What are the most effective theoretical strategies in teaching Anatomy?

https://doi.org/10.56238/sevened2024.012-041

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ABSTRACT

Introduction: The anatomical study cannot be limited to the dissection of cadaveric parts or the memorization and identification of structures. It is essential that, in a modern and dynamic approach to this discipline, contextualization is adopted, and above all, the clinical applications of what is studied, in addition to other methods such as 3D images. It is necessary to understand the student's conception of such methods – which are the didactic and scientific evidence at the moment – so that they can make the connection – in the present and the future – with professional life.
Methodology: The research, carried out with 245 students from two educational institutions in Juiz de Fora, aimed to find out: What methodologies were used in their anatomy course; Which one(s) among them is(are) seen as the most effective, and most facilitator(s) of the learning process and approach to clinical practice. The data obtained were processed using the SPSS program, version 20.0. Results: It was evident that the approach to anatomical content based on clinical guidance and contextualization of the subject is somewhat popular among students, although a large number prefer simpler, more targeted theoretical classes and more concise teaching material, with a statistical relationship. The use of radiological images is seen as more widespread in Medicine and Dentistry, just as the seminar strategy is more used in Pharmacy, Nursing, Biology, Physical Education, and Nutrition courses. Conclusion: Most students preferred studying based on shorter and leaner theoretical classes, with more concise scripts and textbooks; however, they approve that some contextualization and clinical correlation be made. Each course, or group, has a favorite method of studying Anatomy.

Keywords: Teaching methodologies in Anatomy, Contextualization, Clinical application.

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INTRODUCTION

The challenging complexity of human anatomy and its fundamental importance to the sub-areas of the major area of health make this science the greatest highlight among the oldest medical sciences. [1-6 years]

The study of Anatomy, even though it is closely linked to the memorization of names of structures, should always be related to an early – and necessary – contact with the professional reality, enabling a view on the application of theoretical-practical knowledge in one's life after graduation [7,6]. Collipal8 points out that the study of the structure and functions of the human body arouses a unique curiosity and draws our attention to the use of renewed, challenging and effective teaching and learning methods, making it essential to have a close bond between teachers and students, between content and method, as also defended by Montes9.

According to Jones10, anatomical practice cannot be limited to the dissection of cadaveric specimens, or to the memorization and identification of structures. It is essential that, in a modern and dynamic approach to this discipline, the contextualization and, above all, the clinical applications of what is studied be adopted11. Reis12 reported that for most of the students interviewed in his research, the understanding of Anatomy is essential for the acquisition of clinical knowledge, even if the students have not yet had contact with the clinic.

The contextualizations of the subject discussed in the classroom are also modern strategies to hold the student's attention and direct him in professional and extracurricular life, linking the student's world – in the present and in the future – to what is in scientific evidence at the moment. Understanding this connection between anatomy as a science and the professional future and making it concrete, feasible is a challenge for teachers. New dynamic methodologies and technologies have been employed in this regard6. Penha5 describes these new tools as *e-learning,* audios, videos, games and three-dimensional reality and how their use has been used to complement the teaching of Anatomy.

According to Collipal8, new educational trends in Anatomy have been gaining strength, motivated by several factors such as the difficulty of obtaining cadaveric specimens, the excellent quality of synthetic anatomical specimens on the market, and the high costs of preparing and maintaining an anatomy laboratory in which cadavers are used.

Corrêa13 advocates the incorporation of ultrasonography and imaging exams into anatomy classes for a greater early clinical experience, as well as 3D imaging (computational anatomy). Anatomy-specific videos and *software* are other important tools available to support the teaching of the human body in colleges and universities [3,4]. Artificial anatomical specimens are also an irreversible and practical reality, and are being widely used more and more in higher education institutions with courses in the Health Area [2].

Penha5, however, raises poignant doubts about the efficacy of these teaching methods, just as Inzunza14 questions how students see their learning when they have contact with these new technologies and teaching tools, and also questions the impact of these strategies on the teaching and learning process in a medical school.

Possessing the knowledge of modern didactic techniques, or knowing their efficiency and effectiveness, the Anatomy teacher is able to develop one of the most important facets of the teaching-learning process: the motivation of his students for a contextualized study, bringing the student's reality to the classroom, and can still always apply to future clinical practice. The content covered [11]. But what would be the student's perspective in the face of these novelties? It is the great object and scope of didactics and teaching. How does he see his learning in the face of these strategies? What is the best methodology or what would be the most effective and efficient tools in anatomical teaching? This is from the perspective of the student involved in the teaching-learning process in Anatomy.

That said, the objective of this article emerged: to evaluate the perception of students, in their journey in anatomy laboratories, regarding the methods of study of this science, and its importance and effectiveness in the development of their trajectory as health professionals. Nothing is more legitimate than research to provide us with these answers. We then aim to understand the student's conception of such methods (which are the greatest didactic and scientific evidence at the moment), if they are really important and make the connection – in the present and in the future – with professional life.

METHODOLOGY

The research comprised a descriptive and cross-sectional study, in which data from a structured questionnaire (Survey-type) capable of demonstrating the evaluation of students of the disciplines of Anatomy of the Federal University of Juiz de Fora and of a private college also in Juiz de Fora, in relation to the teaching of this science, were evaluated. The application was through *google forms* maintaining all the confidentiality of the answers. The inclusion criterion was students from all courses in the health area at UFJF and Faculdade Suprema, who had taken the discipline of Anatomy in the last 3 years (marking the post-pandemic and the return of face-to-face activities in teaching) for at least 1 (one) academic period. The instrument used in the research, applied in simple interviews, was structured with closed questions, previously tested with 12 multiple-choice questions based on the "Liker Scale" with five answer options each: Completely agree; I partially agree; neutrality (neither agree nor disagree); I partially disagree and strongly disagree. To determine the questions that were included in the questionnaire, we referred to the most modern and suggestive articles on the subjects "Teaching Anatomy" and "New Strategies and Methodologies in Anatomical Teaching". The parameters studied will be based on a systematized script, considering the

demographic variables: gender; age; marital status and to which course the interviewee belongs, his/her current academic period, in addition to the temporal relationship with the practical teaching of anatomy. He wondered; A) whether, among the didactic materials, the most modern so-called materials were used by the students in their anatomical study, such as contextualizations, clinical applications, 3D material and image resources - radiographs and tomography, for example; B) Which of these methods facilitate the teaching-learning process in anatomy; C) Which of the methods/strategies and technologies can be considered essential to generate greater confidence of these students about the use and application of their anatomical knowledge in a future professional practice; D) what type of teaching material and class strategy are best evaluated by these students.

The number of students who answered the questionnaire was 398, distributed as follows: Medicine course - 163 answers; Dentistry-86 responses; Physiotherapy- 44 answers; Pharmacy, Nursing, Biology, Physical Education and Nutrition- 105 responses.

The data obtained were tabulated in an Excel spreadsheet, version 21.0, and processed using the SPSS program, version 20.0 (Chicago, IL, USA). The statistical tests applied were: the chi-square test and the Student's t-test. Statistical significance was set at $P < 0.05$. The statistical correlation between some answers was verified: 1) Option for more targeted theoretical classes X Importance of clinical applications in the study of Anatomy; 2) more targeted theoretical classes X Importance of contextualizations in the study of Anatomy; 3) more targeted theoretical classes vs. use of direct and concise scripts; 4) Use of more targeted books X Importance of clinical applications in the study of Anatomy; 5) Use of more targeted books X Importance of contextualizations in the study of Anatomy, 6) use of a direct script X more directed theoretical classes and finally 7) more directed theoretical classes X use of more directed books.

RESULTS

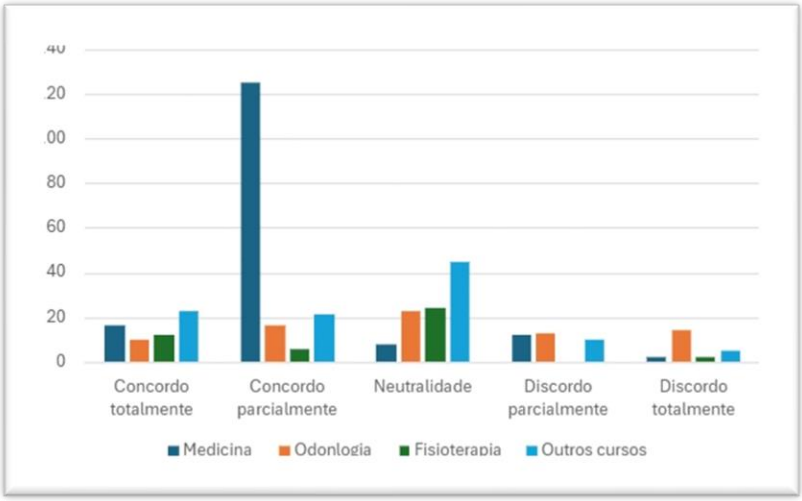
For the analysis of the collected data, it was decided to distribute the interviewees into groups, according to the number of periods they attended the anatomy discipline, and, consequently, the degree of their contact with it.

Therefore, in one group there are the students of the Medicine course, who study Anatomy for 4 periods and still present greater adherence to the research, followed by the students of Dentistry and Physiotherapy who study for three periods and with an equally significant adherence. The other students of Pharmacy, Nursing, Biology, Physical Education and Nutrition, who have classes in this discipline in 1 or 2 periods only, were distributed in another group, since they also had less adherence to the cause.

When analyzing the data, it is clear that (Graph 1) when it comes to addressing the content with clinical direction, the students of the Medicine course were the ones who most informed this

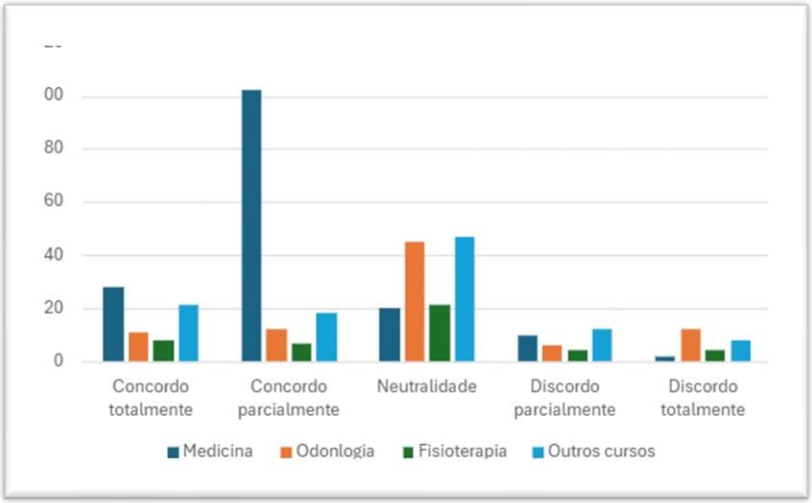
type of discussion, with 125 answers "I strongly agree", making up 77% of the total number of students in this group and 31% of the total number of students. In the other groups, a similar response appeared in 16 dental students (18% of the group); 6 from Physical Therapy (14% of the course interviewees) and 21 students (20%) from the others.

Graph 1 representing the numbers referring to the answers to the question: "if the content was approached with clinical guidance during the Anatomy classes"



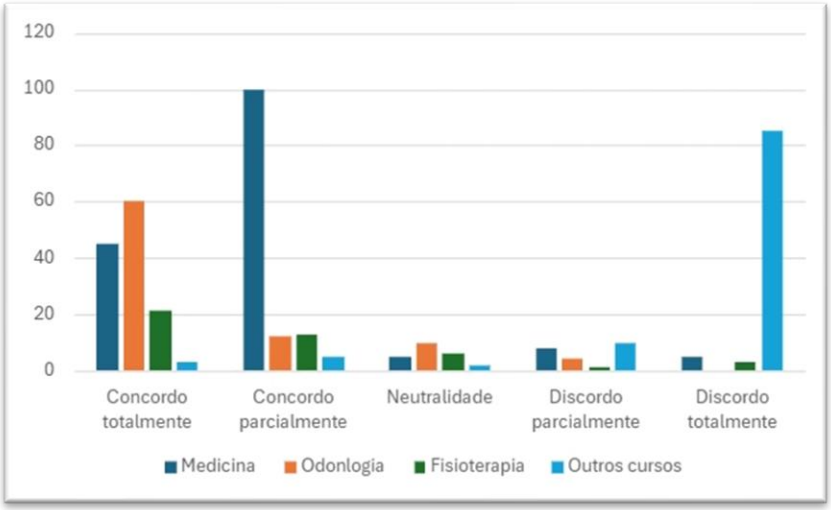
Graph 2 shows the number of opinions regarding the presence of contextualizations in Anatomy classes. The large number of "neutralities" by Dentistry students, 45 (52%), and 47 from Pharmacy, Nursing, Biology, Physical Education and Nutrition courses, making up almost 50% of the students in the group, is noteworthy. Among medical students, the option "partially agree" had 102 votes (62% of the course), on the other hand, the option "strongly agree" received 28 mentions, equivalent to 17% of the course respondents.

Graph 2 representing the numbers referring to the answers to the question: "if the content was approached with contextualizations during Anatomy classes"



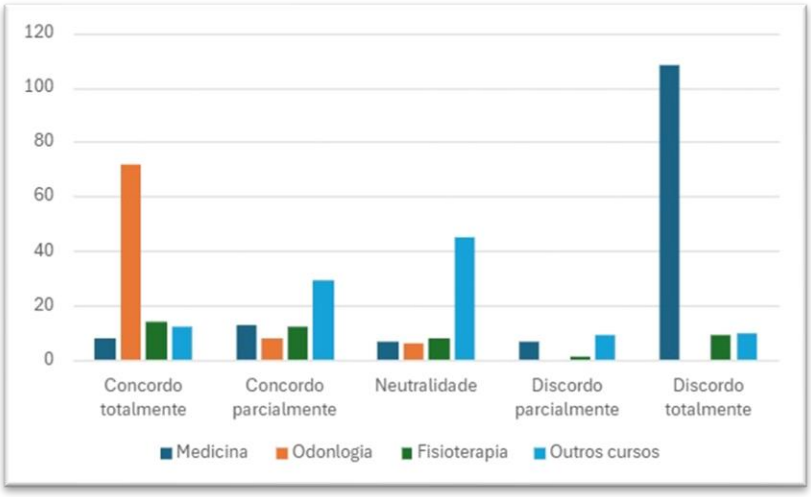
Graph 3 shows the analysis of the answers regarding the use of imaging exams, it is evident the adherence to this methodology within the Dentistry course, constituting the group with the highest absolute and relative volume of options in the item "totally agree" (n=60, making up 70% of the students in the course); In addition, the options "strongly disagree" and "partially disagree" were not considered. In the Medicine course, an almost unanimous response to the options "partially agree" and "strongly agree" (90% of the group).

Graph 3 representing the numbers referring to the answers to the question: "if the content was approached with the aid of imaging exams – 3D, CT scans, etc."



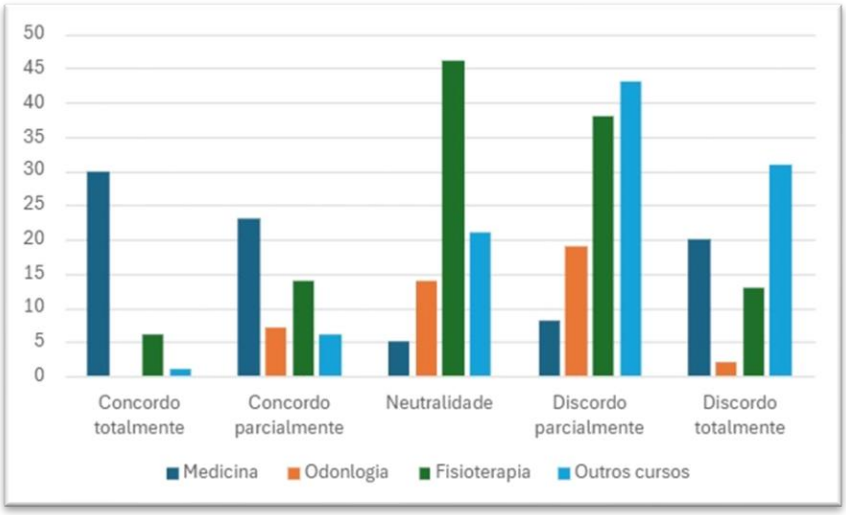
When we put Graph 4 in the light of our analysis, it is evident the importance of seminars and clinical debates in the Dentistry course, which had an absolute volume of 72 votes in the option "strongly agree" (83% of the course respondents), and there was no option for "strongly disagree" and "partially disagree". On the other hand, the Medicine course presented the highest absolute and relative volume of "strongly disagree" options, totaling 108 students (75%). Students from the Pharmacy, Nursing, Nutrition, Physical Education and Biology courses remained predominantly neutral (45 answers, making up 42% of the interviewees in the group), slightly tending to agree, adding 41 answers (39% of the course) to the items "strongly agree" and "partially agree".

Graph 4 representing the numbers referring to the answers to the question: "if the content was addressed with the help of seminars and clinical debates by the students"



In the analysis of the answers related to the question whether there was an approach to the content of Anatomy using technologies such as 3D and computational resources, which are not just slides, it is sovereign to highlight the prevalence of negative answers, a total of 174 answers - 44% of the total - were added for all courses in the options "strongly disagree" and "partially disagree". From this point of view, it is worth highlighting the great adherence of Medicine to the option "strongly agree" in a context in which the options "strongly disagree" and "partially disagree" predominate, being the group with the highest number of positive responses (n=53= 32%).

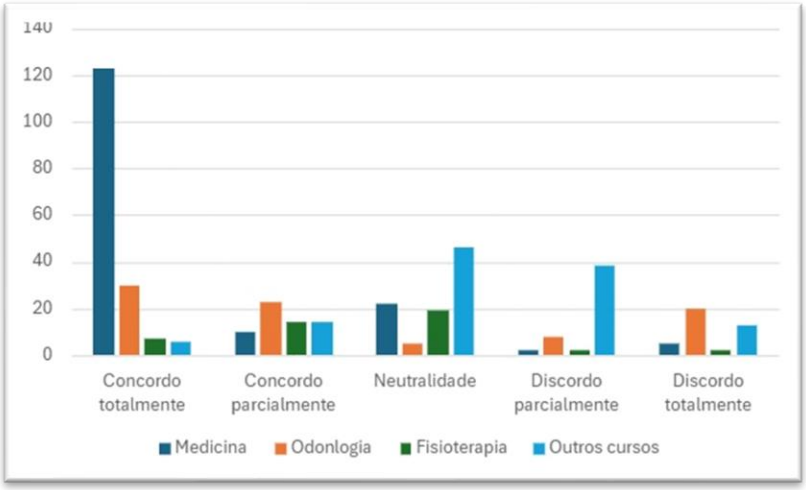
Graph 5 representing the numbers referring to the answers to the question: "if the content was approached with the aid of some technology other than slides, such as 3D and computational resources"



When referring to the result referring to the answers to the question "whether the contextualizations made in the classroom are sovereign for the consolidation of the subject" (Graph 6), it is noticeable the great preference among medical students for the item "I totally agree" (n=123, 75% of the course interviewees). In the Dentistry course, the option "strongly agree" was also the

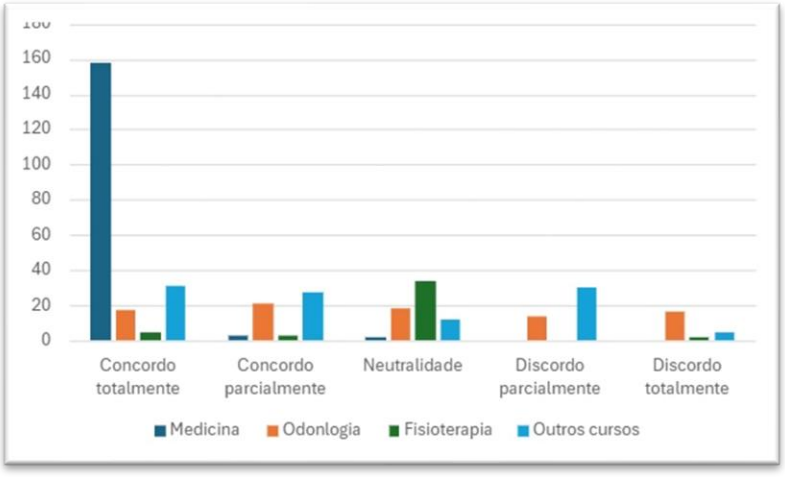
most popular (n=30, 34% of the group). However, the profile of the group was more distributed among all the options, indicating greater variability. In Physical Therapy and in the other courses, the prevalence of answers was in the "neutrality" option (representing 43% and 39%, respectively).

Graph 6 representing the numbers referring to the answers to the question: "if the contextualizations made are of great value for the consolidation of the subject of Anatomy"



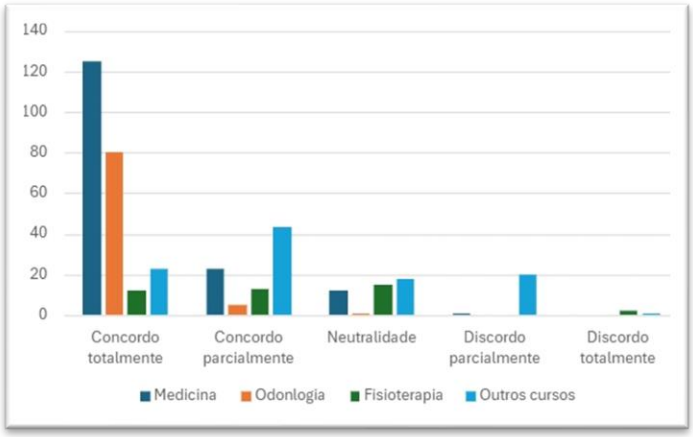
Proceeding to the question about the importance of clinical applications in the development of a good understanding of the patient and his disease (Graph 7), we can observe that among the Dentistry students there is a great variability in their answers, with very similar numbers in all items. In Physical Therapy, there was a predominance of neutrality (n=34, 79% of the total number of course interviewees), with a slight tendency to agree. In the group of Pharmacy, Nutrition, Physical Education, Nursing, and Biology, there was a tendency to agree. In Medicine, on the other hand, students opted for the option "strongly agree" almost unanimously (158 responses, around 96%).

Graph 7 representing the numbers referring to the answers to the question: "whether clinical applications are essential for the development of a good understanding of the patient and his disease in professional life"



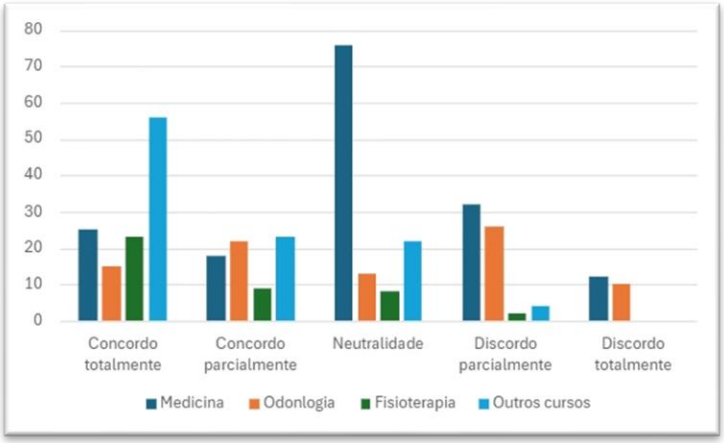
In particular, in courses other than Medicine, Physical Therapy and Dentistry, there was a relevant group with relative disagreement regarding the importance of imaging resources in the understanding of clinical diagnoses, as 20% of the students totally and partially disagreed with this item. In medicine and dentistry, total agreement prevailed, being 78% (125 students) and 93% (n=80), respectively, while physical therapy students showed a balanced distribution in the answer items, with 29% of total agreement, 31% of partial agreement (together they would be close to 60%) and 36% of neutrality (Graph 8).

Graph 8 representing the numbers referring to the answers to the question: "whether the use of real images is essential for the student's professional life"



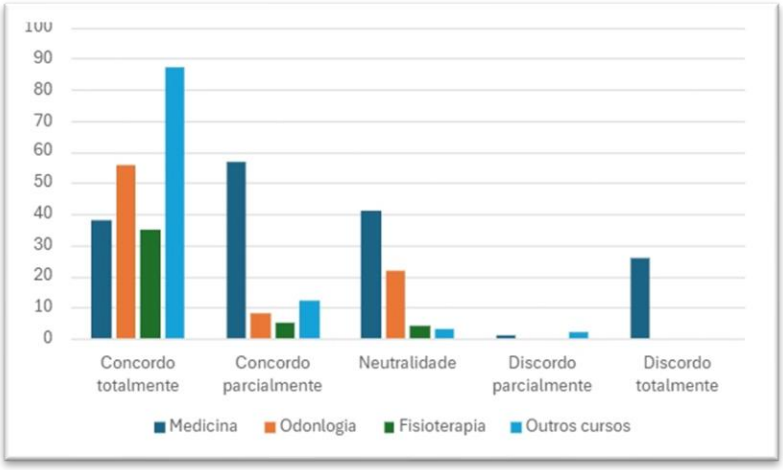
Regarding the use of seminars for clinical development, neutrality was observed, corresponding to n= 76 (47%) of the answers in Medicine (almost 50%). Following the same justification, a similar pattern can be observed in the distribution of responses to dentistry. For students in Pharmacy, Nutrition, Physical Education, Nursing, and Biology courses, there was a prevalence of total agreement, with n=56, making up almost 55% of the options.

Graph 9 representing the numbers referring to the answers to the question: "whether clinical seminars are fundamental tools for teaching/learning anatomy"



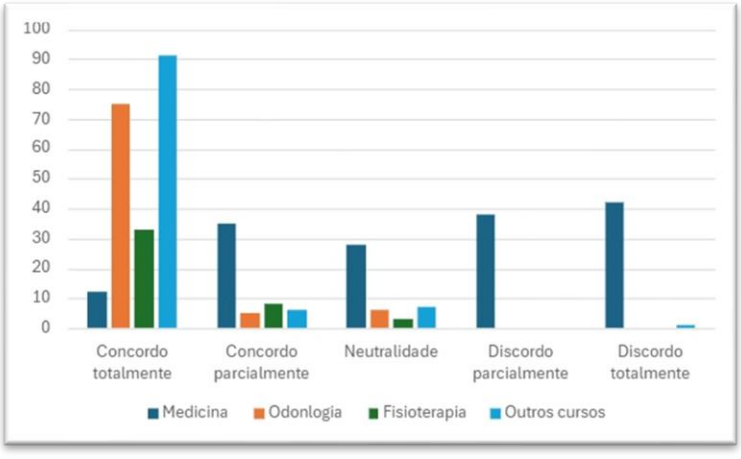
For the students interviewed in the Pharmacy, Nutrition, Physical Education, Nursing and Biology courses, the prevalence of total agreement is notorious, 84% (n=87) that the use of more directed and objective anatomy books is more indicated. This number was 65% (n=56) in dentistry, 80% (n=35) in physiotherapy, evidencing a better understanding of Anatomy based on a more concise didactic material. On the other hand, in medical students, despite the prevalence of agreement (38 students) to the detriment of disagreement (n=27), there is a trend towards neutrality, with 35% of partial agreement and 25% of neutrality.

Graph 10 representing the numbers referring to the answers to the question: "whether concise textbooks with less anatomicisms, but more contextualized, are sufficient for a good understanding, memorization and clinical application of anatomy"



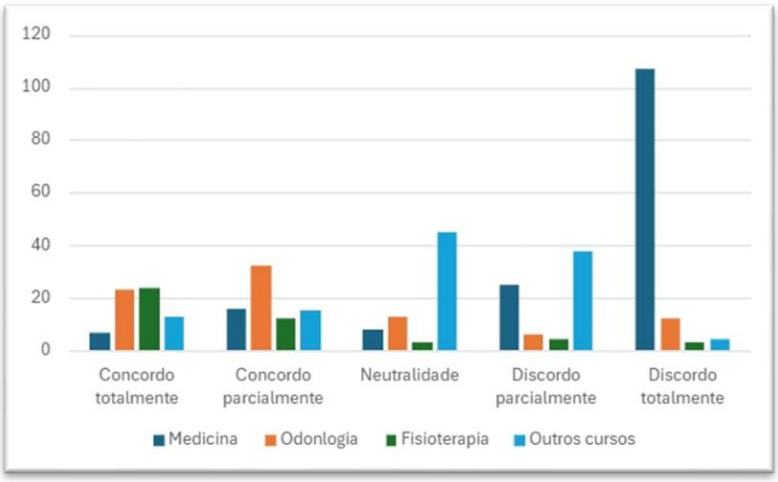
In a very similar way, the answers to the question in which the possibility of a concise and directed script was evaluated to perfectly meet the good study of anatomy, showed that the prevalence of disagreement among medical students was 27% (n=42) in total disagreement and 25% (n=35) in partial disagreement. While 87% (n=92) were in Pharmacy, Nutrition, Physical Education, Nursing, and Biology students and were in total agreement, 75 in dentistry and 33 in physiotherapy.

Graph 11 representing the numbers referring to the answers to the question: "whether a well-directed and direct practical script is sufficient for good anatomy learning"



Medicine stands out, with the majority of disagreements, represented by 80.98% of the votes (with 65.64% of total disagreement), evidencing the need for clinical correlations in relation to the content addressed. In Dentistry, as well as in Physiotherapy, Pharmacy, Nursing, Nutrition, Physical Education and Biology, there is a varied distribution of responses, tending to neutrality with 40% (n-45) of the options, a considerably expressive percentage.

Graph 12 representing the numbers referring to the answers to the question: "whether it would be possible to have a good anatomical learning and a good application of the content in professional life just by attending the theoretical classes on pure anatomy, without clinical applications"



By statistically associating some variables by chi-square and Student's t-test, we verified the statistical correlation between some answers (Table 1).

Variable 1	Variable 2	P- (parameter≥ 0.05)	Association
More targeted theoretical classes	*Importance of clinical applications in the study of Anatomy*	P=3.08	No Membership
More targeted theoretical classes	*Importance of clinical contextualizations in the study of Anatomy*	P= 2.86	No Membership
More targeted theoretical classes	*More concise study scripts*	P= 0.09	Little association
Use of more targeted books	*Importance of clinical applications in the study of Anatomy*	P= 0.07	Close Membership
Use of more targeted books	*Importance of contextualizations in the study of Anatomy*	P=0.07	Close Membership
Using a Direct Roadmap	*More targeted theoretical classes*	P=0.0041	Statistical Association
More targeted theoretical classes	*Use of more targeted books.*	P=0.0053	Statistical Association

It is possible to infer about the great tendency of students who do not consider clinical applications and contextualizations important, preferring more concise textbooks, in addition to the coincidental preference between directed scripts and also objective classes, only with pure anatomy content. These concise textbooks are also preferred by most students who have opted for lectures without contextualizations or clinical applications.

DISCUSSION

Study methods in Anatomy will always be debated on a large scale. And it is interesting when we cite most of the authors1,3,10,14,15,16,17, 18, 19. Kerby1, for example, interviewing 580 students in the United Kingdom, found that the most effective method of study in Anatomy would be dissections. However, our present research aimed not to highlight this "commonplace" but rather to address the new nuances and didactic tactics used today in this discipline.

The present study was carried out with students of the disciplines of Anatomy of the Federal University of Juiz de Fora and of a private college also in Juiz de Fora, Faculty of Medical and Health Sciences of Juiz de Fora (Suprema), with 398 participants divided according to the number of semesters of anatomy they have in their curriculum and according to their adherence to the research. The students who answered the questionnaire were distributed as follows: 1) Medicine course (163 answers) - 4 semesters; 2) Dentistry (86 responses) - 3 semesters; 3) Physiotherapy (44 responses) - 3 semesters; 4) Pharmacy, Nursing, Biology, Physical Education and Nutrition - 1 semester (105 responses). Or in the case of Nursing, 2 semesters. The variable number of participants from one course to the other was due not only to the differences in class sizes (the Dentistry and Medicine classes are larger) but also to the number of periods with which each course is related to Anatomy.

The importance of the use of radiographic images is widely supported by the literature today. Camilo20 stated that medical images are crucial for clinical diagnosis, planning and monitoring of the patient's health, supported by Rathan *et al21*, who point out how the use of images, even amateur production, significantly improves students' understanding of the anatomical content addressed; Rocha *et al22* indicated that the use of radiological images increased students' interest in the study of anatomy, in addition to improving students' ability to identify structures and increase long-term knowledge retention, including facilitating the use of anatomy in professional practice. Our research is congruent with these ideas and brought numbers that make the opinion of the absolute majority of the students interviewed coincide with this statement. However, it is necessary to consider the access not only of students, but also of teachers and institutions to the material, which is expensive, as reported by Chang23.

In the interview, we did not distinguish the type of image used in the classes, we only inquired about its use and its importance in Anatomy and in the clinic, but Iwanaga24 concluded, after

analyzing several studies that compare the efficiency of using 2D images (and other methods) with 3D models, that students who learned with 3D were more likely to achieve higher scores in knowledge assessments. This was corroborated by Venantius [4]. The present research showed that the use of real images in classes is very important for almost all students, but it stands out in Dentistry and Medicine courses, which is really in line with the professional reality of these students, marked by frequent contact with images of CT scans, MRIs and X-rays

In the present study, it was demonstrated that when questioning about clinical guidance in the teaching of anatomy, medical students are the ones who agree that this type of approach occurred during their anatomical learning, and, in general, this teaching methodology seemed to them to be very important in clinical practice, as well as contextualizations; this is notably important in a scenario in which the value of clinical guidance for the teaching of anatomy is known and reinforced by several authors, such as Vieira25, who points out that the study of anatomy contextualized with surgical techniques, clinical cases and radiological images - which can be seen as an anticipation of what students will encounter in their professional lives - is capable of improving the performance of students in the recognition of structures and acquisition of concepts. In our analysis, the course that most considered the use of clinical applications and contextualizations in the teaching of anatomy to be important was Medicine, corroborated by Montes9, who mentions the engagement of these students in this practice. However, Martinelli, interviewing students of Physical Education, Nursing, Nutrition and Physiotherapy, found the great engagement of these students regarding the application of Anatomy in their clinical practice and vice versa.

It was also evident that almost half of the students of Dentistry, Pharmacy, Nursing, Biology, Physical Education and Nutrition remained neutral about the use of the importance of contextualizations and clinical applications in their learning of anatomy, and the positive responses in this sense were not so striking, differently from what Salbego26 found. These students also did not perceive the need to explore this type of approach in depth, going against what Maciel18 writes, defending the everyday and clinical applications in Anatomy didactics, regardless of the course to which the discipline is taught. And these numbers discussed here are intriguing, because even if the courses of Biology, Physical Education and Nutrition do not have a so-called clinical contact with the patients, the Dentistry professionals will work clinically and surgically with the patient, requiring a solid knowledge in Anatomy.

Our results showed that the popularity of seminars and clinical debates in Dentistry, Physiotherapy, Nursing, Nutrition, Physical Education and Biology courses is notorious. On the other hand, among the participants of the Medicine course, it is evident that the seminars and debates among the students are little explored by the professors, and demand little value in the practice of Anatomy in the clinic, according to the students of the course, since this was the course with the

highest absolute and relative volume of options "I totally disagree", in this regard. Montes9 brings a suggestion from an extremely pertinent student about the point addressed at this moment, and which shows us the level of approval, on the part of the students, of the use of seminars and clinical cases in anatomical teaching:

> "Holding seminars, I think, is an excellent idea, which will demand more from us students, so that we can integrate more into the content and delve even deeper. The use of clinical cases associated with this procedure helps to put the discipline more dynamic and more centralized in the clinical practice that we will perform for the rest of our lives."

With the increasing restrictions imposed on whole-body dissection, medical schools have been opting for alternatives to the practical dissection of cadavers; in this scenario, alternative technologies end up gaining ground, according to Vieira32. Chang23 states that "*Technology-enhanced learning*" (i.e., learning enhanced by the use of technology) through didactic resources, such as apps, can be especially useful when the content taught is essentially visual. Still in this vein, it is imperative to underline the significant variance within medicine regarding the use of alternative technologies: 61% of the group provided positive answers, while 32% provided negative answers; this may indicate that some teachers made use of 3D, while others did not, which is probably due to the fact that these students took the anatomy course at different times. In the Dentistry course, it is worth mentioning the absence of votes in the option "strongly agree" and the low volume of votes in the option "strongly disagree" (2 only, 4% of the interviewees in the group); This indicates that some alternative technology was used, although its use was shallow, given the predominance of the "partially disagree" option (19 responses, 45% of the group).

A curiosity was aroused when we analyzed the data regarding the study methods themselves. The students of the Medicine course had a clear rejection of concise and summarized books, this so-called "rejection" tended to decrease progressively, in the students of Dentistry, Physiotherapy and also in the students of the Pharmacy, Physical Education, Biology, Nursing and Nutrition courses, there was a growing preference for the type of material under discussion. Although Liew27 has researched and described patterns in the methods of study in Anatomy, and has written that these tend to be practically identical, we noticed here a great difference in the posture of the groups of students according to their course.

And when we associate this option for a more summarized didactic material with the importance of clinical applications, which are generally absent in this type of books, we see a quasi-statistical association, that is, the greater the interest in clinical applications in Anatomy, the greater the need to refer to a denser didactic material.

Reinforcing the above statement, the statistical correspondence came when we connected theoretical classes without clinical direction with concise didactic material ($p=0.0053$), showing that

the more the student values a more in-depth discussion, the more he strives for more specialized content, and vice versa. It is notorious the large number of names to be memorized in Anatomy, Salbergo *et al* [26] even report in their research that the great complaint of students in relation to this science is precisely the number of structures to memorize. Perhaps this anguish is reflected in the numbers we present here. The student needs an absolute motivation for the efficient study of Anatomy, supported by what Sturges *et al28 said*. This motivation goes a long way through the use of methods such as clinical application with the association of the topic under discussion with the student's future professional life. And once again we call attention to the significant number of students who do not consider this strategy to be important, although the vast and overwhelming majority of our interviewees tended to attribute great value to it.

When we associated the preference for "anatomical" theoretical classes both with the importance of contextualizations and with the clinical direction of the classes, we saw that there was no statistical significance, that is, even recognizing a certain value, importance and effectiveness in these last strategies mentioned above, the student tended, in a certain way, to prefer more expository and direct classes, with a summarized written material (script). Campos29 suggests active methodologies, i.e., those in which, in Anatomy, the theory of clinical application comes before the theory itself, therefore, the suggested motivation22,26,30 should be cultivated by the professors of the discipline in this sense.

Finally, in addition to this motivation, and in the absence of access to state-of-the-art technologies, the exploration of radiographic and tomographic images is recommended, in addition, of course, to the use of contextualizations and clinical guidance, always. In this way, the students' desires and didactic needs will be met.

CONCLUSION

It can be inferred that:

- There are differences between courses in their approach to the subject using contextualizations, clinical applications, and radiographic, or 3D, images, although these teaching tactics seem to be widely used.
- Students, in general, recognize the effectiveness of contextualizations, clinical correlations, and the use of images, despite the fact that a large group does not see as much importance in these methods in the construction of a more robust anatomical knowledge. These variants were closely *linked* to the student's course, i.e., linked to different aspirations and different needs to use Anatomy in professional life

- As much as the interviewees prefer more summarized theoretical classes, they recognize the importance of contextualizations and clinical applications in Anatomy. The same is true of the desire for targeted scripts.
- Some students showed themselves to value summarized theoretical classes, direct scripts and concise books, differing greatly as to the group or course they take, that is, again here we see the weight of how much anatomy can be, or cannot be, essential in their professional career.
- Many students support the use of seminars, it was a method pointed out as good by most students of Physiotherapy, Pharmacy, Physical Education, Biology, Nursing and Nutrition, but not all. The discredit of this method among medical students is highlighted, a group that, however, like Dentistry, opted for greater approval of the use of radiological images in classes.

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