Pluralities in dental education: narratives of utilizing digital resources for educational approaches on racism and diversity

Abstract This article aimed to report the experience of using social media as spaces for building knowledge about the themes of structural racism and the health of the LGBT population through events promoted by scholarship students from the Tutorial Education Program (TEP) Dentistry at the Federal University of Rio Grande do Sul. Considering the scenario of dental education, beyond the technical and scientific knowledge required for dentists, it is of utmost relevance to address issues that go beyond these boundaries for the training of professionals capable of practicing dentistry in an integrated manner with the social context. Given the pandemic caused by the novel coronavirus (COVID-19) and the need to adapt teaching tools to the demands of isolation and social distancing, the significant space that social media has gained as a means of knowledge construction on various topics was observed, with the advantage of dispensing with travel, unlike traditional teaching environments. The methodology used proved advantageous, as it allowed teachers, students, and the general public from different regions of Brazil to come together, ensuring broad discussion of topics that have a significant social impact. Nevertheless, it is emphasized that social inequality generates different possibilities of access to virtual environments, being a barrier to information for more vulnerable populations. The choice of themes aligned with the proposals of the TEP Groups, as they positively contribute to the formation of university students.


Pluralidades en la enseñanza odontológica: informes sobre el uso de los recursos digitales para los abordajes educativos del racismo y la diversidad

Resumen Este artículo tuvo como objetivo relatar la experiencia de utilizar las redes sociales como espacios de construcción de conocimiento sobre los temas del racismo estructural y la salud de la población LGBT a través de eventos promovidos por becarios del Programa de Educación Tutorial (PET) Odontología de la Universidad Federal do Rio Grande do Sul. Al considerar el escenario de la enseñanza en Odontología, además de los conocimientos técnicos y científicos necesarios para los odontólogos, es de suma importancia abordar temas que superen estas barreras para la formación de profesionales capaces de ejercer la profesión de forma articulada al contexto Social. Ante la pandemia generada por el nuevo coronavirus (COVID-19) y la necesidad de adecuar las herramientas didácticas a las exigencias del aislamiento y distanciamiento social, se observó el importante espacio que conquistaron las redes sociales como medio de construcción de conocimiento de los más variados temáticos y con la ventaja de prescindir de desplazamientos, a diferencia de los entornos de enseñanza tradicionales. La metodología utilizada demostró ser ventajosa, ya que posibilitó el encuentro de profesores, estudiantes y público en general de diferentes regiones de Brasil, asegurando una amplia discusión de temas de gran impacto social. Aun así, se destaca que la desigualdad social genera diferentes posibilidades de acceso a los entornos virtuales, siendo una barrera de información para las poblaciones más vulnerables. La elección de los temas estuvo en línea con las propuestas de los Grupos PET, ya que contribuyen positivamente a la formación de los universitarios.


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INTRODUCTION

Dental education, a setting for ongoing discussion and constant updates over the years, still maintains a teaching and learning process centered on the reproduction of techniques for skill acquisition. This, in turn, tends to relegate the need to develop critical thinking and build the expected competencies for a healthcare professional to a secondary position\(^1\). It is undeniable that this training logic has resulted in a long period of neglecting human, social, and human rights issues, essential themes for the knowledge set of a dentist.

While curricular changes have emerged with the proposal to qualify dental students with a broader view of the human being and society, including new actors and innovative training scenarios, it is still strongly influenced by the biomedical teaching model. This results in students with little acuity regarding the recognition of problems that surpass biological barriers\(^2,3\). It is known that topics related to minorities, for example, are not as frequently discussed in academic environments, resulting in few studies and consequently hindering the creation of a truly universal healthcare model that ensures the dignity of all populations\(^4,5\).

Moreover, there is evidence demonstrating certain behaviors of dental students towards patients of different races and skin colors when faced with similar clinical situations. There is greater accountability attributed to black patients regarding the outcomes of employed treatments and a lower perception of their decision-making capacity\(^6\). Despite these topics being highlighted and sometimes discussed in an organized manner within institutions, the academic community does not fully understand the need to address the issue of racism\(^7\).

In the digital era, scenes of hostility against different social groups are witnessed daily\(^8\), even though the use of the internet is legally determined by principles of plurality, diversity, human rights, and the exercise of citizenship\(^9\). Such acts are often motivated by support and the false sense of anonymity that many of these situations find, depending on the social network where they are published.
Simultaneously, social media presents itself as an environment that facilitates the gathering of groups sharing identity-related feelings, allowing the formation of bonds and mobilizations in defense of what their members stand for, whether those ideals are liberal or conservative. Thus, it becomes apparent that, although hostility is present in the digital world, it can be considered an appropriate space for the development of debates on topics that would not attract as many participants in conventional settings.

Due to the emergence of the COVID-19 pandemic, various sectors of society, if not all, had to adapt to a new reality to maintain the operation of their businesses, institutions, organizations, among others. In the educational field, particularly in higher education, it was no different, as several universities adopted remote formats as a strategy to continue classes\textsuperscript{10,11}. Therefore, it is possible to identify that during this period, there was a convergence between the traditional teaching environment and the digital medium, with all its peculiarities and limitations - the latter being particularly relevant for dentistry undergraduate programs.

Therefore, this experiential report addresses the use of informal and digital communication channels to reach a broader audience on topics necessary for the social and professional development of future dentists who will predominantly practice in a country where the historical process of social development reflects in the health of individuals they will serve. Furthermore, the report aims to project an educational model that enhances inclusive themes, with greater participation and interaction between the audience and organizers, adapting the traditional educational model through technological innovations.

**EXPERIENCE REPORT**

_Pandemic scenario and restrictions in Higher Education Institution (HEI)_

The COVID-19 pandemic significantly impacted the functioning of the Federal University of Rio Grande do Sul (UFRGS). After a period of class suspension in 2020, the university implemented what is known as Emergency Remote Teaching (ERT), where previously in-person activities transitioned to a digital format due to the need for social distancing to control the virus’s spread. Not only were teaching activities adapted, but also extension and research activities – the latter being interrupted in many cases.

As a result, the Faculty of Dentistry (FO) at UFRGS also had to undergo adaptations, preventing the continuation of classes, research, laboratory activities, and services at the Dental Teaching Hospital of the institution. The scholars of the Tutorial Education Program (TEP) Dentistry UFRGS, who primarily conducted their activities at the FO facilities, had to adjust so that their activities fit into the remote format and the pandemic scenario.

In this context, members of the group developed the so-called "Open Classes," which were online meetings with professors, dental professionals, undergraduate and postgraduate students. The goal was to address topics not covered in the undergraduate curriculum, aiming to stimulate debate and the dissemination of knowledge on these subjects. The activity was named for its main feature – live broadcasts with an open chat to encourage more participants to contribute to the discussion and bring their experiences to the meetings.

_Organization and execution of the open classes_

In the period leading up to the preparations for the Open Classes, four scholars from the Tutorial Education Program (TEP) Dentistry UFRGS underwent training covering two main themes: structural racism and the health of the LGBT population. Subsequently, discussions were held on the importance of incorporating these themes into the undergraduate curriculum and how they could be presented to other students and the broader academic community.

Following this, two presentations were crafted, highlighting the key aspects to be addressed for a potential discussion on the themes. This involved selecting the main characteristics of the studied populations, relevant
concepts for understanding them, as well as elucidations regarding public policies and historical aspects contributing to the challenges in the overall health and oral health of these populations.

Under the guidance of a faculty member from FO UFRGS and the Graduate Program in Collective Health at UFRGS, the group organized two events with the participation of guests from different universities and areas within Dentistry. These meetings, held on various dates during the 2020 pandemic, were previously advertised through the TEP group’s social media channels.

To facilitate synchronous and remote event execution, reaching the highest number of participants possible, the guests, presenters, and moderator convened through the institution’s web conferencing platform, Mconf. This platform enabled access to the presentation materials and discussions. The meetings were simultaneously broadcasted through the live streaming feature on YouTube, allowing viewer interaction through chat on the TEP Dentistry UFRGS channel, which boasts over 5260 subscribers.

During each event, one of the presenters monitored the comments in this interactive space, conveying messages with testimonials, critiques, questions, and suggestions to the other participants to stimulate discussion. These comments remain available to the audience while the content is on the channel. Additionally, the platform offers statistical analysis of the reach and audience of the livestream and video through YouTube Studio.

At the end of each class, a keyword was presented for viewers to fill out the attendance form and become eligible for certification. Finally, both events were made available on the TEP Dentistry UFRGS channel, allowing other individuals to access the content asynchronously.

Motivation for the choice of themes

It is expected that a dentist, as a healthcare professional, possesses a profile not only enriched with technical-scientific knowledge but also attentive to human dignity and aware of social, cultural, economic, and environmental policies. However, it appears that such subjects may not be integrated into undergraduate education, as emphasized by a participant in the second class: "traditional dental education does not make room for these topics due to the prejudice of many professors. How do you see the possibility of change in dental programs?"

The comment from the live stream aligns with what the literature indicates—certain topics are overlooked in academic settings, particularly in Dentistry, where the limited number of articles reflects a certain disinterest among health researchers in changing this reality. This point was also reiterated during the meeting by a dentist, whose statement "in the search for these topics for my thesis, I noticed the scarcity of these studies" illustrates the frequency of this situation.

As racism is derived from a historical, social, and political process, it is crucial to portray it in its structural conception, intrinsically embedded in the way society is structured, normalizing social patterns and rules based on discriminatory racial principles. The literature emphasizes the importance of adopting anti-racist practices for effective change.

Among the harms caused by the structure in which racism exists, racial disparities in health stand out. In the medical field, studies show that individuals with black skin receive fewer requests for mammograms than those with white skin, highlighting a potential neglect based on racial discrimination. Similarly, studies demonstrate the same issue in the dental field by revealing racial disparities in oral health, as the black population experiences a higher prevalence of dental caries, for example.

One factor highlighted in the literature related to racial health inequities is the treatment decision influenced by patients’ skin color. A study aiming to evaluate this influence demonstrated that, for a severely affected tooth with dental caries, white-skinned patients were more commonly referred for prosthetic rehabilitation, while black-skinned
patients were directed towards composite resin restoration\(^1\). In another study, black patients were more likely to undergo extraction of a tooth affected by dental caries, while the treatment decision, made by the same clinician, was to retain the same tooth in white-skinned patients\(^1\). Given the above, the adoption of educational practices is necessary to reduce racial disparities and enhance healthcare in a comprehensive and non-discriminatory manner.

**The first class (Structural racism: a challenge for dental education)**

In the initial session conducted by the group, the proposed theme was structural racism and its impact on the academic environment, the practices of dental professionals, and the oral health processes of dental patients. To facilitate this discussion, two Black professionals were invited to join the presenters and the mediator—namely, a coordinator of a Dentistry undergraduate program at a private university in Rio Grande do Sul and a dentist who graduated from UFRGS.

The class lasted approximately two hours and twenty minutes, reaching a peak of 117 simultaneous participants during the transmission. The average viewing time was 31 minutes and 20 seconds, accumulating a total of 257 hours and 27 minutes of content watched. Moreover, there was substantial interaction from participants, with a total of 198 messages exchanged in the chat over the two hours.

With the data from the live stream and subsequent publication, the video made available on the platform after the event garnered 691 views and an impression rate of 5806 users. This statistic underscores the content’s reach, even though only 1.8% of users clicked on the material (Table 1).

**Table 1.** Statistics of the transmission and videos provided on the platform where the class broadcasts took place.

<table>
<thead>
<tr>
<th></th>
<th>Structural racism: a challenge for dental education</th>
<th>LGBTI health: a challenge for dental care and education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Live Transmission Statistics obtained from platform analysis on August 26, 2021</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broadcast Duration</td>
<td>2h59m43s</td>
<td>2h47m13s</td>
</tr>
<tr>
<td>Peak Simultaneous Viewers</td>
<td>117</td>
<td>98</td>
</tr>
<tr>
<td>Average Viewing Time</td>
<td>31m21s</td>
<td>22m6s</td>
</tr>
<tr>
<td>Total Viewing Hours</td>
<td>289.6</td>
<td>246.7</td>
</tr>
<tr>
<td>Chat Messages</td>
<td>198</td>
<td>321</td>
</tr>
<tr>
<td>Replays</td>
<td>493</td>
<td>587</td>
</tr>
<tr>
<td><strong>Statistics of the available video obtained from platform analysis on August 26, 2021.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Views*</td>
<td>691</td>
<td>727</td>
</tr>
<tr>
<td>Impressions**</td>
<td>5806</td>
<td>9379</td>
</tr>
<tr>
<td>Click-through Rate</td>
<td>1.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Average View Duration</td>
<td>25m8s</td>
<td>20m21s</td>
</tr>
</tbody>
</table>

Adapted from ©YouTube Creator Studio. * Number of times the video was opened by someone. ** Number of times the video thumbnail was presented to an individual on the platform.
Analyzing the gender and age demographics of the video’s audience, it is evident that there is no homogeneity among viewers. A larger number of female viewers between the ages of 18 and 34 were present, as shown in Table 2.

Table 2. Percentage distribution of class viewers after video availability on the platform according to gender and age.

<table>
<thead>
<tr>
<th>Age of the audience</th>
<th>Structural racism: a challenge for dental education</th>
<th>LGBTI health: a challenge for dental care and education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Feminine</td>
<td>Masculine</td>
</tr>
<tr>
<td>18 - 24 years</td>
<td>30.0%</td>
<td>8.1%</td>
</tr>
<tr>
<td>25 - 34 years</td>
<td>29.6%</td>
<td>10.3%</td>
</tr>
<tr>
<td>35 - 44 years</td>
<td>6.3%</td>
<td>5.8%</td>
</tr>
<tr>
<td>45 - 54 years</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>55 - 64 years</td>
<td>9.9%</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>75.8%</td>
<td>24.2%</td>
</tr>
</tbody>
</table>

Adapted from ©YouTube Creator Studio

The second meeting aimed to delve into the discussion of LGBT population health and its connections with Dentistry. To enhance representativity and experiences, most of the guests, panelists, and presenters belonged to the LGBT community. Nonetheless, individuals adhering to cisheteronormative standards were also present, highlighting that everyone can contribute experiences and knowledge to discussions promoting equality and equity.

Among the discussion panel members were the TEP group scholars, a professor from FO UFRGS, faculty from the Federal University of Santa Catarina (UFSC) and the Federal University of Pernambuco (UFPE). The developers of the pamphlet "Education, Health, and Diversity: Tips for Good Practices in Oral Health" presented during the event, were also present.

The second class lasted approximately 2 hours and 20 minutes. Despite similar promotion to the previous event, the peak simultaneous viewership was slightly lower, reaching a total of 98 participants. The average viewing time was 22 minutes, accumulating a total viewing time of 216 hours, 18 minutes, and 58 seconds. Throughout the event, the number of viewers remained above 80, and participants were actively engaged, with a total of 321 messages exchanged during the live stream.

With the video of the transmission available on the platform, approximately 9379 individuals were suggested to watch it (impressions). Although the click-through rate on these impressions was only 2.4%, the material currently has 727 views (Table 1). However, the average viewing time remains low, indicating that some viewers specifically seek discussion on particular issues within the complete video.

The audience reached after the event’s availability was similar to that of the "Structural Racism: A Challenge for Dental Education" event, primarily consisting of women between 18 and 24 years old. However, this time, there were no participants above 44 years old, as shown in Table 2.

Advantages and limitations of digital meetings
The methodology employed proved extremely beneficial in certain situations. The use of virtual communication tools facilitated the gathering of different perspectives among participants. Notably, attendees from various cities, universities, and regions of the country, such as those from UFPE and UFSC, were present. This dynamic made possible by digital tools was evident not only in education but also in the technical-scientific production of Dentistry courses.

Moreover, the events reached viewers from different locations, as emphasized in the comment, "Extremely important and necessary class, watching from here in Minas Gerais." Professors from institutions in other cities and states could participate to contribute by discussing these issues in their localities. Additionally, the format allowed this inter-regional interaction without the need for expenses on transportation and accommodation for participants, a situation that typically hinders inviting speakers and integrating diverse audiences under normal circumstances.

Nevertheless, it's crucial to ensure that the process of digitizing education does not perpetuate educational inequities. In socially unequal countries, access to technology may be limited based on the social stratum being analyzed. Therefore, caution must be exercised when evaluating the reach of certain events and institutional activities during a period of isolation.

The hypothesis of reverse equity, theorized in 2000 by Victora et al., suggests that innovations in health (and education, in this context) tend to be initially adopted by the socially and economically privileged—those facing fewer difficulties. In the short term, if effective, these new interventions may increase educational inequalities. Thus, if the coverage of this educational innovation continues to grow, eventually, only the most disadvantaged will be harmed.

It's essential to note that economically privileged groups, with greater capacity to access digital content, are not the same as those experiencing the consequences discussed in the classes. Therefore, besides technological efforts to popularize the content, adherence to the pre-established guidelines in National Curricular Directives, integrating sociodemographic issues more comprehensively into undergraduate education, is crucial.

Program of Tutorial Education as a facilitator

The Tutorial Education Program (TEP), belonging to the Ministry of Education, aims for the inseparability of the triad of teaching, research, and extension to ensure the improvement of education in the courses and higher education institutions where they are inserted. The expansion of experiences and opportunities allowed by TEP to its participants is a result of this inseparability process, enabling the comprehensive development of individuals who will contribute to their environments. Moreover, the plurality of experiences and the consequent results should be able to encompass other students in the course benefited by the program.

TEP seeks the closest possible contact between scholars and other students in institutions to disseminate new ideas and practices capable of collectively shaping students and professionals aware of their roles in society. Additionally, TEP is responsible for maintaining different pedagogical practices within the Higher Education Institution (HEI), and this was also the goal with the implementation of open classes, considering that the teaching-learning process was affected by the pandemic situation.

Therefore, it is essential that TEP groups be able to minimize deficiencies in health education through practices that integrate different discussions and themes. This aims to make questions like the one from an open class viewer, "Is there any space where we can discuss this more?" less frequent, and this mentioned space should be easily found within Educational Institutions that allow the development of the program. Thus, the role of the groups will be fulfilled, ensuring the visibility of different approaches, as stated by an event participant: "Congratulations for opening this discussion for a more democratic and less socially unequal society."

FINAL CONSIDERATIONS
Considering the National Curriculum Guidelines for undergraduate education in Dentistry, the relevance of the open classes conducted on the topics of the health of the LGBT population and structural racism is evident. Among the skills and competencies necessary for the training of dentists is the understanding of the social reality of their environment, aiming to transform it for the benefit of the population.

In light of this, the chosen themes have significant social impact and were positively addressed by the TEP group. They utilized digital teaching tools, with the possibility of reaching diverse audiences and encouraging discussions that are highly relevant to empower future healthcare professionals about the specificities that make up each minority group.

REFERENCES


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