Supervised Analysis To Know The Opinion About The Research Seedbed Of The Norte De Santander Node On Facebook

Albert Miyer Suarez Castrillón[1], Sir-Alexci Suarez Castrillon[2], Marta Milena Peñaranda Peñaranda[3]

[1] Faculty of Engineering and Architecture, GIMUP Research Group. Universidad de Pamplona, Colombia.

[2] Faculty of Engineering, GRUCITE Research Group, University Francisco de Paula Santander Ocaña, Colombia

[3] Master in Organizational Management. Researcher of the GIDSE group. University Francisco de Paula Santander Ocaña, Colombia.

ABSTRACT

The opinion of the members of the research seedbeds of a departmental node is very important, because it reflects the confidence about the events, training and planning of the node for their representations. Each departmental node is composed of different institutions at higher, middle and basic levels; and each institution has groups with research groups composed of students, which are led by a teacher. That is why this research analyzes the image that the Norte de Santander Node may have, analyzing the node's own messages as an institution and the opinions of its members as users. The results are totally positive on the part of the users, demonstrating the good functioning of the node with the educational institutions.

Keywords: Research seedbed; Norte de Santander Node, RedCOLSI, formative research.

1. INTRODUCTION

The Colombian network of research seedbeds (RedCOLSI), is the Colombian non-profit entity which encompasses a scientific movement that expands throughout the country, where teachers and students are linked, representing institutions of higher, middle and basic education (RedCOLSI, 2021). It has 21 nodes throughout the country, and each node brings together different institutions within its area of coverage, for example the node of the capital Bogotá (Redcolsibogota, 2021), keeps updated information of its events through the social network Facebook, and so do different nodes of the country. The research is divided into scientific and formative where each seedbed with its members present their research through a paper, which is evaluated by jurors at the local level, and then move on to the departmental and then the national level, which is held at a venue previously selected by all the nodes that make it up.

By making a national event and with so many competing institutions, the final selection of each work is a great recognition for the winning students, which raises the quality and representation of their institutions, as an achievement obtained from research; that is why the institutions make public every time they achieve excellent results (Americana, 2021; Universidad-Ibaque, 2022; UTADEO, 2017). The network maintains values and organization that is growing every year, with the incorporation of more institutions.

The research seedbeds become an opportunity in undergraduate as they are alternative scenarios for education, favor personal relationships and promote interdisciplinarity (Saavedra-Cantor et al., 2015). The benefits are both individual, collective and institutional, due to the effort made by teachers and students in the classroom, allowing to solve everyday problems, and also helps to better understand the different subjects in a more practical way (Jojoa, 2021). However, maintaining a seedbed is a difficult task, due to the fact that there is no score or valuation of the subject as such, and the academic resources, finances and time of the student and teacher must be in some occasions by their own conviction towards research. The experiences, challenges and planning is an essential part of the success of the seedbed, since the permanence of the student in the group and the participation with good research projects depend on it, some researchers publish their experiences (López-Ríos et al., 2016), and thus be able to help other teachers who start in the creation of these research groups.

The boom and the amount of projects that are being formed in the seedbeds is so great that student publications increase the research and repercussion of an institution, with which publications are created to provide knowledge of the results of the projects through calls for publication, for example in the Pedagogical and Technological University of Colombia has the publication of Habitus publishing relevant articles in their thematic areas (Ojeda-Pérez, 2021; Rodríguez-Díaz et al., 2021; Torres et al., 2021). Escuela Militar de Cadetes "General Jose María Córdova", also has a publication called Revista Brujula, which publishes formative works, focused on the training of future officers of the Colombian army, with topics covering areas of administration, technology, systems, among others (Rodríguez et al., 2021; Sierra-Zamora et al., 2021). There are even seedbeds that have their own publication, as is the case of the Semillero de Investigación en Familia and the Grupo de Investigación GESI, at the Universidad de los llanos (GESI, 2021), with a wide coverage of topics in Health Sciences and Social Sciences, for students, graduates and professionals, accepting articles in different languages (Baquero-Sanz, 2021; León-Pinzón et al., 2021; Téllez-Gordo & Garcés-Castañeda, 2021).

The objective of this research is to analyze the messages of the seedbeds that belong to the Norte de Santander Node, through the messages they write on the Facebook platform, and thus know the impression of the users, visitors who are members of the seedbeds of this Colombian region (Norte de Santander Node, 2022). Among the institutions that compose it are the Universidad Francisco de Paula Santander with its two branches in Cúcuta and Ocaña, Universidad de Pamplona, FESC, Universidad Libre, among others, and institutions such as Técnico Jorge Gaitán Duran, Instituto Técnico Nacional de Comercio de Cúcuta, Escuela Normal Superior María Auxiliadora, among others.

2. METHODOLOGY

A supervised learning is used on messages on the social network Facebook, referring to the research seedbeds of the Department of Norte de Santander, for this each message obtained must be stored and perform a pre-processing that includes first the normalization of uppercase and lowercase, elimination of Stopwords that are not important in the messages (Conjunctions, pronouns, prepositions), then the text is performed and converted by dividing each word into a token to form a vector or list, using the boundary that divides each word as the white space and then classified to know the opinion in each message, which can be positive or negative (Figure 1).

Each opinion or message is extracted from the official website of the node in the social network Facebook, to subsequently analyze each sentence and word. And it is analyzed in two different ways through the complete sentence and individually by the value of each word, likewise, the institutional messages and the users' opinion messages are analyzed; selecting the most relevant ones according to Facebook in the framework of the Departmental Meeting 2021 and 2022.
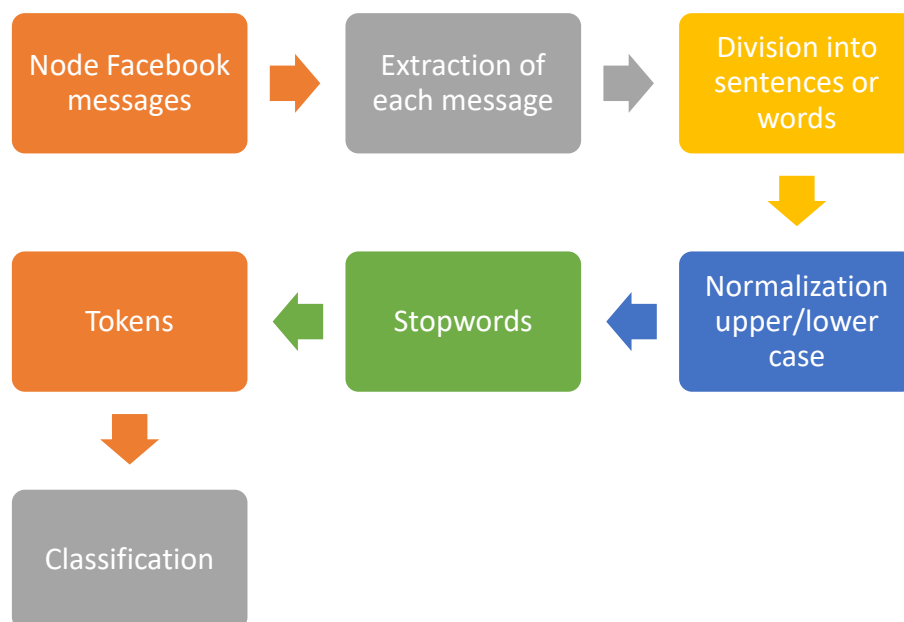

Figure 1. Message analysis process.

3. RESULTS

After performing the classification, it is determined whether each sentence of the messages has a positive or negative value. In Table 1, it can be determined that the institutional messages are short and composed with an average of 2 sentences and that they do not exceed 3 sentences at the most, they are presented at the beginning with a more neutral message and end in the same way when they exceed 2 sentences, while in the middle of the messages the sentences are more positive. Although there are messages that are neutral, no negative message was presented, so that the Node shows that it is performing its functions in an orderly manner and fulfilling the duties and events it must perform.

Table 1. Institutional messages per sentence.

	Value per sentence		
Message number	1	2	3
1	Neutral	Positive	Neutral
2	Neutral	Neutral	
3	Neutral	Positive	Neutral
4	Neutral		
5	Positive	Positive	
6	Neutral	Neutral	Neutral
7	Positive	Positive	
8	Positive	Positive	
9	Neutral		
10	Neutral	Positive	

In Table 2, it can be seen that the opinions of users visiting the social network are quite short and precise, almost all are 1 sentence long and usually reach 7 tokens, and all are absolutely positive, implying the good position of the node before teachers, students and visitors of the Social Network, determining that the events have been satisfactory for all educational institutions, reflecting constant successes.

Table 2. User opinions by sentence.

	Value per sentence		
Message number	1	2	3
1	Positive		
2	Positive		
3	Positive		
4	Positive	Positive	
5	Positive		
6	Positive		
7	Positive		
8	Positive		
9	Positive	Positive	Positive
10	Positive	Positive	

In Figure 2, we can compare the two groups of text analysis, based on institutional messages and user opinions, the comparison is clear, where users maintain a positive opinion constantly and with high values, while institutional messages maintain an average between positive and neutral, it is also perceived that the data do not present negative values in any of the two groups, with which the Node is perceived favorably in the Department, improving the brand as such.
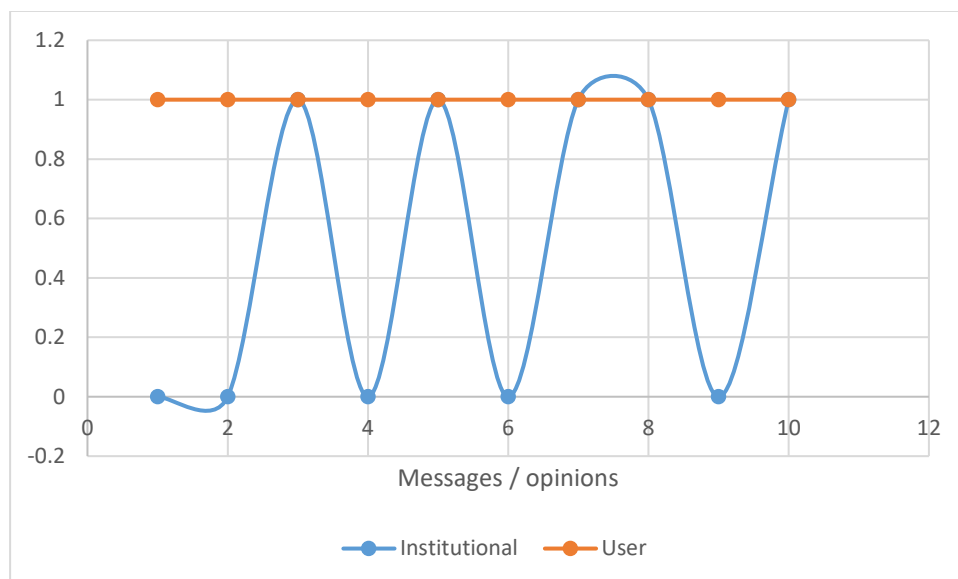
Figure 2. Messages vs. opinions.

4. CONCLUSIONS

Knowing the opinions of the users and affiliates of a departmental node of seedbeds, allows to know if the functions and events that are carried out are meeting the objectives. After analyzing the Norte de Santander node, and the institutional messages and opinions, it is observed that the users that integrate the node show a totally positive message towards the node, supporting the events and trainings, generating confidence among students and teachers of each institution, as well as socializing each participation, recognition or award that they achieve in the projects and presentations.

REFERENCES

Americana. (2021). 3 proyectos de investigación de la Americana entre los más destacados por La Fundación Red Colombiana de Semilleros de Investigación (Redcolsi) en evento a nivel nacional | Agencia de Noticias Americana. https://americana.edu.co/barranquilla/agencia-noticias/redcolsi/

Baquero-Sanz, G. (2021). Pódcast como herramienta de alfabetización en salud: Una experiencia. Boletín Semillero de Investigación en Familia, 3(2). https://doi.org/10.22579/27448592.823

GESI. (2021). Boletín Semillero de Investigación en Familia. https://revistas.unillanos.edu.co/index.php/bsif

Jojoa, H. A. (2021). Semilleros de investigación: Una mirada general desde lo individual y colectivo. Revista Universitaria de Informática RUNIN, 9(12), Art. 12.

León-Pinzón, E. Y., Loboa-Rodríguez, N. J., & Ramírez-Ramírez, Y. A. (2021). Perfil epidemiológico y clínico de personas hospitalizadas por VIH/sida en el departamento del Meta, Colombia. Boletín Semillero de Investigación en Familia, 3(2). https://doi.org/10.22579/27448592.811

López-Ríos, J. M., Salas-Zapata, L., Ossa-Estrada, D. A., Saldarriaga-Franco, J. F., & Martínez-Herrera, E. (2016). Identidad, vivencias y retos de un semillero de investigación para la

salud pública en Colombia. Iatreia, 29(1), 27-38. https://doi.org/10.17533/udea.iatreia.v29n1a03

Nodo Norte de Santander. (2022). Redcolsi Norte de Santander. https://es-la.facebook.com/people/Redcolsi-Norte-de-Santander/100068457018291/

Ojeda-Pérez, Z. (2021). El EnIIU, un escenario multidisciplinar de divulgación científica para semilleros y jóvenes investigadores de Boyacá, Colombia. Revista Habitus: Semilleros de investigación, 1(2), Art. 2. https://doi.org/10.19053/22158391.13591

RedCOLSI. (2021). RedCOLSI. https://web.redcolsi.org/

Redcolsibogota. (2021). RedCOLSI Nodo Bogota-Cundinamarca. https://www.facebook.com/redcolsibogota

Rodríguez, A. S., Ariza, S. E. C., & Hernández, A. H. H. (2021). Aplicación de tecnologías de realidad aumentada en procesos logísticos militares: Una revisión de literatura. Brújula Semilleros de Investigación, 9(18), Art. 18. https://doi.org/10.21830/23460628.95

Rodríguez-Díaz, J. C., Espinosa-Sarmiento, A. L., & Quintero-Gamboa, Y. F. (2021). Desarrollo de modelo de rotor Darrieus para banco eólico de eje vertical. Revista Habitus: Semilleros de investigación, 1(2), Art. 2. https://doi.org/10.19053/22158391.12173

Saavedra-Cantor, C. J., Muñoz-Sánchez, A. I., Antolínez-Figueroa, C., Rubiano-Mesa, Y. L., & Puerto-Guerrero, A. H. (2015). Semilleros de investigación: Desarrollos y desafíos para la formación en pregrado. Educación y Educadores, 18(3), Art. 3. https://educacionyeducadores.unisabana.edu.co/index.php/eye/article/view/4980

Sierra-Zamora, P. A., Gómez, A. P., & Aldana, E. A. C. (2021). Facultad de Administración Logística de la Escuela Militar de Cadetes "General Jose María Córdova": Orígenes, desarrollo, perspectivas. Brújula Semilleros de Investigación, 9(18), Art. 18. https://doi.org/10.21830/23460628.101

Téllez-Gordo, M. C., & Garcés-Castañeda, G. E. (2021). Los adultos mayores de Puerto López, Colombia: Una perspectiva desde la salud. Boletín Semillero de Investigación en Familia, 3(2). https://doi.org/10.22579/27448592.822

Torres, K. M., Alvarado, N. G., & Alfonso, N. E. (2021). Tipología de visitantes a destinos de turismo religioso desde la producción científica. Revista Habitus: Semilleros de investigación, 1(2), Art. 2. https://doi.org/10.19053/22158391.12176

Universidad-Ibaque, C. (2022). 98 puntos y una idea de dureza al encuentro nacional RedColsi. https://www.unibague.edu.co/noticias-institucionales/3769-98-puntos-y-una-idea-de-dureza-al-encuentro-nacional-redcolsi

UTADEO. (2017). Semillero Interpretantes. Universidad de Bogotá Jorge Tadeo Lozano. https://www.utadeo.edu.co/tadeo-caribe/link/investigacion-en-utadeo-caribe/211146/semillero-interpretantes