

## The latin language in the teaching of Anatomy: relevance in the past, present and future

La lengua latina en la enseñanza de la anatomía: relevancia en el pasado, presente y futuro

Manuel Enrique Cortés Cortés<sup>1</sup> <https://orcid.org/0000-0003-0845-7147>

Lorena Hortensia Maluenda Parraguez<sup>1</sup> <https://orcid.org/0000-0002-2510-4960>

<sup>1</sup>Universidad Bernardo O'Higgins, Facultad de Educación. Santiago, Chile.

\*Autor para la correspondencia: [cortesmanuel@docente.ubo.cl](mailto:cortesmanuel@docente.ubo.cl)

Recibido: 29/05/2022

Aceptado: 18/07/2022

Dear Editor:

The engaging article by *Castro et al*<sup>(1)</sup> illustrates how the COVID-19 pandemic has challenged teachers to adopt new active strategies for teaching Anatomy in the last two years, favouring virtual or hybrid teaching-learning modalities. On pondering this subject, particularly the creation and use of modern information and communication technologies (ICT), it is imperative to rescue the classical and timeless value that *Terminologia Anatomica* can add to ICT. This letter to the editor

aims to highlight and recall the importance of the teaching of medical humanities, especially the use of latin, in the teaching of Anatomy in biomedical degrees.

Classical greek and latin, descendants of ancient indo-european, have changed very little over the centuries and are not widely spoken or promoted today; nevertheless, they meet the most demanding requirements of scientific terms, which must be explicit, accurate, comprehensible and internationally accepted.<sup>(2)</sup>

On the other hand, these languages offer numerous opportunities for word creation, as the two languages can be used in conjunction to create neologisms. However, to be more specific, why is it important to highlight and promote the teaching of Anatomical Latin in the 21st century? With more than three thousand years of existence, the language of Lazio (*Latium*), mistakenly regarded as a “dead language”, contains terms with relatively steady and unchanged meaning over the centuries. The world of science, humanities and the arts recognises latin as the language which has enabled cultural transmission to the Western hemisphere, a master key to opening its doors.<sup>(3)</sup> We have been granted access to centuries of medical culture knowledge through this door. The translation of scientific knowledge between latin and greek enabled the spread of classical knowledge between different cultures. More specifically, the crucial transference of anatomical terminology from the cultures of Ancient Greece and the Islamic Golden Age to medieval Latin Christendom took place in the so-called Toledo School of Translators from the 12th to the 13th centuries. Because of latin, translations from the Toledo School were extensively disseminated in Europe. For example, in Toledo, Gerard of Cremona (*Gherardo Cremonensis*) translated Avicenna’s *Canon of Medicine (Liber Canonis Medicinae)*, a medical masterpiece in the Islamic Golden Age.<sup>(4)</sup> Therefore, these latin translations provided the foundation for the scientific thinking developed in the administrative councils of the first universities.<sup>(4)</sup> Latin has proved its relevance with Andreas Vesalius’ *De Humani Corporis Fabrica* (1543), William Harvey’s *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus* (1628), and Luigi Galvani’s *De Viribus Electricitatis in Motu Musculari Commentarius* (1792) -all monumental masterworks for medicine and biology written in Latin. These advantages and historical facts justify why latin, above all, has been the basis for Anatomical nomenclature since the 19th century.<sup>(2)</sup> It should also be noted that anatomical terminology in spanish and other languages is closely related to the latin terminology used in the area (table).

**Table** - Frequent anatomical terms in proto-indo-european, latin, spanish, french and english

| Proto-Indo-European | Latin     | Spanish | French | English |
|---------------------|-----------|---------|--------|---------|
| kap                 | kaput     | cabeza  | tête   | head    |
| kerd                | cor       | corazón | coeur  | heart   |
| néhs                | nasus     | nariz   | nez    | nose    |
| hóst                | ossum, os | hueso   | os     | bone    |
| údteros             | uterus    | útero   | utérus | uterus  |

Can latin be considered a dead language? The term “dead language” is commonly used in various countries to emphasise that latin and classical greek have disappeared from everyday use, leading to vernacular languages. English is undoubtedly the scientific communication language today, just as latin once was. Nevertheless, far from being dead, latin and greek are not obsolete languages with limited modern use, but rather languages that are very much alive and essential to the medical community through terminology,<sup>(5)</sup> for example, in botany, and especially in anatomy. In every country, some groups or associations still teach or practise them. Moreover, our everyday spanish (castilian) is, in general terms, a rather evolved vulgar latin with a large greek and other languages’ origin word count. On the other hand, english -essentially a Saxon language- also exhibits a large lexicon of latin origin, mainly derived from the norman occupation.

As for latin anatomical terms, it should be noted that they prove to be extremely useful, as stated above, for describing and identifying both human and animal anatomical structures (recall the *Nomina Anatomica Veterinaria*), but they also entail some drawbacks. Medicine and related-sciences students often feel that anatomical terms strain their memory.<sup>(6)</sup> In addition, the creative potential of researchers who wish to discover new meanings in anatomical structures may be constrained by the specific, relatively static terms.<sup>(6)</sup>

While it is true that the use of latin shows both benefits and drawbacks for anatomical terminology, it has many more advantages. It should be taken into account that it is the consequence of the uninterrupted efforts of previous

generations of anatomists,<sup>(6)</sup> which resulted in centuries of medical tradition ensuring the immutability of the terms used.

In conclusion, we agree with *Castro et al*<sup>(1)</sup> on the importance of implementing new virtual strategies for teaching Anatomy. Nevertheless, we should not neglect the need to enrich the cultural training of healthcare students in biomedical humanities by promoting latin anatomical terminology in virtual strategies, in addition to spanish and english. Open-access computer applications and platforms with images including the descriptions translated into spanish, english and latin could be implemented using ICT. These applications could be helpful for anatomy and histology, physiology, pathology and medical botany teaching-learning strategies.

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### **Conflict of interest**

The authors have no conflicts of interest.