (2020) argue that satisfaction is due to the user's feeling of joy and happiness when the service provider fulfills the customer's wishes. Service quality has become a fundamental strategy to achieve higher levels of user satisfaction (Guerrero, 2014).

Parasuraman *et al.* (1985) states that service quality is evaluated through the SERVQUAL model that after an incessant study managed to propose a redefined model with what are considered the most important categories to evaluate service quality, these are: Tangibility, Reliability, Empathy, Sensitivity and Safety. a) The elements of tangibility, are those physical parts of the establishment where the service is provided, equipment, personnel, materials and that can be appreciated by the five senses of people. b) Reliability, refers to the ability to provide a safe and efficient service, indicates consistent performance, without room for default and resulting in satisfied promises, without the need for rework. c) Sensitivity or responsiveness, this refers to the predisposition of the provider to voluntarily assist users by providing the best possible service with accuracy and speed. d) Security, indicates the capacity of courtesy, knowledge that service providers can instill in users and ensure their trust. e) Empathy, it refers to the way the institution cares about the user and provides assistance on an individual basis, providing interest and personalized attention, this includes understanding the needs of users.

Basically, user satisfaction is based on excellence in quality management and innovative technological management. To this end, and as a strategy used by institutions to be competitive, it is necessary to ensure the quality of services and products that allow them to occupy a prominent position among their public (Tapia Hermida *et al.*, 2022).

METHOD

This scientific paper is of applied type, since the determination of the objectives of the study aims at its practical application in reality and at solving the problem (Baena, 2017). The approach will be quantitative, since it considers that knowledge must be impartial and

derived based on quantitative mediation and using analytical statistics, which is why it proceeds to validate hypotheses that have been estimated at the beginning (Hernández *et al.*, 2014). The design will be non-experimental of cross-sectional type, since it will not proceed to handle variables and data will be collected in a single time interval (Hernández *et al.*, 2014). In addition, it will be correlational, since it will only focus on specifying the relationship between the two variables without conducting experiments.

The population of this study is composed of information obtained from the National Office of Electoral Processes (ONPE, 2022). Only 6806 eligible voters were selected from a well-known district in the province of Huari, located in the department of Ancash. This district, in addition to being recognized worldwide for its ancestral cultural value, is currently undergoing a technological management phase aimed at achieving the objectives of the municipal government, including the satisfaction of the population. This is the reason for the choice of study units adapted to the research methodology. This was limited on the basis of 3 criteria: 1) registered persons residing in the district under study; 2) not being tourists or foreigners staying in the district; and 3) being citizens over 18 years of age and eligible to vote.

$$n = \frac{z^2 * N * p * q}{(Z^2 * p * q) + (N - 1) * e^2}$$

z^2 = Confidence level

N = Known population

q = Probability that the selected population is not the correct one.

p = Probability that the selected population is the correct one

e^z = Maximum acceptable estimation error

$$n = \frac{1{,}96 * 6805 * 0.5 * 0.5}{(1{,}96 * 0.5 * 0.5) + (6805 - 1) * 0.05}$$

$$n = 365$$

The sample size was obtained by considering the 6806 eligible voters who met the predetermined selection criteria. For this purpose, a confidence level of 95% and a maximum margin of error of 5% were estimated, which implies the use of the Z-value of 1.96. By applying the statistical formula for a known population, a total sample size of 365 people was obtained.

For this research, the survey was used as a technique and the structured questionnaire according to the SERVQUAL model was used as an instrument. The questionnaire was created digitally using the Google Forms application. Its structure consists of 10 items that evaluate technological management and 10 items that measure citizen satisfaction.

The reliability of the instrument was determined by means of the Cronbach's Alpha statistical test, in which the data were collected through a pilot survey of the study units. The result showed a coefficient of 0.896, which indicates a high level of reliability.

The analysis of the data was carried out through the normality test, which made it possible to identify the type of statistical test appropriate for the objectives of this research. In this context, the Kolmogorov-Smirnov (K-S) test was chosen, as described in the study by Sánchez (2003). The assessment of the normality of the data is crucial to determine the extent to which the data deviate from a normal distribution. For this purpose, the Kolmogorov-Smirnov test proves to be an appropriate and frequently used tool, as indicated in the work of Domínguez (2018).

RESULTS

The results of the Kolmogorov-Smirnov test reveal a significance level of 0.000, which is less than the standard significance level of 0.05. This indicates that the hypothesis suggesting that there are differences in the normality of the data is accepted, which shows that the distribution is non-normal. Consequently, having a non-normal data distribution, the selection criterion for using non-parametric tests, such as Spearman's Rho Test, is met. In addition, the results show that the statistical level for technology management was 0.171 with a Gl of 365. On the other hand, the significance level, statistic and Gl were found to be 0.000, 0.192 and 365, respectively, for technology management.

Descriptive Results

Descriptive Results of the Variables

This paper presents two variables: technological management and user satisfaction. Both have two parameters: according to the level of description (bad, fair and good) and according to the statistical tool of data distribution (frequency, percentage, valid percentage and cumulative percentage). The descriptive results are presented below:

Table 1 shows, for the most part, that 74% of the citizens' opinion regarding the technological management variable is rated as "good". Despite this positive opinion on technology, there are 5.2% who say that technological management is "bad" and 20.8% who say that it is "regular".

On the other hand, Table 2 shows that 74.2% of citizens rate user satisfaction as "good". In other words, almost three-quarters of the respondents feel satisfied. However, 4.4% say it is "bad" and 21.4% say it is "fair".

Hypothesis Testing

Table 3 shows a sig. level of 0.000, which is less than the p-value (0.000 < 0.05); therefore, the null hypothesis is rejected and the research hypothesis that supports the existence of a relationship between the variables Technological Management and User Satisfaction is accepted. In addition, Pearson's correlation coefficient shows a strength of 0.599, which indicates a moderate positive correlation.

Table 4 shows a sig. level of 0.000, which is less than the p-value (0.000 < 0.05); therefore, the null hypothesis is rejected and the research hypothesis supporting the existence of a relationship between the Technological Innovation dimension and the User Satisfaction variable is accepted. In addition, Pearson's correlation coefficient shows a strength of 0.477, which indicates a moderate positive correlation.

Table 5 shows a significance level of 0.000, which is less than the p-value (0.000 < 0.05); therefore, the null hypothesis is rejected

Table 1
Descriptive Statistics of Technological Management Variables

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Bad	19	5.2	5.2	5.2
	Fair	76	20.8	20.8	26.0
	Good	270	74.0	74.0	100.0
	Total	365	100.0	100.0	

Note. Prepared by author using SPSS 21.

Table 2
Descriptive Statistics of the User Satisfaction Variable

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Bad	16	4.4	4.4	4.4
	Fair	78	21.4	21.4	25.8
	Good	271	74.2	74.2	100.0
	Total	365	100.0	100.0	

Note. Prepared by author using SPSS 21.

Table 3
General Hypothesis Testing

			Technology Management	User Satisfaction
Spearman's Rho	Technology Management	Correlation coefficient	1.000	.599**
		Sig. (two-tailed)	.	.000
		N	365	365
	User Satisfaction	Correlation coefficient	.599**	1.000
		Sig. (two-tailed)	.000	.
		N	365	365

Note. **. The correlation is significant at the 0.01 level (two-tailed). Prepared by author using SPSS 21.

Tabla 4
Contrastación de hipótesis específica 1

			User Satisfaction	Technological Innovation
Spearman's Rho	User Satisfaction	Correlation coefficient	1.000	.477**
		Sig. (two-tailed)	.	.000
		N	365	365
	Technological Innovation	Correlation coefficient	.477**	1.000
		Sig. (two-tailed)	.000	.
		N	365	365

*Note. **. The correlation is significant at the 0.01 level (two-tailed). Prepared by author using SPSS 21.*

Table 5
Specific Testing of Hypothesis 2

			User Satisfaction	Administrative Process
Spearman's Rho	User Satisfaction	Correlation coefficient	1.000	.512**
		Sig. (two-tailed)	.	.000
		N	365	365
	Administrative Process	Correlation coefficient	.512**	1.000
		Sig. (two-tailed)	.000	.
		N	365	365

Note. **. The correlation is significant at the 0.01 level (two-tailed). Prepared by author using SPSS 21.

and the research hypothesis that supports the existence of a relationship between the Administrative Process dimension and the User Satisfaction variable is accepted. In addition, Pearson's correlation coefficient shows a strength of 0.512, which indicates a moderate positive correlation.

DISCUSSION

In this scientific paper, the general objective was to determine the relationship between technological management and user satisfaction; according to the results of the general hypothesis testing, a significance level of 0.000 was obtained as a result, which is less than the p-value of 0.05; therefore, it is statistically proven that there is a relationship between technological management and user satisfaction, also the strength with which they are related shows a Pearson correlation coefficient of 0.599, which is moderately positive. These results agree with the paper by Gómez *et al.* (2018), who argued that for a proper practice of information technology, it is important to choose the technological strategy to turn technology into the main bulwark of the institutional strategy and allow the improvement of attention to the communities, in addition, these strategies and technology must be alienated in their execution, prioritizing the satisfaction of citizens and other users who need public services. This finding shows that the success of the relationship between technological management and user satisfaction is found in the strategic choice, i.e. it is a decision fully made by the leaders, since they are the ones who formulate the vision and strategic mission of a government with technological management in favor of popular satisfaction.

It also agrees with the background information provided by Huamán Coronel and Medina Sotelo (2022), who argue in their paper that the use of digital technologies makes it possible to take advantage of and provide better living conditions for citizens, and that their omission further opens social gaps. The digitalization of the mechanisms of attention favors the government, the restructuring of the channels of public attention through the use of technology increases the effectiveness to give digital welfare to people, in addition to generating savings. This finding is identified with the minimal negative margins of the descriptive

statistics towards technological management and also reflected in the moderate coefficient (0.599), which suggests that Peruvian local governments are probably still in an incipient process of technological adaptation as well as each of their territorial populations.

Specific objective 1 of this study was to determine the relationship between the technological innovation dimension and user satisfaction. According to the results of the general hypothesis testing, a significance level of 0.000 was obtained, which is less than the p-value of 0.05. Therefore, it is statistically proven that there is a relationship between technological innovation and user satisfaction. Furthermore, the strength of this relationship is reflected in a Pearson correlation coefficient of 0.477, which is positive and high.

These findings are in line with what Arango Morales *et al.* (2018) state in their paper, where they point out that technologies are indispensable due to their ability to provide a wide variety of purposes. In addition, they highlight that technology is deeply rooted in the daily lives of people in the city, whether it is for obtaining information, carrying out procedures, or simply for entertainment. This study also shows that in the study district, technology is present in the daily lives of its citizens and they use it as a tool to carry out their procedures in the municipality of this Huarino district.

This is consistent with Huamán Coronel and Medina Sotelo (2022), who argue that the use of digital technologies makes it possible to take advantage of and provide better living conditions for citizens, and that their omission opens more social gaps. The digitalization of the mechanisms of attention favors the government, the restructuring of the channels of public attention through the use of technology increases the effectiveness to give digital welfare to people, in addition to generating savings. It reduces social differences in terms of the quality of communication infrastructure, as well as being within everyone's reach. However, there are latent gaps that indicate that digital citizenship is still evolving in Peru.

Specific objective 2 of this study was to determine the relationship between the administrative process dimension and user satisfaction. According to the results of the general hypothesis testing, a significance level of 0.000 was obtained, which is less than the p-value of 0.05. Therefore, it is statistically proven that there is a relationship between the administrative process and user satisfaction. Furthermore, the strength of this relationship is reflected in a Pearson correlation coefficient of 0.512, which is positive and moderate.

These findings are consistent with what Cerrillo Martínez and Casadesús de Mingo (2018) state in their paper, where they note that document processing systems contribute to optimizing and improving the active image of the institution. In addition, they highlight that these systems facilitate access to information in a transparent manner, guaranteeing the security of users' personal data. They also point out that these tools promote a more dynamic and open service to the community. This study also shows that technology has given the district under study the image of an institution that is transparent and empathetic to the community.

It also agrees with Falco and Kleinhans (2018), who argue in their paper that previous studies have shown a lack of modern technological tools suitable for stimulating citizen and government participation; however, digital participation spaces are within the reach of the majority and available for use by municipalities and citizens.

The limitations of this research are specifically based on its application at the local government level, which differs greatly in terms of budget and infrastructure compared to regional governments, which may be able to count on greater possibilities of technological resources. Also, the applicability of the study would be different since it would increase the population on a scale from 1 to 10. The geographical feature is also limiting, since in some districts there is greater accessibility to Internet and telecommunications and in others not.

It is feasible to propose as a future line of research the technological gaps between local governments, since the disparity in terms of infrastructure, weather conditions, budgets and social variables is overwhelming and decisive at the time of carrying out a technological management of government.

CONCLUSIONS

From the main findings of this scientific paper, the following conclusions can be drawn:

a) Statistical evidence supports the existence of a significant relationship between technology management and user satisfaction at the local government level. Therefore, it is necessary to recommend to other local governments to establish an institutional technological policy, since it has been proven that it promotes people's satisfaction.

b) There is statistical evidence that confirms the existence of a significant relationship between technological innovation and user satisfaction at the local government level. Therefore, it is recommended that the leaders of local governments take the initiative of technological innovation at the organizational level and make it a primary objective for the satisfaction of their taxpayers.

c) Evidence is available to support the assertion of a significant relationship between the administrative process and user satisfaction at the local government level. Therefore, it is recommended that district mayors implement technological management in administrative processes to satisfy citizens in their procedures.

d) A positive level of acceptance is mainly observed in the descriptive analysis of technological management, as it has reached 74%.

e) A positive level of acceptance is mainly observed in the descriptive analysis of user satisfaction with 74.2%.

In relation to the descriptive analysis of the crossover between technological management and user satisfaction, both show a mostly positive level of acceptance, registering 64.7%.

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Conflict of Interest

The author has no conflicts of interest to declare.

Author Contributions

Enzo Giancarlo Yasuda Aguilar (lead author): conceptualization, data curation, formal analysis, research, methodology, project management, resources, visualization, writing (original draft, review, and editing).