







Anatomy from A to Z - Unraveling anatomical terminology on social networks: An experience report

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ABSTRACT

The medical terms used in morphology were derived from proper nouns to honor those who discovered or presented the anatomical structure, known as eponyms. In 1989, anatomists founded the Federative International Program on Anatomical Terminologies (FICAT) to unify anatomical language and facilitate the teaching process by reviewing eponyms and updating nomenclature. Intending to present the fundamentals and knowledge about the origin of anatomical terminologies on social media, the Academic League of Anatomy at the Federal University of Alfenas (LAANAT/UNIFAL-MG), through the extension project "Anatomy from A to Z" disseminated scientific knowledge about anatomical etymology. Weekly posts were made on Instagram and Facebook, based on publications elaborated by the League members, supervised by the professors, and developed on the Canva application. Each post sequentially followed the letters of the alphabet (from A to Z) and consisted of the etymology of two anatomical structures. In analyzing the data, we observed that in 23 publications, we achieved 712 likes, 194 shares, 44 saved posts, 4739 reached accounts, and 6608 prints. LAANAT promoted, clearly and objectively, the dissemination of knowledge of anatomical terminologies to the general public.

Keywords: Anatomy, Etymology, Eponyms, Medicine.

INTRODUCTION

The terminology used in medical publications varies among different authors and different journals. The lack of uniformity compromises the reproducibility of words since multiple variations are created, each following the ideology deemed appropriate. Furthermore, it poses difficulties in conducting keyword-based research, given that the same structure may have multiple spellings (NOVAK, GIOSTRI, & NAGAI, 2008)¹.

The anatomical terminology serves as the foundation for medical communication. It is a developed terminology written in Latin, containing terms derived from both Greek and Latin languages. Its history dates back to 1895 when the first Latin anatomical nomenclature was published as *Basiliensia Nomina Anatomica*. This was followed by seven revisions (*Jenaiensia Nomina Anatomica* 1935, *Parisiensia Nomina Anatomica* 1955, *Nomina Anatomica* 2nd to 6th editions 1960-1989). The latest revision, *Terminologia Anatômica* (TA),

created by the Federative Committee on Anatomical Terminology and approved by the International Federation of Associations of Anatomists, was published in 1998². In addition to the official Latin anatomical terminology, it includes a list of recommended English equivalents (Kachlik et al., 2008)³.

The teaching and learning process of morphological aspects in Human Anatomy presents a challenging and difficult character because memorizing extensive structures with complex terms often makes the task monotonous and discouraging for most students when not delivered in a more participatory manner (Ramos et al., 2008)⁴. Souza and Pires (2013)⁵ emphasize that despite efforts to facilitate the learning process of anatomy and its systematization, there is still a gap in the teaching-learning relationship, as basic education does not include the teaching of Latin and Greek. This leads students to intense and unproductive memorization marathons of terms they are not etymologically familiar with.

According to Chmielewski (2019)⁶, any type of scientific terminology must be clear, precise,

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logical, coherent, and globally accepted, especially anatomical terminology. Knowledge of the precise definition of each anatomical term is also crucial. Understanding the etymology of anatomical terms is extremely important for a more fluent and interesting study and learning experience for students. Moreover, anatomical terms always provide information and a logical reference to the structure (FATTINI, 2005)⁷.

In 2021, the Academic League of Anatomy at UNIFAL-MG (LAANAT) developed a project called "Anatomy A to Z." The project involved creating educational material that addresses the Nomenclature of Human Anatomy, considering its relevance in biological sciences and health-related courses. The educational material was disseminated through LAANAT's social media platforms to spread knowledge about anatomical terminology to the general population using a language that is easy to understand. This approach targeted both the general public and academic audiences while providing students with opportunities to practice their skills in health education by creating informative content about anatomical terminology.

METHODS

Study Type and Participants

This study is a descriptive, retrospective, cross-sectional qualitative study of the experiential type (Pereira et al., 2018)⁸. In light of the pandemic situation and the challenges of conducting in-person activities for academic leagues, the LAANAT of UNIFAL-MG, in 2021, aimed to disseminate knowledge about anatomy and anatomical terminology through the extension project "Anatomy A to Z." The project was registered with the University's Pro-Rector of Extension (PROEX) under the registration PREAE 5463 and was carried out from December 2021 to July 2022.

The project involved ten undergraduate students from the fields of Biomedicine, Nursing, Pharmacy, Dentistry, and Medicine, under the supervision of the league's coordinating professors. All the supervising professors were part of the teaching staff at UNIFAL-MG and held doctorate degrees in the field of anatomy. The project used

LAANAT's Instagram (@laanatunifal) and Facebook (facebook.com/LAANATUnifal) accounts, as these platforms had the highest public engagement.

Stages of Material Development and Preparation

The publications were created by the LAANAT members, supervised by the coordinating professors, and developed using the Canva editing application. A standardized template was established before the start of the posts, ensuring uniformity across all publications. Each post followed the alphabetical sequence (from A to Z) and included the etymology of two selected anatomical structures chosen by the league members, as well as anatomical curiosities about the selected elements.

Methodological Approach

- a) The words were selected collectively during remote meetings among the members. The criteria for selection included relevance, prevalence in the healthcare field, and importance for community knowledge.
- b) To provide theoretical and scientific support for the selected terms, the students, with the assistance of the project's coordinating professors, conducted thorough searches in major databases such as anatomy books, recent articles, and updated research^{9, 10, 11 e 12}. The aim was to provide high-quality and reliable content for those consulting the material. Rigorous searches for current publications on anatomical terminology were performed using Scielo, Lilacs, Uptodate, PubMed, as well as classic books published on the subject (FERNANDES6, 1999)¹³, serving as references for the creation of the A to Z posts.
- c) Based on prior content consultations and discussions with the project's coordinating professors, explanatory posts and/or videos were created on social

media platforms to encourage sharing among the members and reach a larger audience.

- d) The analyzed materials, created by the students, were published on social media platforms in the form of videos, posts, stories, podcasts, and other resources permitted by the respective platforms.

Results Analysis

The league members actively searched social media platforms to promote the project and attract more followers, thereby increasing project visibility. To access the informative material on Instagram, users only needed to follow the LAANAT page. The number of beneficiaries will be determined through the Analytics tool available on Instagram/Facebook, which allows users to track not only the number of beneficiaries and reach but also impressions (a metric that designates how many individual times the content has been viewed).

Results and discussion

The extension project "Anatomy A to Z" provided users of the LAANAT social media platforms with space for dissemination and communication on topics related to anatomical terminology from January to July 2022. It served as an alternative platform beyond the classroom and academic boundaries. Furthermore, it stimulated research and capacity building among the league members regarding the established topics, allowing them to acquire greater knowledge while developing the content. In this sense, the project successfully achieved its objectives by bringing together extensionists, other undergraduate students, teachers, and members of the external community. Over the course of 23 weeks, the project carried out 23 publications, following the alphabetical order and featuring two selected anatomical structures per letter (Figure 1).

Araújo, Pinho, and Córdula (2015)¹⁴ emphasize that the concept of time and the scope of information have undergone significant changes

with the advent of the Internet, leading to a demand for faster and more instant access.

It is estimated that the number of descriptive elements of the human body in Anatomical Terminology was reduced to around five thousand by removing repetitions. New terms have been added to this initial list in subsequent meetings held in the following decades, which continue to this day (Busseti and Busseti, 2005)¹⁵.

Thus, when designating a structure in the body, the nomenclature aims to adopt terms that are not just mnemonic devices but also provide information or description about the respective structure. However, the available time for students is often insufficient for a complete understanding of the meanings of words incorporated into anatomical language. In this scenario, many professors also lose valuable resources for teaching and educating (Di Dio, 2000)¹⁶.

During the search for anatomical terms to be used in the LAANAT social media posts, it was found that there are no terms in the terminology starting with the letters K, W, and Y. Therefore, to continue the posts related to the etymology of terms, Greek names and anatomical descriptive elements whose eponyms started with these letters were selected (Figure 2). It is worth noting that in the posts, it was emphasized that the correct anatomical term should be used to replace the use of eponyms, which, although abolished in anatomy, can still be found in the literature related to clinical practice.

According to Medeiros (2009)¹⁷, students in various health-related undergraduate programs often hear their professors referring to anatomical structures by eponyms. In light of this, it is important to emphasize that eponyms should be eliminated from anatomical content so that appropriate anatomical terminology can be adopted. However, clinical and surgical terminology taught in medical courses still uses eponyms, although it is believed that the replacement with anatomical terminology is becoming increasingly common.

It is expected that professors value the use of anatomical terminology in the classroom, as it is universal and the terms aim to "inform" students about the form, function, relationship, situation, or location of anatomical descriptive elements.

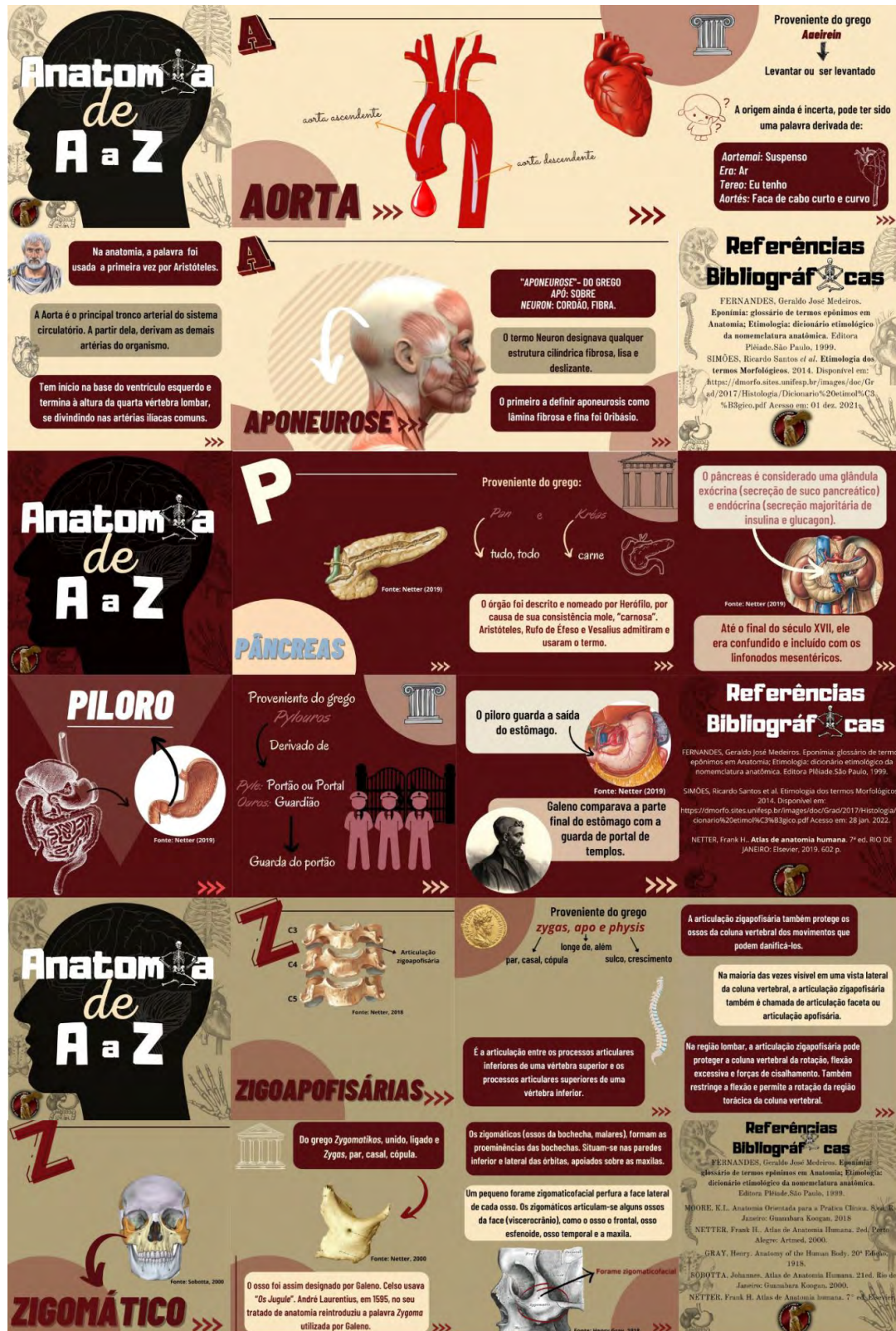


Figure 1: Examples of Instagram and Facebook posts from the "Anatomy A to Z" project, depicting the use of letters A, P, and Z.

The collection of materials produced constituted an active educational process that involved student members of the league and coordinating anatomy professors. In this context, establishing a connection with society reduced the distance between the university and the followers on the LAANAT social media platforms, including other higher education institutions and participants from other states in Brazil. It facilitated the exchange of knowledge and experiences, contributing to the dissemination and expansion of knowledge related to the use of anatomical terminology in Human Anatomy.

The anatomical vocabulary is a valuable part of our medical heritage. Etymology is a fascinating and educational study because the origin and evolution of words provide a priceless cultural background. The anatomical structure, delicately constructed by ancient seers and lexicographers, can still provide significant information and is an intellectual delight (Mosenthal, 2001)¹⁸.

Table 1 demonstrates the record on social media with the number of accesses and shares of the project's posts. The data collected by the league members on the LAANAT Instagram account, counting the likes on all the posts of the "Anatomia de A a Z" project, registered 712 likes.

It is worth noting that the dialogue promoted through social media dissemination allowed for the exchange of knowledge, experiences, and perspectives, as it confronted scientific knowledge from books and articles with the doubts and needs of the participants. This exchange of knowledge encourages participating students to seek new knowledge, address their doubts, and improve their skills, while also fostering

Tabela 1. Summary of data related to the visibility of the project posts.

Items observed	Social media (Facebook and Instagram)
Publications	23
Likes	712
Shares	194
Saved publications	44
Accounts reached	4739
Followers	904
Impressions	6608

interpersonal connections and self-discovery that can contribute to their academic development as well as the social demands of the region.

Furthermore, the project could bring together professors, students, and society to discuss the use of anatomical terminologies in the learning process of Human Anatomy, promoting a broader knowledge construction that enabled undergraduate students to have a better understanding of the terms applied in Anatomy and thus providing a consolidated study during their time researching Human Anatomy at UNIFAL-MG or any other educational institution.

Considering that the LAANAT members are pursuing degrees in the healthcare field, it is crucial to stimulate teamwork in teaching and extension activities. In addition, public education and health policies, along with changes in education, have been driving curricular transformations in healthcare undergraduate programs, emphasizing the need for teamwork both in the professional formation of future healthcare professionals and in healthcare practices (Eli and Toassi, 2018)¹⁹.

According to Menegon (2015)²⁰, university extension is configured as an educational and scientific process, and by promoting it, we are (re) producing knowledge of utmost importance: the knowledge that enables a transformative relationship between the university and society, and vice versa. The concept of inseparability refers to something that does not exist without the presence of the other, meaning that the whole ceases to be whole when dissociated. Therefore, the foundations of teaching, research, and extension are altered, making it a paradigmatic and epistemologically complex principle (TAUCHEN, 2009)²¹. In this sense, the league's action promotes the undergraduate student's engagement in extension, considering the curricularization of extension established by Resolution CNE/CES No. 7/2018. The development of the "Anatomy from A to Z" project also allowed for the integration of teaching, extension, and research generation, with the results being presented in this article as a scientific work. Furthermore, as a result of the project's development, it was presented at the XXIX Brazilian Congress of Anatomy, the most important event for Brazilian anatomy. This was

another opportunity to advertise the importance of using anatomical terminology correctly.

FINAL CONSIDERATIONS

LAANAT has effectively promoted the dissemination of knowledge about the origins of anatomical terminologies to the general public and encouraged the study of anatomy by its members, making it easier to understand the use of anatomical terminology.

The extension project "Anatomy from A to Z" has achieved all the guidelines that guide extension projects, including dialogic interaction, interdisciplinarity, inseparability, impact on student formation, and social impact.

Furthermore, considering the essentiality of Human Anatomy for students and professionals in the healthcare field, LAANAT will keep the project's posts available on its social media platforms and plans to continue the extension action, exploring terms that have not been covered in previous posts. In this context, the league can contribute to the democratization of access to the etymology of anatomical terms, emphasizing their correct usage and facilitating understanding of these terms by students and the general public who have an interest or curiosity about the anatomy of the human body.

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