

Teaching Latin in International Student Groups: Comparative Study

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Abstract: Latin is an old language, but its importance in the field in medicine is still prevalent. When teaching the terminology of medical Latin to the international students' groups at Riga Stradiņš University in Latvia, the lecturers encounter certain problems in the teaching of the course due to the grammatical complexity of the Latin terminology and students' understanding/explanation of the terms in their national languages. The current study was aimed at undertaking a comparative study for identifying the most common difficulties encountered in the study process by international students and local Latvian students.

Students' final or/and interim tests were used to analyse the most common mistakes. Some general statistics from our university were also helpful in our work. In order to sort out the most common mistakes, we used both qualitative and quantitative methods to see the frequency of the mistakes mentioned above.

Key words: Latin medical terminology, students' motivation, comparative study

Abstract: Para mejor la enseñanza de latín en las facultades de ciencias médicas, hemos querido comparar los estudiantes de Letonia y los del departamento Internacional de la Universidad Stradiņš de Riga.

En el presente trabajo hemos querido destacar las faltas y dificultades comunes.

Para este fin hemos utilizado el método cualitativo y cuantitativo también la estadística de la Universidad.

Abstrakt: Latina je starý jazyk, ale její význam na poli medicíny neustále převažuje. Při výuce terminologie lékařské latiny ve skupinách mezinárodních studentů na Univerzitě Stradiņš v Rize v Lotyšsku vyučující čelí určitým problémům vyplývajícím z gramatické komplexnosti latinské terminologie a pochopení/vysvětlení těchto termínů studentům v jejich národních jazycích. Předkládaná studie měla za cíl provést srovnávací studii na identifikaci nejběžnějších obtíží při studiu jak zahraničních, tak místních lotyšských studentů.

K analýze nejběžnějších chyb byly použity závěrečné a/nebo průběžné testy studentů. V naší práci nám také pomohly některé všeobecné statistiky naší univerzity.

K roztržidění nejběžnějších chyb a ke zjištění frekvence jejich chyb jsme použili jak kvalitativní, tak kvantitativní metodu.

Introduction

Although an old language, Latin still plays an important role, especially in the field of medicine. Times have changed but the traditions have been preserved in anatomical studies and in the writing of diagnoses, case histories and medical reports. When teaching students medical terminology in Latin, we have to look for

new ways to approach the students and help them in acquiring the Latin terms and their Greek synonyms which are common in a hospital environment, as well as those needed for doctors in their professional work.

At Riga Stradiņš University (Latvia) we encounter students from different countries, with very distinct differences in their educational, cultural and even religious background. It is important for us to understand the Latin influence upon the Basic Indo-European Language groups, as well as in the context of the Baltic languages (the languages spoken in Lithuania and Latvia). These languages also belong to the group of Indo-European language family and also use the Latin script and have similar grammatical structures.

Materials and methods

In order to analyse the study outcome, we compared studies of three years (2012 to 2014). Almost 400 international and 600 Latvian students were involved in our study. We used a comparative and also a contrastive method, using English as language 1 (L1) and Latin as language 2 (L2). The results are highlighted in two tables (see the comparison – international versus Latvian English students) also showing the benefits and minuses of English the language of instruction.

We also used qualitative and quantitative methods as these are the methods mostly used in Latvia in pedagogical studies and researches. They were suitable for our basic aim as well. As to the qualitative method, this was direct classroom observation. To complete our study, we also needed a quantitative method – statistics or/and students' tests and exams to draw the quantity of mistakes.

The syllabus of Medical Latin is included in the study course at the Faculty of Medicine for students from Latvia and the International Student department. There may be different methods applied in class. By consulting professors of Anatomy and Histology, it is clear that the main emphasis should be on explaining the noun and adjective endings, the agreement of nouns and adjectives. The methods applied during the course are varied. After acquiring the basics of Latin grammar, it is important to perform terminology analysis (e.g. *articulatio capitis costae*, etc.). Since the groups are comparatively small (10–14) students, it is easy to use individual or group work, to start the lesson by repeating the vocabulary or offering to do more creative exercises. Comparing the Latvian students with the students of other nationalities, we can conclude that Latvian students have no difficulties with the declensions. The reason is that declensions and cases are used in the Latvian language. Latvian students also do not have difficulties with the agreement of nouns and adjectives, because the Latvian language has two genders (masculine and feminine) and the adjective has to agree with the noun gender. **What is difficult for them is the word order in medical terms.** The experience also reveals **certain difficulties with the correct translation** because quite

commonly students mix up the adjectives with nouns in the genitive: for example, instead of *costa longa* – *longa costa* and *regio abdominis* / *regio abdominalis*, which in Latvian would be translated in a similar way.

A short historical review

We have to remember as well the history of the European universities, where the first and most important faculties were Theology and Medicine. It is important to emphasize the importance of Celsus' *De Medicina*, which appeared in print as early as 1478, only a couple of decades after the introduction of the printing press. It was then followed by Latin editions of Galen. During the subsequent centuries almost all important medical works were published in Latin (e.g. those by Vesalius, Harvey and Sydenham). The medical vocabulary expanded but basically did not change. Medical Latin continued to be ordinary Latin with the admixture of numerous Greek and Latin medical terms. Gradually, however, the national languages gained ground at the expense of Latin. In some countries medical Latin survived a little longer: for instance, in Denmark, hospital doctors were writing patients' notes in Latin until 1853.

Nowadays we can speak about the era of the development of national medical languages, such as medical English (i.e. ordinary English with the admixture of medical terms), medical French, medical German, medical Italian and many others. A few of these, especially French, German and English, replaced Latin as vehicles for international communication, but most of the others were only used nationally. The national medical languages had much in common since most of the medical terms were derived from medical Latin, but there were systematic differences that are still persisting. In Germanic languages, such as the German, Dutch and Scandinavian ones, anatomical terms and disease names are often imported directly with their correct Latin endings, e.g. *nervus musculocutaneus* and *ulcus ventriculi*, whereas the same terms in Romance languages are usually 'naturalized' according to the norms of each particular language, e.g. *le nerf musculo-cutané* and *ulcère gastrique* in French, and *il nervo musculocutaneo* and *ulcera gastrica* in Italian. English is a Germanic language but half of its vocabulary is of Romance origin, and medical English tends to follow the Romance pattern except for placing the adjective before the noun, e.g. 'the musculocutaneous nerve', 'gastric ulcer'. In Slav languages it is customary to translate the terms, e.g. Russian *kozhno-myzhechny nerv* ('skin-muscle nerve') and *jasva zheludka* ('ulcer of stomach'). Modern Greek is noteworthy in allowing only Greek terms, including many of those that Celsus translated into Latin two millennia ago. The musculocutaneous nerve, for instance, is *to myodermatiko neuro*. However, the distinction described here between a Germanic, a Romance and a Slav pattern is no more than a tendency with numerous exceptions. English-speaking doctors also accept direct loans with Latin endings (e.g. *medulla oblongata* and *diabetes mellitus*), and German doctors may natural-

ize the Latin terms (e.g. *Coronararterien* for *arteriae coronariae*) or translate them into German (e.g. *Magengeschwür* instead of *ulcus ventriculi*). The national medical languages did not confine themselves to importing terms already found in medical Latin. Medical scientists continued to develop new concepts that had to be named, and our classically schooled predecessors coined a multitude of new terms, most of which were composed of Greek rather than Latin roots, since Latin does not permit the formation of composite words to the same extent. They introduced, for instance, the terms *nephrectomy*, *ophthalmoscopy* and *erythrocyte*, which in medical Latin would have been rather cumbersome *excisio renis*, *inspectio oculorum* and *cellula rubra*. This huge neoclassical word stock with Greek roots, which is still being used, also presents other characteristics of linguistic interest such as the special meaning attached to certain suffixes of a Greek origin (e.g. *-itis* and *-oma*) and the fact that some prefixes and suffixes are more productive than others. Greek *hyper-*, for instance, is more productive than Latin *super-*, although originally they had exactly the same meaning. Therefore, we say *hypertension*, which is a Greek-Latin hybrid, rather than *supertension*, which would have been the correct Latin term. (Cf. Ref. 1, 2)

As to the Baltic language branch, there are three languages: Old Prussian, Lithuanian and Latvian. Old Prussian is a dead language now, so we can speak just about two living languages in the Baltic language group. As concerns the Latin influence on the Latvian language, we can find it mostly in scientific papers or doctoral theses. We can mention quite a lot of examples from the clinical terminology where mostly Greek terms dominate. We know that at least half of the names of the specialists in different fields of medicine come directly from Greek (*nefrologs* – nephrologist, *oftalmologs* – ophthalmologist etc.). In Latvia the register of specialists in out-patient and in-patient departments most commonly will use the Greek terms, instead of the translation into the native language (*otorhinolaryngologist* instead of ‘ear, nose and throat doctor’). It is different when we use anatomical terms, for in most cases we translate them into our native language (*vertebra* – skriemelis, *incisura* – ierobs etc.). These language specificities exist in other languages as well and for laymen may cause some confusion. (Cf. Ref. 3)

This was an important issue to be taken into account when starting teaching the Latin medical terminology at our University.

Aim

The **aim of the comparative study** undertaken was to address different student groups studying medical Latin in Riga Stradiņš University, to highlight the main problems in the study process and to help students understand anatomical terminology.

Also we wanted to target **identifying the differences in teaching medical terminology** in different international student groups, by **pointing to the most common mistakes** and difficulties experienced in the study process, and by looking for solutions in **reducing the encountered problems**.

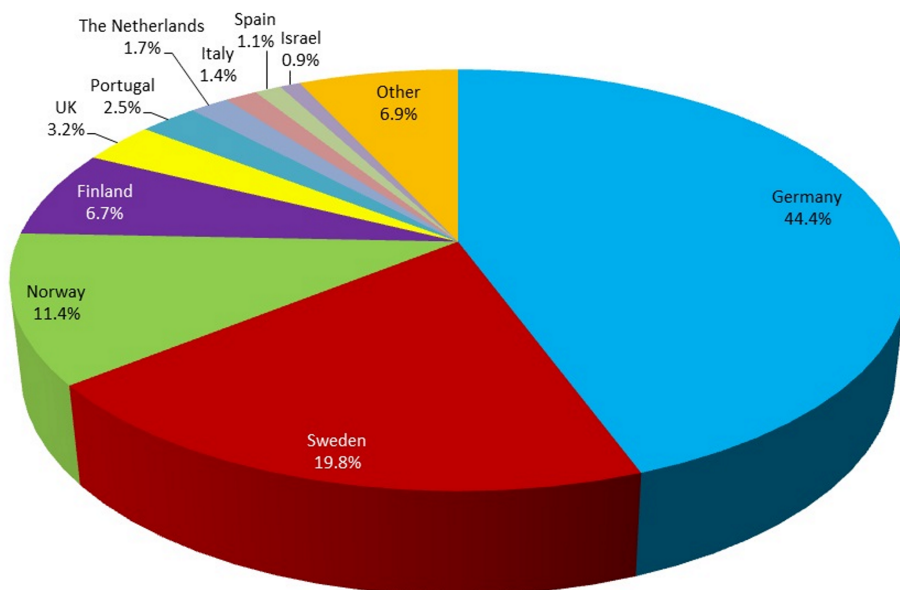


Fig. 1: Our students by countries

Riga Stradiņš University has had experience in teaching international students for 25 years now. The number of students is expanding year by year, comprising a rather large spectrum of European countries. From the statistics shown in the pie chart we can see that a considerable part of our students come from **Germany** where Latin and Greek languages are taught at Classic Gymnasium. The **advantage** of these students is that they already know the Latin grammar, the endings of nouns and/adjectives, they have a better understanding of the prepositions and their usage. We have to admit, however, that over a longer period of study they also make mistakes (some of them lose interest, and a portion of them just consider other subjects to be more important, especially when colloquia and exams are approaching). The most common problems arise with the incorrect use of the 3rd declension (genders, as a rule); sometimes it is difficult for them to explain the clinical (medical) terms in English (e.g. *hernia*, *sputum*, *ulcus*, etc.). The lecturer's support here is needed and even skills in translating the terms into the students'

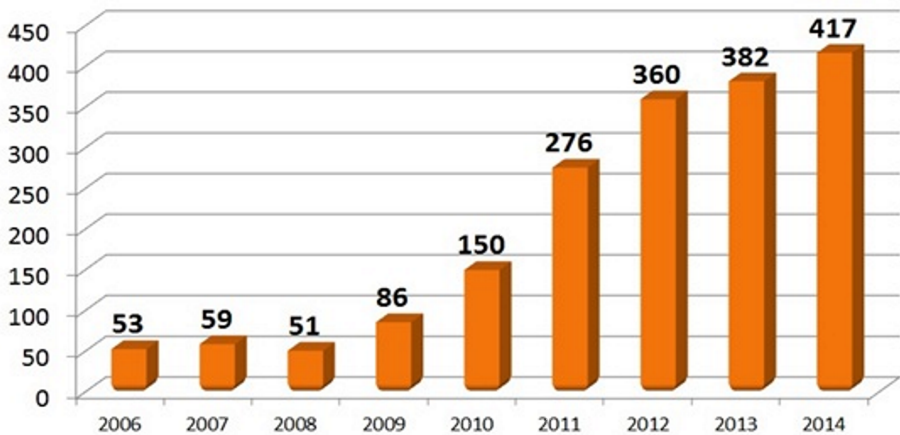


Fig. 2: International students admitted in the RSU from 2006 till 2014

native language (e.g., finding an adequate translation in Finnish, Swedish, Dutch, etc. languages).

Students coming from **Sweden, Norway and Finland** usually start learning Latin from the very beginning. Due to the specificities of their languages they have problems not only with nouns and gender of the nouns, but also with the **cases (genitive)** and with **noun-adjective agreement**. As to medical terminology, they usually put a lot of effort into their studies and finally they pass tests and exams quite well. They study with greater enthusiasm, because this is a new study course for them and they understand that they should put a greater effort to learn it.

We can say that the students from **Portugal and Spain**, find it easier to remember the terms in Latin and they do correct translations of English–Latin because in their native language, for instance, the adjective comes first before the noun. Still they have difficulties in remembering genders and some other grammatical facts.

We have also quite a large number of students from **the United Kingdom**. The problems for them are similar to those of other students, especially in the formation of cases and genders.

Duration of the Latin course and its content

The faculties where Latin is taught in our University are the Faculties of Medicine, Dentistry, Pharmacy, Rehabilitation and Public Health and Social Welfare. The international students learn Latin medical terminology only in the Faculty of

Medicine. For local students (Latvian groups) in most of the faculties Latin is an obligatory (A) course, but for most study programmes, e.g., the Faculty of Public Health and Social Welfare it is an optional (B) course. Some years ago we had four semesters of Latin for all the medicine profile students. Nowadays Latin is not that important and the current study programme provides just two semesters of Latin. That means **40** contact hours (20 contact hours each semester).

In our practical classes we use the materials of medical Latin terminology developed in the Language Centre of Rīga Stradiņš University. Other sources are available at our resource centre at the University. All the necessary study materials can be also found in e-studies. E-studies are also the place where some additional materials and the Internet sources are recommended. Every year language teachers update the study materials and improve the teaching methods. In e-studies the students can get acquainted with the results of their tests and the final exam grades.

The **first** semester is targeted at teaching general Latin, mostly related to the study of the terms used in Anatomy or Histology. The course includes: Latin nouns (I,II, III, IV, V declensions, I/II group adjectives) and the analysis of the ending in the anatomical terms. During the **second** semester the students learn clinical terminology, prefixes and suffixes and Latin-Greek synonyms, as well as some prepositions (e.g. ante, post, in, sub, per, etc.). We have some relatively new faculties such as Faculty of Rehabilitation and Faculty of Public Health and Social Welfare. These faculties usually have just one semester of Latin (for local students) and the course refers only to acquiring Latin nouns and adjectives and a brief introduction to clinical terminology.

Requirements of the course

Students' attendance of the course and doing homework is obligatory. In the current study we have summarized our three-year experience of teaching Latin terminology, including both final and interim tests, elaborated for our groups, as well as taking into account the experience of other colleagues. We regularly share our experience in meetings at the Language Centre and also in personal meetings with our Latin professors (also consulting specialists in Anatomy and Physiology). We also regularly visit other colleagues' classes for the purpose of sharing experiences and learning from each other. For assessing the analysis of our work we have used the statistics of our university to have a better comparison of achievements of foreign and Latvian students. The web page of the university introduces statistics from ERASMUS and the International Students' Department and it is available for each year. To be precise, around 1000 foreign students and around 3000 Latvian students are involved in medical studies. Judging from statistics, we can see that the number of our international students is increasing year by year, while the number of our Latvian students remains more or less the same.

The first objective to think about on meeting a new group is **students' motivation**. We work with the first year students, who, quite often, have little idea about the usage of medical terminology or/and the medicine studies in general. *Ab initio* these studies for them are difficult but, with time, if there is good communication and good relations with the groups, we can improve study results by pointing to students to find the interrelation between their anatomy course and the Latin terminology classes. Our experience also shows that it is useful to include Latin sentences in the course for broadening students' interest in the language (for instance: *Hic locus est ubi mors gaudet succurere vitae.* – meaning: *This is the place where the death enjoys being useful to help the living.* This phrase is found as an inscription on the doors of the Anatomical Theatre in Riga.). Explanation of clinical terms makes students get a deeper insight into the field they are learning, and though we language teachers are not physicians, quite often we have to explain the disease processes. The outcome of the study process is good if the classroom setting is positive and motivates students to use medical terminology and learn additional knowledge in clinical medicine.

One of the aims for the comparative study was to analyse the oral or written answers of students in order to point out to the most common mistakes. Here are some examples:

1. Almost all the students (about 90 per cent) make mistakes when they put stress in some nouns like *corpus, corporis n.; caput, capitis n.* etc.
2. For some of them (almost 50 per cent) it is difficult to pronounce correctly Latin diphthongs, (e.g., ae, oe).
3. Almost all students (90 per cent) do not remember that *corpus, corporis* is a 3rd declension noun and is neuter. They also mix up the gender of such nouns as *pars, partis f., os, ossis n., margo, marginis m., etc.*
4. For some of the students it is difficult to distinguish between the 2nd declension masculine gender and 4th declension masculine gender nouns (40 per cent) (e.g., *musculus, i, m.* and *ductus, us, m.*).
5. The next type of common mistakes is related to the neuter gender nouns. For example, if we need the nominative plural for *ligamentum* or/and *os*, many students (almost 60 per cent) write *ligamenti* and *osses* instead of *ligamenta* and *ossa*.
6. A small percentage of the students (2 to 5 per cent) say that they do not have genders in their mother tongue and/or they use the same adjective endings for all the genders.
7. Almost 90 per cent of the students have difficulties with making correct word order in Latin terms.

8. Almost 50 per cent of the students have difficulties with making noun-adjective agreement.

We can add that during the last two years we have also had students from Thailand. We have already noticed that they are very diligent, but their native tongue is very different from English and Latin. Consequently, they do have to put a lot of effort into understanding the cases, adjectives and/or word order. It requires from the lecturer a greater deal of attention to students who experience difficulties in understanding the terms.

Here we would like to show some examples of the exercise types from the first and second semester test:

1st semester test

1. Translate the noun into Latin. Write its vocabulary form.
E.g. vein; skull; abdomen
2. Add the noun which corresponds to the given adjective. The adjective cannot be changed:
E.g. lacrimalis; albus, flavum.
3. Change the given phrase into N. pl. and G. pl.:
E.g. ramus lateralis, os sacrale
4. Make agreement of the adjective with the noun. Choose the correct variant:
E.g. caput (ovalis, e; longus, a, um; simplex, simplicis) etc.

2nd semester test

1. **Translate using prepositions:**
 - remedy against fever
 - pain behind the sternum
 - cyst under the left scapula
2. **Translate:**
 - chronic inflammation of kidneys
 - purulent inflammation of lungs
 - rheumatic disease of arteries
3. **Make terms:**
 - ... pexia (ventriculus, uterus, vesīca urinaria, hepar, pulmo)
 - ... rrhoea (sudor, saliva, lacrima, cutis, uterus)
 - ... ectomia (vas, mamma, vēna, vagīna, oesophagus)
4. **Add suffixes and translate:**
 - blepharo ... – bleeding
 - adeno ... – morbid state
 - glosso ... – suturing
5. **Write inflammations (Nom. and Genit. sg.):**

- liver
- kidney
- heart

Usually the students pay more attention to their final examination test, since they are getting the grades. At least international students do. As to Latvian students, it depends on the faculty and the study programme. However, all the students have one additional difficulty – **they do not relate the clinical terminology we teach them to other subjects they learn.** In many cases we have to make a lot of effort to find out the explanation of the clinical/medical terms by studying medical dictionaries. Besides, **this is a constant teaching-learning process** to improve our own knowledge of medicine. We can use internet sources and/or dictionaries to answer the questions of the students. First year students actually do not know much about their future profession and they are still not used to the language the doctors speak. Most commonly they have little awareness of people’s health problems. We, teachers, have to give students examples from doctors’ daily lives, we explain to them Latin sayings and proverbs, either related or not related to medicine. **Our Latin teachers have elaborated (compiled) the list of suffixes and Latin-Greek synonyms used in clinical terminology.** This list and some additional exercises, which are available in e-studies, help students sit the final exam.

However, we have to admit that for **almost 100 per cent** of the students there are difficulties in remembering the suffixes and Latin-Greek synonyms used in clinical terminology.

We have compared students from different countries using the **contrast method**; it means, we analysed the students, contrasting the student’s mother tongue to that of Latin. We have to admit that the percentage of students with English as their mother tongue is very low, approximately 1 or 2 per cent of all the students, depending on the year and study programme. However, we used English as a reference language (Language number one), and Latin was a language number 2, and students’ mother tongue was language number 3. Thus, we have come to the following conclusions:

1. **English is helpful**, if we try to explain terms and/or want the students to learn them, since in the English medical terminology, as mentioned before, almost all the same nouns and adjectives are used.
2. **English does not help** us to explain the genders of nouns and adjective endings for different genders.
3. In some cases **English has a different word order in the term**, for instance, in English we begin with the adjective, but in Latin with the noun.
4. As **English does not have declensions or cases for the nouns and adjectives**, almost all the students find it difficult to understand the usage of cases.

Here you can see a comparison we made between international and Latvian students:

International students	Latvian students
<ul style="list-style-type: none"> • Difficulties with noun genders and noun-adjective agreement • They do not relate the clinical terminology with the other subjects • Clinical terms are translated in their native language 	<ul style="list-style-type: none"> • Difficulties with the right word order and with the vocabulary • They do not relate the clinical terminology with the other subjects • Some of clinical terms are used in the daily life (e.g. names of specialists)

Conclusion

In conclusion we have to say that the lecturers have to be very flexible with each group. There are cases when we have to change some items in our lecture plan because more time has to be spent on explaining such notions as noun-adjective agreement, elaborating new additional exercises or finding out the explanation of the terms in the students' mother tongue. We also have to be flexible because we have almost never had a group of students consisting of one nationality and with the same cultural background. As mentioned before, usually the groups are not big, so we try to pay individual attention to each student. The e-study resources are also helpful in their studies. In e-studies we have put additional tables of noun declensions and/or exercises for students' personal use and the medical dictionary (Latin-English). Almost all the students, when answering the course evaluation questionnaire, give positive responses, pointing to satisfaction with the input of materials and the competence of lecturers.

To achieve better results in the teaching process, it is significant to stress the importance of good lecturer–student relationships, as well as having a positive atmosphere within the group. Our experience shows that the groups with a good leader and/or good relationship in the group result in better learning outcomes. We have also noticed that students who had learned Latin at school and have better a understanding of Latin grammar help their course mates, which can be noted as a good reason for having a good teaching environment. This is also a good moment in the educational process, because future doctors have to be able to co-operate with colleagues when working in a team.

In conclusion we would like to say that teaching Latin in international students' groups is both a challenge and great stimulus in a lecturer's work. It is a constant learning process both for students and lecturers, which not only enriches knowledge but also gives a deeper insight into different cultures.

To summing it up, let us remember the Latin phrase: Verba docent, exempla trahunt!

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Bionote

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