



Model design for the assessment of identity and digital reputation of institutional information of HEIs in web environments

Diseño de modelo para la valoración de identidad y reputación digital de información institucional de IES en entornos web

Xóchitl Marissa Dávila Ordoñez FIRST AUTHOR CONCEPTUALIZATION – WRITING VISUALIZATION xdavila@docentes.uat.edu.mx Universidad Autónoma de Tamaulipas Tampico, Tamaulipas, México ORCID: 0000-0001-7355-8513 David Alonso Leija Román second author and corresponding author conceptualization methodology – writing – supervision dleija@uat.edu.mx Universidad Autónoma de Tamaulipas Tampico, Tamaulipas, México ORCID: 0000-0001-5782-2767 Ma. Luisa Montes Rojas THIRD AUTHOR RESEARCH – WRITING – VALIDATION mlmontes@uat.edu.mx Universidad Autónoma de Tamaulipas Tampico, Tamaulipas, México ORCID: 0000-0003-3138-1582

> Received: January 26, 2023 Approved: February 20, 2023 Posted: April 1, 2023

Abstract

This paper describes the design of a model to assess information and institutional content on websites of Higher Education Institutions (HEI) in accordance with compliance with good institutional digital identity and reputation practices. In principle, a referential framework of the strategic function of the actions of integral communication, identity, institutional digital reputation and its impact on the HEI. Next, considerations are applied to elements of relationship between categories of aspects of integral communication at an internal, external and corporate level for the design of indicators that identify and weigh the coverage of good institutional digital identity and reputation practices in accordance with the provision of institutional information and content on a website. Finally, recommendations are described for the functionality of the valuation model and the importance of its application within the integral communication strategy of HEI in web environments.

Keywords: Identity, reputation, websites, institutional communication, digital information.

🛞 Resumen

Este trabajo describe el diseño de un modelo para valorar la información y los contenidos de tipo institucional en sitios web de Instituciones de Educación Superior (ies) de acuerdo con el cumplimiento de buenas prácticas de identidad y reputación digital institucional. En principio se presenta un marco referencial de la función estratégica de las acciones de comunicación integral, la identidad, la reputación digital institucional y su impacto en las ies. Seguido, se aplican consideraciones a elementos de relación entre categorías de aspectos de la comunicación integral a nivel interno, externo y corporativo para el diseño de indicadores que identifiquen y ponderen la cobertura de buenas prácticas de identidad y reputación digital institucional de acuerdo con la disposición de información y contenidos institucionales en un sitio web. Por último, se describen recomendaciones para la funcionalidad del modelo de valoración y la importancia de su aplicación dentro de la estrategia de comunicación integral de ies en entornos web.

Palabras clave: Identidad, reputación, sitios web, comunicación institucional, información digital

🛞 Introducción

nstitutions of Higher Education or HEI have experienced accelerated changes towards a new adaptation and integration of their institutional life, where normalization in environments impacted globally by digital transformation stands out (Jensen, 2019). This forced interaction with technology has given rise to adapting various digital communication tools as important channels to enhance the management and development of intangible assets such as identity and reputation in environments applied to the inclusion format that the semantic web implies.

The current semantic ecosystems where websites of HEI participate as formal tools that link the essence of institutional communication on the internet (Segura-Mariño, Piñeiro-Naval and Moreira-Cedeño, 2020). The institutional reference of digital representation on a website timelessly participates within the diversity of the Internet as an official channel through which universities present their identity and institutional image to the world in a hegemonic way before any additional support or derivative of these, such as the social networks (Campoverde-Molina, Luján-Mora and Valverde, 2021). The determined and official space of a website continues to be positioned as a strategic communication resource that helps these institutions build a stable and formal digital reputation that contributes to the development and consolidation of institutional identity and reputation in the field. digital (Dipa, Hafiar y Rahmat, 2021). In addition, identity and reputation are recognized as strategic assets that help HEI become competent and can obtain a position in the education market (Miotto, Del-Castillo-Feito and Blanco-González, 2019).

This work proposes, from the perspective of integral communication, the design of a model made up of categories, dimensions and indicators, which seek to identify the main guidelines that fulfill the function of guiding a diagnostic evaluation of the identity and digital institutional reputation of an HEI, through communicative actions at an informative level and arranged on its institutional website.

Theoretical foundation

tical Identity and digital institutional reputation in universities tion

Identity, image and reputation are three organizational and corporate concepts that are associated with the theoretical and practical development of institutional communication (Rodrich, 2012), which are seen as close elements in a relationship of reciprocal interdependence. For W. Margulies (1977/2003), corporate identity is the sum of all the ways in which a company chooses to identify itself to all its audiences, such as the community, customers, employees, the press, etc., while that the image refers to the perception of the company by these audiences; it is the image that, over time, builds the institution's reputation.

These concepts are visible both in physical and virtual contexts. When seeking to reflect an identity and image favorably supported by a good reputation, the same physical and virtual rules are shared (Piazzo, 2012).

The concept of digital identity began to be coined in the 1990s, with the arrival of personal computers (Pérez, 2012), Palomar (2017) ensures that digital identity is made up of all actions within the digital space that individuals have. and organizations. In the case of the university, the digital institutional identity has to do with how it distinguishes itself from other universities through the position it adopts and how it practices and projects its internalized digital culture; This is what Lara (2009) comments, who also emphasizes that the presence of a university on the Internet is not limited only to disseminating the institutional discourse in the various online media, but also implies knowing the medium and its practices, in order to build thus an identity in accordance with a transparent and coherent internalized digital culture. According to Casillas and Ramírez (2019) and Lara (2009), the digital culture of the university can be reflected in the access to specialized digital magazines, databases, virtual libraries, virtual academic and research communities and the ways in which the academic community interacts with them in favor of their disciplinary practices, in addition to the computer programs used for data manipulation and learning platforms, the practices of production and distribution of open educational resources and educational resource repositories, and the Generation of initiatives in the production of content and programs that build a bridge with digital culture and the university community.

Regarding digital institutional reputation, Villafañe & Asociados (2019) state that, although corporate reputation is one for each institution (global reputation), there is a significant part (each of its areas) that partially reflects their reputation., as is the digital field, that is to say: the reputation online, which they define as the expression of recognition of the interest groups of an institution in digital and social media (networks, blogs, among others).

In universities, communication linked to reputation must adopt a system that not only disseminates information, but also proposes the construction

of a positive image among its different interest groups, which Altarana and Cortez (2015) define as "reputational communication".

It is considered that the communication of reputation is what values what Rodrich (2012) calls "reputational capital of an institution" (p. 229), because, as Villafañe (2004) affirms, "the reputation that is not communicates does not generate value, even if it exists" (p. 155). Each institution, in this case the university, needs to communicate the values on which its institutional reputation is built, that is, it must make its promise deliverable to its different stakeholders so that it generates reputation (Villafañe, 2018).

Altarana and Cortez (2015) state that reputational communication in universities will be aimed at highlighting its fundamental function, that of being an institution that generates and disseminates knowledge by addressing the problems of society. According to Villafañe and Carreras (2013), the university must communicate to its internal and external stakeholders its vision, mission, values and aspects to be valued so that they are recognized, such as relationship and recognition programs, message arguments (by public) and recognition management: prizes, rankings, indexes, certifications, among others. Thus, according to Villafañe and Carreras (2013), communication at the university generates reputation when it "discloses and transfers reputational strengths; transmit the commitments and explain how they are fulfilled; reinforces recognition of the university's achievements; maintains a balance between what we are and what we want to be" (p. 36).

Integral communication and content in digital environments

In 1977, Joan Costa first expressed the idea of integrating communications (Rivero, 2018), however, it was not until the year 2000 when comprehensive communication was recognized as a builder of culture and identity for institutions. (Arévalo, 2019).

Integral communication is framed as a strategic tool in order to establish identification guidelines and institutional reputation to differentiate itself within the competitive market (Romero and Tirado, 2008). A broad concept of integral communication for organizations is the one provided by Arévalo and Rebeil (2017, p. 14), who take as a reference the postulates of the Research Center for Applied Communication. Said concept refers to the social process that consists of the "production, processing and exchange of information, which internally and from an economic, political and cultural or social system is given the task of flowing and accelerating messages and interactions between all groups of interest, in three different dimensions", dimensions that in this case respond to internal or organizational communication (the participatory and effective contribution of its internal and external audiences); to corporate communication and public relations (contribution to the image and reputation of the organization); and, as a last dimension, marketing

communication (the products or services that the organization offers to society).

New technologies make communication tools available to organizations to create and share content from virtual environments. From this, integral digital communication is also contemplated, defined as: "The social process that integrates technology to make messages and interactions flow and accelerate between the organization or institution and its interest groups from production, processing or exchange of information" (Arévalo and Rebeil, 2017, p. 17). In this context of digital communication, it is necessary to attend jointly to all the interest groups of the institutions to contribute to the development of solid links between them and the organizations, through a common strategy and making use of new technologies with the greatest possible use to obtain an impact on its results, since the development of science and technology caused communication to focus on the exploration of new strategies to offer greater competitiveness for institutions, thus seeking a better and faster adaptation to the continuous changes in the environment (Arévalo and Ortiz, 2019). According to Berners-Lee (1996), the principle of the web, as a space for

action in the universe of global information through network technologies, suggests that this abstract space of interaction between users and interconnected pages of texts, images, audiovisual and other dimensional contexts, require a customization focused on improving the understanding of the participants to represent and relate organizational and individual properties of the information and contents that are communicated there in an integral manner. The web continues to provide a means of rapid dissemination of information, which is used by the institutions as a channel of communication and interaction between the people that integrate them, as well as with their interest groups in general.

♦ Methodological design The development of this work was carried out from a descriptive and heuristic research approach of literature review at the level of preliminary or primary studies (Bransford and Stein, 1993) to base and identify concepts, categories and dimensions of institutional identity, reputation and its impact on higher education institutions based on the information available on their websites, in order to design a conceptual model that describes the most representative indicators at the level of comprehensive communication to assess institutional web information from the identity and reputation in the digital context.

The descriptive research technique allows to systematize data that comes from various sources related to the phenomenon to be studied. This type of research allows shortening, ordering, classifying, that is, it seeks to make the most precise description possible of the phenomenon being studied (Tinto, 2013).

Literature review and preliminary foundation of referents

Regarding the concept of identity, main aspects that involve the study of university institutional identity were identified, highlighting the proposals of Blanco (2018), Cortés (2011) and Vallaeys (2008). In addition, the concept of identity was explored from the digital field, taking as reference Aparici and Osuna (2013), García (2012), Molina (2015) and Palomar (2017). In this tour, he highlighted a term that is the product of the accelerated popularity of digitalization, the internet and the wide use of technologies: "digital culture", in this regard, the contribution of authors such as Casillas and Ramírez (2019), Deuze (2006) and Lara (2009), who address digital culture in HEI.

Regarding the topic of reputation, study frameworks related to corporate reputation were reviewed, highlighting the contribution of Orozco-Toro and Ferré-Pavia (2017), who explore dimensions in evaluation models related to this area. From the analysis of such models, a coincidence was identified between the dimensions that comprise them, highlighting the quality of products and services, vision and leadership, social responsibility, economic and financial performance. Within this same study framework, Tavizón, Torres, Placeres, Ríos and Laines (2015) propose indicators of various rankings standards used to measure the quality of the HEI, pointing out as main indicators the academic and teaching quality, the infrastructure linked to the integral development of the student, the employability and prestige of the graduates, the social impact of the institution and the opinion of employers.

In addition, research exploring reputational communication in social networks was reviewed HEI. In this area, Altarana and Cortez (2015) and Villafañe and Carreras (2013) stand out, together with the reputational assessment work in the HEI developed by Villafañe (2018) in "The Reputation of Universities in Chile. Model of evaluation and management of the reputation of Chilean universities"; Sánchez (2017), in his study entitled: "Corporate reputation in the communication of Spanish university institutions through their websites"; Guzmán and Velásquez (2017), with the work called: "Corporate identity and reputation of the Pontificia Universidad Católica de Valparaíso: How is it projected among its potential students?"; and Meyer (2009), with the proposal: "Institutional reputation model for Higher Education Institutions in Puebla".

On the other hand, the concept of reputation was looked at from the digital field, that is, from digital reputation, taking as reference the following authors: De Pinedo (2017); López and Suárez (2018); Santamaria (2015); Seker, Cankir and Arslan (2014) and Villafañe & Asociados (2019).

At the website level, material was reviewed to identify information that would support the corporate website as an important space for disclosing information related to institutional identity and reputation. What was mentioned by Seker was consulted et al. (2014); Chun and Davis (2001); From Pinedo (2017); Moreno and Capriotti (2011); Segura-Marino et al. the (2020); Van Riel (2003) and Villagra (2002).

In accordance with the literature review of the aforementioned authors and references in corporate identity and reputation practices, the elements with qualitative components related to the strategic functions of integral communication were identified to establish a framework of considerations and delimit aspects with categories of importance at the level of comprehensive communication.

Consideration of functions and categories of integral communication aspects

The identity and reputation management processes of HEI show an increase in participation priorities in web digital communication environments within integral communication tasks (Segura-Mariño et al., 2020); That is why the assessment of the content provided on the website of the HEI and the aspects of communication at the internal, external and corporate level, are taken in this case as a starting point to observe the dimensions, also called "integral communication strategic functions", which refer to "a set of actions and procedures through which, a diversity of communication resources are deployed to support the work of the organizations" (Romero and Tirado, 2008, p. 146). In this way, the strategic functions of the integral communication of organizations (such as the case of HEI) are derived in the following three categorical aspects:

Internal communication aspects

They are categories that mainly encompass the communication that occurs within the organization, in the search to ensure the fulfillment of its functions, guided by what is established in the mission, vision and values of the institution. As a category of analysis for this study, the essential objective of the HEI, that is, what is established in the institutional philosophy, remembering that the corporate philosophy is recognized as the starting point for the management of institutional identity and reputation, in this case: the mission, vision and values of the organization (Alessandri, 2001; Capriotti, 2010). Likewise, Villafañe and Carreras (2013) are taken up again, who agree when mentioning that the particularities of the university expressed in its mission, vision and values serve to set a recognition objective that will serve as the first reference for the reputational management of the institution. Within this category are considered aspects of communication that take place within the institution and that favor reputational communication using the website of the HEI institution as a channel.

In this section, two analysis subcategories are established: "organizational objectives" and "internal communication", for which the dimensions of

"institutional philosophy" and "institutional communications and policies" correspond, respectively.

The organizational objectives-institutional philosophy focus on the assessment of three main aspects: vision, mission and values. These are relevant, since, through them, the HEI makes the common philosophy of the institution known to its stakeholders, which guides and outlines its identity and reputation.

On the other hand, internal communication-communications and institutional policies is aimed at evaluating aspects that are related to the internal communication of the HEI arranged on its website, contemplating mainly those that favor reputational communication.

Aspects of corporate communication

Here are the categories that group the coordination of the communication of intangible values that seek to create legitimacy of the institution through its identity, image, reputation and social responsibility. As a category of analysis, it focuses on evaluating the content published on the website of the HEI related to university institutional identity, digital culture, social responsibility and reputational communication. The proposed subcategories are: "institutional digital identity" and "institutional digital reputation".

The institutional digital identity considers two more dimensions: identity spheres and institutional digital culture, which evaluate, on the one hand, the main components that define the identity of the HEI, identity components that make up the being and the work of the institution and that help to consolidate the sense of belonging of the interest groups with the institution and promote its prestige and reputation. Also valued in this area are aspects that help define the position with which the HEI with their stakeholders from its website within the institutional digital culture. In this case, digital culture is an outstanding piece for the conformation of the institutional digital identity of a HEI.

Regarding the institutional digital reputation, it contemplates "social responsibility" and "reputational communication" as dimensions that focus on the evaluation of aspects of university work related to functions of a social and sustainable nature, actions that promote the definition and the strengthening of the institutional identity and reputation, while considering aspects that value the reputation of the institution, that is, aspects that require recognition by the interest groups of the HEI and that add value to the institution by building a reputation.

Aspects of external communication

This category includes aspects focused on the promotion of the institution's products and services with its stakeholders involved. As a category

of analysis, it is aimed at the specific treatment given to the stakeholders of the institution within the website of the HEI.

For this category, "interest groups" are determined as a subcategory, with two dimensions called "message per public" and "interrelation and discourse". These items contemplate the evaluation of aspects associated with the treatment made by the HEI from your website to your stakeholders. Villafañe and Carreras (2013) establish a hierarchy of classic interest groups of a university and ensure that this approach, which they call multistakeholder, It is useful to the university mainly to establish communication priorities, budget allocation and decision making. The hierarchy they identify places students first, then teachers, administrative staff third, employers fourth, pre-university and postgraduate students next, graduates sixth, and finally, in the last hierarchy, to the government, the media, the institutions, the directors of scientific journals and the parents of future students. The participation of interest groups is important for building the institution's reputation, since the recognition that it is capable of achieving HEI in its interest groups will influence the construction of its reputation as an institution.

♦ Results From the literature review and the aforementioned considerations, a conceptual model (see Figure 1) and indicators (see Table 1) are conceived, which correspond to the design and consideration of key elements with guidelines to assess the identity and digital institutional reputation of a HEI, through the content and information provided on its website from a comprehensive communication approach.



Figure 1. Category considerations model for diagnostic assessment guidelines of a HEI's digital institutional identity and reputation through the institutional information available on its website. Source: self-made.

Indicators

The indices that evaluate the corporate reputation of institutions traditionally use dimensions and attributes (Orozco-Toro and Ferré-Pavia, 2017). For this case, and according to the selection of aspects, categories, subcategories and dimensions, the following elements have been counted: three categories, five subcategories and eight dimensions, from which 57 indicators were proposed that correspond to statements that in set will guide the assessment and scoring of a HEI's digital identity and reputation through institutional information available on its website. The categories, subcategories, dimensions and indicators that make up the evaluation instrument are shown in Table 1. *Table 1.* Categories, dimensions and indicators for a diagnostic assessment of the identity and digital institutional reputation of a HEI through their website

Categories	Subcategories	Dimensions	Indicators
Internal communication aspects	Organizational goals	Institutional philosophy	-Discloses its institutional philosophy: Mission, Vision and Values. -Communicates its institutional philosophy in a clear, useful and realistic way. -Communicates its institutional Vision, where it declares its aspirational goal. -Communicates its institutional Mission, which defines the tasks to achieve its Vision. -It has a description of its Values linked to the Mission and Vision.
	Internal communication	Announcements and institutional policies	 -Shows some permanent institutional message from managers addressed to their internal staff, highlighting the corporate culture of the HEI. -Disseminates the objectives or aspirational goals of the main departments of the institution. - Discloses the Institutional Development Plan. - Discloses institutional regulations, such as school, academic and administrative regulations. -Discloses the corresponding regulations by faculties, areas or academic units that make up the institution. -Shows an organizational chart or organizational structure of the institution.
	Institutional digital identity	Identity areas	 -Discloses the succession of the main significant events that give evidence of the historical memory of the institution. -Shows the iconographic elements that distinguish it, such as: symbols, emblem, murals, monuments. -Disclose their traditions, events or ceremonies that are part of their institutional culture. - It makes known symbolic elements that foster its identity, such as: anthem, mascot, slogan or university motto, sports team, architectural spaces or cultural workshops. -Shows a distinctive visual image, where it is possible to clearly identify the name of the institution, its logo and the institutional colors. -Share your institutional graphic identity manual.
		Institutional digital culture	-Offers students and teachers access to databases of specialized magazines. -Services are provided for access to virtual libraries. -It has an institutional repository in "open access". -It makes known the collaborative work between virtual academic and research communities. -It makes evident the production and distribution of open educational resources. -Discloses the digital learning platforms available. -Offers students and teachers digital resources such as websites or digital mobile applications to facilitate, whether administrative, academic, educational or cultural processes linked to the institution. -Offers communication via email, instant messaging, social networks.

Aspects of corporate communication	corporate	Social responsibility	-Communicates actions or programs linked to poverty care or community work. -Promotes research towards actions to solve social or environmental problems. -It shows itself as an institution that promotes a respon- sible culture of sustainable development. -It shows itself as an inclusive and diverse institution. -Shows institutional transparency and public account- ability. - It has scholarship or student support programs.
		reputational communication	 -Discloses the variety of academic offerings it offers. -Discloses the academic preparation or teaching profile of its teachers. -Shows the infrastructure and complementary spaces that it provides for the study. -Communicates its institutional commitments and explains how they are fulfilled (institutional reports). -Communicates how the institution contributes to the economic, social and environmental impact. -Discloses the number of research centers and institutes it has. -Discloses the number of academic bodies or research groups that the institution has. -It makes evident the production of impact research, such as: the number of patents, citations in Journal Citation Reports-Institute for Scientific Information (jcr-isi) and publications in indexed journals. -Discloses the acodevents and recognitions of the university. -Communicates the certifications it has. -Discloses the agreements and recognitions of students and teachers. -Promotes the mobility or international links of students and teachers. -Promotes the generation of jobs that it manages. -Communicates the generation of jobs that it manages. -Communicates the outstanding participation of its graduates in the labor market.
External communication aspects	Interest groups	message by public	 -It has a section where it includes specific information aimed at students. -It has a section where it includes specific information addressed to teachers. -It has a section where it includes specific information addressed to administrative staff. -Contemplates information from and for the graduates of the institution. -Contemplates specific information addressed to its applicants.
		Interrelationship and discourse	-Share detailed information to get in touch with the departments of the institution, such as: telephone numbers, email, address. -Reflect a receptive attitude by allowing user comments or inviting them to be sent. -Discloses opinions about the institution issued by its interest groups (students, teachers, administrative staff or graduates). -The information that is communicated maintains a serious, informative, argued discourse.

Source: Self-made

Evaluation instrument with indicators

The measurement technique used by the instrument is the Likert scale. Five points on the scale or response options are contemplated that indicate how much you agree with the corresponding statement. The evaluation process for diagnostic purposes guides the evaluator to visualize the desirable scenarios to contribute to the development and consolidation of digital identity and reputation, through the contents available on the website of the HEI evaluated. Each indicator leads the evaluator to search for evidence, which, after a process of identification and appreciation, must be evaluated in the five possible ways established in the scale.

The content to be evaluated includes texts, images and multimedia content found within the website. To score each indicator of the evaluation instrument according to the established scale, value judgments will be made that will take into account the content and disposition of what is expressed in the indicator and its correspondence with what is exposed on the website of the HEI. To establish a clearer position in this regard, the assessment criteria can be consulted in Table 2, which seek to avoid the bias of compelling assessments during the evaluation exercise.

Table 2. Criteria, judgments and assessment scale of indicators for evaluation

Value judgments about:	Scale					
	Strongly disagree (1)	Disagree (2)	Inaccurate (3)	ОК (4)	Totally OK (5)	
Content (Identify that the website discloses what is established in the indicator)	None of the aspects contem- plated in the affirmation of the indicator are disclosed on the website.	Some of the aspects contem- plated in the affirmation of the indicator are disclosed only precariously on the website.	Several of the aspects contem- plated in the indicator's statement are disseminated on the website.	Most of the aspects contem- plated in the affirmation of the indicator are reported on the website it report consistently and accurately.	All aspects contemplated in the affirmation of the indicator are reported consistently and accurately on the web site.	
Provision (Assess access to easily locate and reach what is sought)	The information related to what is established in the indicator is not located on the website.	The information provided on the website regarding what is established in the indicator is difficult to locate. It is displayed on the main site or the user is redirected to an external site without explana- tion.	The information provided on the website regarding what is established in the indicator is not within the first three navigation levels of the main menu. It is displayed within the same website; however, the section that contains it immedi- ately redirects to an independent external site without prior explanation.	The information provided on the website related to what is established in the indicator is within the first three navigation levels of the main menu. It is displayed within the same website; however, the section that contains it immedi- ately redirects to an independent external site without prior explanation.	The information provided on the website related to what is established in the indicator is within the first three navigation levels of the main menu. It is displayed within the website itself, or at least provides an introduction or brief information on the topic before sending the user to a site outside the main one	

Source: Self-made

For the analysis, the indicators with scores that make up each dimension of the instrument are taken into account and the sum of the quantities obtained by each scale is made. To ensure that the number of the total score is in the continuum 1-5, the following formula is applied:

PT/NT

PT = equals the total score obtained for each dimension of the instrument

NT= is the number of indicators that each dimension contains

Thus, for example, if in the dimension "Institutional Philosophy" a total score of 22 points is obtained, this quantity in a continuum of 1-5, would be equivalent to 4.4, considering that the total number of indicators of that dimension is 5. Substituting with formula would be:

$$22/5 = 4.4$$

Once the total score in the 1-5 continuum is obtained, the minimum (1) and maximum (5) scores achieved by each dimension will indicate an unfavorable or favorable evaluation, respectively.

Assessment and diagnosis

The analytical reading of this assessment corresponds to five levels: absent, insufficient, acceptable, good and optimal, which are equivalent to a diagnostic assessment specified in Table 3. In said diagnostic assessment the term "good practices" is used, the which refers to the experience guided by guidelines that are recommended to be applied in specific contexts that seek favorable results in the development of tasks or processes. "Good practices have a high percentage of relevance in the success of organizations" (Torres, Vallejo and Burbano, 2019, p. 3), since they serve as a general framework for various situations, including project management; and they include guidelines and standards built from the experience of experts, with the intention of contributing and carrying out the objectives of a project (Ilieş, Crişan y Mureşan, 2010).

Table 3. Levels of the diagnostic assessment of identity and institutional reputation of the content of websites of HEI

Point interval	Assessment level obtained	Diagnosis
0-1	Absent	The content available on the website of the HEI does not participate with good communi- cation practices that contribute to the development and consolidation of its digital institutional identity and reputation.
1.1-2	Insufficient	The content available on the website of the HEI participates in a reduced way with good communication practices that contribute to the development and consolidation of its digital institutional identity and reputation.
2.1-3	Acceptable	The content available on the website of the HEI participates in a medium way with good communication practices that contribute to the development and consolidation of its digital institutional identity and reputation.
3.1-4	Well	The content available on the website of the HEI participates sufficiently with good communication practices that contribute to the development and consolidation of their digital identity and reputation.
4.1-5	Optimum	The content available on the website of the HEI participates fully with good communica- tion practices that contribute to the develop- ment and consolidation of its digital identity and reputation.

Source: Self-made

The results of the diagnostic evaluation of the website of the HEI are obtained for each dimension that integrates the evaluation instrument, with the intention of having a more specific approach by category. However, by averaging all the scores of the dimensions, a single figure with an overall assessment can be obtained.

Finally, it should be noted that the level of diagnostic assessment obtained is the result of two phases. The first qualitative assessment derives from the appraisals and annotations of the evaluator during the evaluation exercise carried out, while the second numerical weighting is the product of the observation and production of the evaluator's data recorded in the evaluation instrument and supported by the content of the tables. 2 and 3. It is important to note that the work presented is framed as a priority in explaining its conceptual development and instruments for its application, so its application to specific cases is considered for future improvement and validity work.

Conclusions The contents and information published on institutional websites of HEI Intangible elements of identity communication and digital institutional reputation result. Communities of interest and social (*stakeholders*) of the HEI demand official information from institutional websites given the bias of informality suggested by social networks and third parties that make up their external image network.

> The design and adaptation of the valuation model of institutional information of web sites of HEI provides a proposal to standardize a method and a scheme of consideration of good practices of the essential sections and contents at the level of information to achieve a significant impact and the maintenance of the institutional identity in a solid way, articulating the institutional visibility before the external reputation that it generates from its public image.

> The consideration of the systematic scenarios for the assessment of institutional digital identity and reputation of HEI of the proposed model affects, mainly, evaluation indicators that consider and define categorical areas and dimensions of specific content typologies, which are considered necessary to take into account in accordance with the critical mass of references in the field of corporate identity and institutional, as well as in the predictive and adaptive elements of information transparency control as a reputational reference.

> The indicators considered have been screened with a system of diagnostic criteria and valuation weightings in order to estimate whether the source of content and institutional information, such as the website, complies with the principles and good information practices regarding institutional identity management. indoors, and whether it achieves a reputation as a pragmatic exercise in outdoor exposure. Both (identity and reputation) have been evaluated according to the availability of these contents at a public level, seeking to minimize and stabilize the information gaps that polarize the interpretation of the image and the integrated communication actions of the HEI.

> The website of a HEI as a strategic identity and reputational communication tool, it needs to be seen as a substructure within the general structure that integrates that institution; It must operate with actions that contribute from an integrating vision to the realization of common goals to achieve the established institutional purposes. Identity is an intangible asset that is managed within a HEI, the image is the result of the public exposure of the identity, and the binding element of both is the

reputation, which grants values according to its correct management in digital communication environments, when the source of origin supports the context of its marketing strategy. communication. ©

References Alessandri, S. (2001). Modeling Corporate Identity: A Concept Explication And Theoretical Explanation. Corporate Communications, 6(4), 173-182. https:// doi.org/10.1108/EUM000000006146

> Altarana, T. & Cortez, C. (2015). La gestión de la reputación digital en las universidades: Twitter como herramienta de la comunicación reputacional en las universidades peruanas. *Revista de Comunicación*, (14), 26-47. Recovered on May 13th, 2021 from https://dialnet.unirioja.es/servlet/ articulo?codigo=5223790

> Aparici, R. & Osuna, S. (2013). La Cultura de la Participación. *Revista Mediterránea de Comunicación, 4*(2), 137-148. Recovered on May 13th, 2021 from https://rua.ua.es/dspace/bitstream/10045/34243/5/ReMedCom_04_02_07.pdf

- Arévalo, R. (2019). Comunicación integral para las organizaciones. Liderazgo y creación de valor. Salamanca, España: Comunicación Social. Ediciones y Publicaciones.
- Arévalo, R. & Ortiz, H. (2019). Comunicación organizacional web de la ética en las organizaciones del tercer sector. *El profesional de la información*, 28(5), 1-11. Recovered on May 13th, 2021 from http://profesionaldelainformacion.com/contenidos/2019/sep/arevalo-ortiz.pdf
- Arévalo, R. & Rebeil, M. (2017). *Responsabilidad social en la comunicación digital organizacional.* México: Tirant Humanidades.
- Berners-Lee, T. (1996). The World Wide Web: Past, Present and Future. Recovered on December 7th, 2021 from https://www.w3.org/People/ Berners-Lee/1996/ppf.html
- Blanco, T. (2018). La construcción de la identidad corporativa en las universidades españolas. Revista Internacional de Ciencias Sociales y Humanidades, SOCIOTAM, 28(2). Recovered on December 7th, 2021 from https://www.redalyc.org/journal/654/65458498006/html/
- Bransford, J. & Stein, B. (1993). *The Ideal Problem Solver*. New York: W. H. Freeman and Company.

Campoverde-Molina, M., Luján-Mora, S. & Valverde, L. (2021). Accessibility of University Websites Worldwide: A Systematic Literature Review. *Universal Access in the Information Society*. https://doi.org/10.1007/s10209-021-00825-z

- Capriotti, P. (2010). Branding Corporativo: Gestión estratégica de la identidad corporativa. *Revista Comunicación*, (27), 15-22. Recovered on December 5th, 2021 from http://www.bidireccional.net/Blog/UPB2010.pdf
- Casillas, M. & Ramírez, A. (2019). Cultura digital y cambio institucional de las universidades. *Revista de la Educación Superior RESU-ANUIES, 48*(191), 97-111. Recovered on December 7th, 2021 from http://www.scielo.org.mx/pdf/resu/v48n191/0185-2760-resu-48-191-97.pdf
- Chun, R. & Davis, G. (2001). E-Reputation: The Role of Mission and Vision Statements in Positioning Strategy. *The Journal of Brand Management*, 8(4), 315-333. Recovered on December 10th, 2021 from https://link. springer.com/article/10.1057/palgrave.bm.2540031
- Cortés, D. (2011). Aportes para el estudio de la identidad institucional universitaria: El caso de la UNAM. *Perfiles Educativos, 33* (spe), 78-90. Recovered on December 8th, 2021 from http://www.scielo.org.mx/pdf/peredu/ v33nspe/v33nspea8.pdf
- De Pinedo, I. (2017). La reputación corporativa digital. Propuesta metodológica de un modelo de medición [tesis doctoral]. Madrid: Universidad Complutense de Madrid. Recovered on September 10th, 2021 from de https://eprints. ucm.es/40823/1/T38254.pdf
- Deuze, M. (2006). Participation, Remediation, Bricolage: Considering Principal Components of a Digital Culture. *The Information Society*, *22*(2), 63-75. https://doi.org/10.1080/01972240600567170
- Dipa, A., Hafiar, H. & Rahmat, A. (2021). Website Accessibility 3 Best Universities in West Sumatra Regarding Online Reputation. Nyimak Journal of Communication, 5(2), 295-309. Recuperado el 10 de octubre de 2021 de http://103.131.16.137/index.php/nyimak/article/view/4203
- García, J. (2012). Movilidad y cambio social. Identidad híbrida en la era post-PC. *Revista Telos. Cuadernos de Comunicación e Innovación,* (91), 89-95. Recuperado el 25 de octubre de 2021 https://www.fundaciontelefonica. com.mx/cultura_digital/publicaciones/telos-91/253/#close
- Guzmán, S. & Velásquez, C. (2017). Identidad y Reputación Corporativa de la Pontificia Universidad Católica de Valparaíso: ¿Cómo se proyecta entre sus potenciales estudiantes? [Bachelor's degree thesis]. Chile: Pontificia Universidad Católica de Valparaíso. Recovered on October 17th, 2021 from http://opac.pucv.cl/pucv_txt/txt-6500/UCD6723_01.pdf
- Habermas, J. (1987). Teoría de la acción comunicativa, I. Racionalidad de la acción y racionalización social. Taurus.

Ilieş, L., Crişan, E. y Mureşan, I. (2010). Best Practices in Project Management. Review of International Comparative Management, 11(1), 43-51.

Recovered on December 10th, 2021 from https://www.researchgate. net/publication/46567671_Best_Practices_in_Project_Management

- Jensen, T. (2019). Higher Education in the Digital Era: The Current State of Transformation Around the World. International Association of Universities (IAU). Recovered on December 8th, 2021 from https://iau-aiu.net/ IMG/pdf/technology_report_2019.pdf
- Lara, T. (2009). El papel de la Universidad en la construcción de su identidad digital. Revista de Universidad y Sociedad del Conocimiento (RUSC), (6), 15-21. Recovered on May 13th, 2021 from https://dialnet.unirioja.es/servlet/articulo?codigo=2938407
- López, L. & Suárez, D. (2018). Gestión de crisis en la era digital: La importancia de la comunicación organizacional en la web 2.0 para el fortalecimiento de la reputación corporativa online, caso Bavaria S. A. [tesis doctoral]. Colombia: Universidad Autónoma de Occidente. Recovered on May 25th, 2021 from http://hdl.handle.net/10614/10462
- Margulies, W. (2003). Make the Most of Your Corporate Identity. En J. Strachey (Ed. and Trans.), *Revealing the Corporation: Perspectives on Identity, Image, Reputation, Corporate Branding and Corporate-Level Marketing.* United Kingdom: Routledge. (Original work published in 1977).
- Meyer, J. (2009). Imagen y reputación en las organizaciones: Hacia un modelo de reputación en las instituciones de educación superior de Puebla. En J. Meyer (Ed.), *Comunicación Estratégica: Nuevos horizontes de estudio* (pp. 112-136). México: Fundación Manuel Buendía/UPAEP.
- Miotto, G., Del-Castillo-Feito, C. & Blanco-González, A. (2019). Reputation and Legitimacy: Key Factors for Higher Education Institutions' Sustained Competitive Advantage. *Journal of Business Research*. 12, 342-353. https:// doi.org/10.1016/j.jbusres.2019.11.076
- Molina, J. (2015). Recorrido por dos ámbitos identitarios: Universidad y ciberespacio. Revista *Lasallista de Investigación*, 12(2), 204-214. Recovered on September 25th, 2021 from https://www.redalyc.org/articulo. oa?id=695/69542291021
- Moreno, A. & Capriotti, P. (2011). La comunicación de las empresas españolas en sus webs corporativas. Análisis de la información de responsabilidad social, ciudadanía corporativa y desarrollo sostenible. ZER: Revista de Estudios de Comunicación = Komunikazio Ikasketen Aldizkaria, 11(21). Recovered on May 18th, 2021 from https://ojs.ehu.eus/index.php/Zer/ article/view/3718
- Orozco-Toro, J. & Ferré-Pavia, C. (2017). Los índices de medición de la Reputación Corporativa en la cadena de valor de las empresas de comuni-

cación, una propuesta. Austral Comunicación, 6(2), 229-252. https://doi. org/10.26422/aucom.2017.0602.oro

- Palomar, J. (2017). La construcción colaborativa de la identidad digital en las administraciones públicas. GIGAPP *Estudios Working Papers*, 4(66), 326-339. Recovered on October 16th, 2021 from http://www.gigapp.org/ewp/index.php/GIGAPP-EWP/article/view/76
- Pérez, M. (2012). Identidad digital. Revista Telos. Cuadernos de Comunicación e Innovación, (91), 55-58. https://telos.fundaciontelefonica.com/archivo/ numero091/identidad-digital/
- Piazzo, V. (2012). Crisis en la web 2.0: Gestión de la comunicación para preservar la imagen y la reputación organizacional online. [PhD thesis]. Barcelona: Universidad Autónoma de Barcelona. Recovered on September 18th, 2021 from https://core.ac.uk/download/pdf/13325508.pdf
- Rivero, M. (2018). De la Comunicación Organizacional a la Comunicación Integral con perspectiva estratégica. 1-39. Doi 10.13140/ RG.2.2.19306.98244
- Rodrich, R. (2012). Fundamentos de la comunicación institucional: Una aproximación histórica y conceptual de la profesión. *Revista de Comunicación*, (11), 212-234. Recuperado el 24 de mayo de 2021 de https://dialnet.unirioja.es/servlet/articulo?codigo=4508714
- Romero, M. y Tirado, L. (2008). Comunicación integral para el posicionamiento de la imagen corporativa en instituciones de educación superior. *Centro de Investigación de Ciencias Administrativas y Gerenciales, 5*(2), 32-57. Recovered on November 26th, 2021 from http://ojs.urbe.edu/index.php/ cicag/article/view/461
- Sánchez, D. (2017). La reputación corporativa en la comunicación de las instituciones universitarias españolas a través de sus sitios webs [PhD thesis].
 Murcia: Universidad Católica de Murcia. Recovered on October 18th, 2021 from http://repositorio.ucam.edu/handle/10952/2635
- Santamaría, F. (2015). Identidad y reputación digital. Visión española de un fenómeno global. Ambiente Jurídico, (17), 11-44. Recovered on September 4th, 2021 October 2021 from https://revistasum.umanizales.edu.co/ ojs/index.php/Ambientejuridico/article/view/1570
- Segura-Mariño, A., Piñeiro-Naval, V. & Moreira-Cedeño, C. (2020). Metodología para evaluar la comunicación institucional en sitios web universitarios. Estudios sobre el Mensaje Periodístico, 26(3), 1217-1228. https://doi. org/10.5209/esmp.65418

Seker, S., Cankir, B. & Arslan, M. (2014). Information and Communication Technology Reputation for XU030 Quote Companies. *International Jour-*

nal of Innovation, Management and Technology, 5(3), 221-225. Recovered on May 30th, 2021 from https://arxiv.org/abs/1406.5073

- Tavizón, A., Torres, A., Placeres, S., Ríos, J. y Laines, C. (2015). Las perspectivas del impacto de las ies en la comunidad y su prestigio: Instrumento preliminar. *Vincula Tégica EFAN*, 1(1), 965-990. Recovered on June 15th, 2021 from https://www.researchgate.net/publication/324970503_LAS_ PERSPECTIVAS_DEL_IMPACTO_DE_LAS_IES_EN_LA_COMUNIDAD_Y_ SU_PRESTIGIO_INSTRUMENTO_PRELIMINAR
- Tinto, J. (2013). El análisis de contenido como herramienta de utilidad para la realización de una investigación descriptiva. Un ejemplo de aplicación práctica utilizado para conocer las investigaciones realizadas sobre la imagen de marca de España y el efecto país de origen. *Provincia*, 29, 135-173. Recovered on October 30th, 2021 from https://www.redalyc.org/ pdf/555/55530465007.pdf
- Torres, O., Vallejos, A. & Burbano, J. (2019). Buenas prácticas de gestión administrativa en empresas de servicios en la ciudad de Ibarra. *Revista Dilemas Contemporáneos: Educación, Política y Valores,* VII, 1-11. Recovered on October 16th, 2021 from https://www. dilemascontemporaneoseducacionpoliticayvalores.com/index.php/ dilemas/article/view/1043/122
- Vallaeys, F. (2008). Responsabilidad social universitaria: Una nueva filosofía de gestión ética e inteligente para las universidades. Revista Educación Superior y Sociedad: El movimiento de responsabilidad social de la universidad: Una comprensión novedosa de la misión universitaria. Publicación del IE-SALC/UNESCO, 13(2), 191-220. Recovered on September 10th, 2021 from https://www.iesalc.unesco.org/ess/index.php/ess3/issue/view/37/38
- Van Riel, C. (2003). The Management of Corporate Communication. En M. Balmer y S. Greyser (Ed. and Trans.), *Revealing the Corporation: Perspectives on Identity, Image, Reputation, Corporate Branding and Corporate-Level Marketing.* United Kingdom: Routledge.
- Villafañe, J. (2004). La buena reputación. Claves del valor intangible de las empresas. Madrid: Ediciones Pirámide.
- Villafañe, J. (2018). La reputación de las universidades en Chile. Modelo de evaluación y gestión de la reputación de las universidades chilenas. Santiago de Chile: Estudio de comunicación. Recovered on September 10th, 2021 from http://www.villafane.com/publicaciones/la-reputacion-de-las-universidades-en-chile/
- Villafañe & Asociados. Consultores. (2019). *Reputación online (IRON)*. Recovered on December 15th, 2019 from http://www.villafane.com/reputacion-corporativa/#reputacion-online-iron

- Villafañe, J. & Carreras, E. (October 17th-18th, 2013). La reputación de las universidades: Clave para su gestión [conference]. xxiv Jornadas de Formación augac "Rankings y reputación universitaria". La Rioja, España. https://aps.unirioja.es/apnoticias/servlet/Noticias?codnot=7209&accion=detag&month=1&year=2021
- Villagra, N. (2002). La presencia de los valores corporativos en internet: Un análisis aplicado al caso español [tesis doctoral]. Madrid: Universidad Complutense de Madrid. Recovered on October 18th, 2021 from https:// eprints.ucm.es/id/eprint/4397/

Solution About the authors Xóchitl Marissa Dávila Ordoñez

Degree in Graphic Design from the Faculty of Architecture, Design and Urbanism (FADU), Master in Design with emphasis in Digital Design and PhD in Communication, degrees obtained by the Autonomous University of Tamaulipas (UAT). He has collaborated in publications and research articles on design and education issues. In the field of teaching, he has participated with different universities, such as the Instituto de Estudios Superiores de Tamaulipas (IEST-ANAHUAC), Universidad del Noreste (UNE) and the Universidad Interamericana para el Desarrollo (UNID). Since 2004 he has been active in the fadu-uat, where she was career coordinator of Graphic Design, and where she currently continues as a tutor, teacher and collaborator of the consolidated academic group of Art, Theory and Heritage Conservation.

David Alonso Leija Román

Graduate in Communication Sciences from the Autonomous University of Tamaulipas, Master's Degree in Business and Institutional Communication Management from the Autonomous University of Barcelona, Master's Degree in Digital Content Management and PhD in Information and Documentation in the Knowledge Society, both from the University from Barcelona, Spain. From 1997 to 2011 he worked in the media (Multimedios Estrellas de Oro, Milenio Diario, Radio Grupo del Golfo, Grupo Imagen) and creative advertising agencies and media as a supplement information editor, creative publicist and audiovisual documentarian. Since 2000, she has actively collaborated as a teacher at the Autonomous University of Tamaulipas in the area of graphic design, information management and communication. As of 2012, his professional activity focuses on academic research related to the dissemination of strategies, actions and policies to facilitate the management, architecture and long-term digital preservation of information and design of digital content of cultural, historical and academic heritage. He is a member of the SNI from CONACYT, from the Digital Preservation Group UNAM in the Library and the National Newspaper Library of Mexico, as well as the consolidated academic group Art, Theory and Heritage Conservation of the

Faculty of Architecture, Design and Urbanism (FADU) in the UAT. Since 2017, he has chaired the Ibero-American Association for Digital Preservation (APREDIG), a non-profit organization dedicated to spreading the importance of digital preservation.

Ma. Luisa Montes Rojas

Degree in Graphic Design from the Faculty of Architecture, Design and Urbanism of the Autonomous University of Tamaulipas. She is a teacher in Communication Sciences from the uanl and PhD in Communication from Pompeu Fabra University (UPF) Barcelona, where he collaborated in the Scientific Communication Research Group (GRECC). She was a scholarship holder of the Program to Encourage Creation and Artistic Development of Tamaulipas (PECDA) in 2013 and a CONACYT scholarship holder to carry out doctoral studies abroad in 2014. Her work experience has been developed in different collaborative entrepreneurship projects, such as Salud Tampico, Decora Vinil and PromoPyme. In the private sector, he has worked at Grupo Imagen Radio and Insert Media Target. In the field of teaching, he has collaborated with different universities in the Mexican Republic, such as the Centro de Estudios Superiores de Diseño de Monterrey (CEDIM) and the Regiomontana University (UR) and Arte A. C. Since 2007 and up to date, she is a full-time research professor at the FADU-UAT, where he collaborates with the Academic Group of Design and Sustainable Building. She is also a professor of the master's degree in Communication at the Faculty of Law and Social Sciences (FADYCS) from the uat and member of the SNI.



This work is licensed under a Creative Commons license. Attribution-NonCommercial-NoDerivative Work 4.0 International