

**"WE MUST BE ATTENTIVE AND STRONG": KNOWING
GENDER AND PERFORMING SEXUALITY IN THE STUDIES OF
NATIONAL MEETINGS IN THE TEACHING OF CHEMISTRY**

**“É PRECISO ESTARMOS ATENTOS E FORTES”:
CONHECENDO GÊNERO E PERFORMATIZANDO SEXUALIDADE
NOS ESTUDOS DOS ENCONTROS NACIONAIS NO ENSINO DE
QUÍMICA**

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Abstract

This paper analyzes the academic studies on gender and sexuality presented in the annals of the National Chemistry Teaching Meetings (ENEQ). We used the following terms for data collection: gender and sexuality. For data analysis and discussion, we used the critical reference and content analysis (BARDIN, 2016). Six complete papers and seven abstracts were found that met the interest of the research. The study made it possible to gather several perspectives on its importance in Basic Education, as well as new horizons of introducing the teaching of gender and sexuality in the teaching of chemistry. However, they are insipid studies that need more debate and public policies that strengthen the training of teachers who dare to teach Chemistry in times that it is necessary to be "attentive and strong".

Keywords: Gender; Sexuality; Chemistry Teaching; Teacher training.

Resumo

Este trabalho analisa os estudos acadêmicos sobre gênero e sexualidade apresentados nos anais dos Encontros Nacionais de Ensino de Química (ENEQ). Utilizamos para o levantamento de dados os termos: gênero e sexualidade. Para análise e discussão dos dados, utilizamos o referencial crítico e a Análise de Conteúdo (BARDIN, 2016). Foram encontrados seis trabalhos completos e sete resumos que atendiam ao interesse da pesquisa. O estudo possibilitou reunirmos variadas perspectivas sobre sua importância na Educação Básica, bem como novos horizontes de introduzir o ensino de gênero e

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sexualidade no ensino de química. Entretanto, ainda assim, são estudos insipientes e que necessitam de maior debate e de políticas públicas que fortaleçam a formação de professores que ousam ensinar Química em tempos que é necessário estarmos “atentos e fortes”.

Palavras-chave: Gênero; Sexualidade; Ensino de Química; Formação de professores.

*The censorship board on my face says
Not recommended to society
The comfort stripe on my body says
Not recommended to society
Perverted, unloved, evil boy, very careful
Bad influence, bad looks, indecent boy,*

(Not recommended - Caio Prado Ribeiro, 2014).

1 First of all, a study of gender and sexualisty in Chemistry Teaching

Censor... Delete... Forget... Kill... Die... These are the verbs that are intended for the population considered different, especially those that do not identify with the *performativity of a cisheteronormative body*. By so much standard, it is confused and merges with an ABNT. Because we are resistant and understand the schoolable space that makes chemistry teaching happen, as democratic and diverse, we assume in this article the posture of researchers who want to know gender and perform sexuality, in a space of (in)visibility, in the National Meetings of Chemistry Teaching (ENEQs).

Thus, this article aims to investigate the scenario of discussions on gender and sexuality in the papers presented in the last ten editions (2010-2020) of the National Meeting of Chemistry Teaching (ENEQ), which occurred in a face-to-face format and the last in a remote way, considering the Covid-19 pandemic. Our intention, therefore, is to understand the investigative, pedagogical, theoretical-conceptual and political trends that researchers have assumed for the advancement of the debate in the educational space of Chemistry, as a science that must know the genres and perform sexuality, according to Butler (2003).

"In other words, acts, gestures and desire produce the effect of a core or internal substance, but produce it on the surface of the body, through the game of significant absences, which suggest, but never reveal, the organizing principle of identity as a cause. These acts, gestures and actions, understood in general terms, are performative, in the sense that the essence or identity that they intend to express are fabrications manufactured and supported by corporeal signs and other discursive means. The fact that the gender body is marked by performative suggests that it has no separate ontological status. " (BUTLER, 2010, p. 194)

Considering the performance, gender, sexuality, and chemistry, as areas of research, the idealization of this work emerges from the perception of the members of SNORESONAR - University Collective of Research in Social Representation, Narratives [auto(bio)gráficas] and Inventive Cartography in Science Education in about the relevance of this discussion in times of rise of free hatred for and with diversity, which is increasingly forgotten, erased and silenced, especially in educational spaces and in spaces of power.

We have noticed that the spaces of discussions and production of knowledge and knowledge about this theme enables the coexistence of antagonistic discourses: one defends the idea of a multiple subject, in which the sociocultural environment shapes us, as the other believes in the homogeneous and *cisheteronormative dominant* subject. Being the second group composed, generally, of religious who even establish criteria to classify the subject as "correct person" or "citizen of good", especially with the rise of the extreme right that has commanded Brazil since 2018.

In contrast to this contradictory and excluding view, Silva (2000, p. 76) states that, "identity and difference have to be actively produced. [...] We are the ones who manufacture them in the context of cultural and social relations." This position about identity issues and their differences refers to social, cultural and historical productions, since each individual carries with him the customs of the society in which he is inserted. That is, a universe of identifications and stereotypes, which makes us different, with distinctions that go beyond heteronormative behaviors and/or physical appearance.

The gender issue in today's society is still understood from the biological factor, resulting in its definition in binary and heteronormative conceptions: male and female, male and female. According to De Jesus (2013), biological factors do not interfere in the behavior of being a man or a woman. However, what defines the gender of individuals are the historical and sociocultural factors that permeate the social markers of their trajectory and life history.

"Gender is the repeated stylization of the body, a set of repeated acts within a highly rigid regulatory structure, which crystallizes in time to produce the appearance of a substance, of a natural class of being. " (BUTLER, 2010, p. 59).

Thus, supported in Tilio (2009), we think about gender identity through experiences, experiences and sociocultural contribution and political positions that support the relevance of this discussion in a broader and more comprehensive way, especially in specific areas of Nature Sciences, specifically Chemistry.

Aligned with this thought, especially in the attempt to have an opinion about the concept of gender identity, we bet on the ideas of Louro (1997, p. 24), because "[...] we understand the subjects as having plural, multiple identities, transforming identities, that are not fixed or permanent, that may even be contradictory." In this sense, we affirm that gender does not depend on biological sex or is limited to it. Its representation is tied to the sociocultural influence in which individual develops, leaving aside the binarism imposed that there are only two possibilities of gender within diverse, different and plural society.

However, we emphasize that we have a society thirsting for standards, whether by gender, sexuality or even appearance, in which they judge you, classify and exclude, or include, from interpersonal characteristics. In order to understand why this happens, it is worth noting that we live in a neoliberal, capitalist, neoconservative and neocolonizing world, in a situation that standards help to profit, whether by religious, egocentric, aesthetic pathways, since it aims to satisfy the market.

Thus, we survive a moment of narratives of standardization of society, in which only those and those that demarcation predefined stereotypes are accepted and welcomed in social spaces, including in so-called books sacred by Christianity and/or other religions. Thus, the modus operandi to live in society is heterocentric, patriarchal, colonial, macho, conservative and retrograde. It is the homogenization of subjectivities, lives, orientations, including sexual and gender policies, that lead to the payment and invisibility of the so-called diverse subject and difference. It is the biologization of identity.

This work is justified in an attempt to point out and bring to the debate the need for research that addresses the conceptions of gender, identity and sexuality in chemistry teaching. To this end, our research was based on the works published in ENEQ, which take place biannually, and we are going to the 20th edition. Therefore, it is up to us to answer the following research question: how does the debate on gender and sexuality take place in the ENEQ? What conceptions of gender and sexuality are concentrated in ENEQ's work? Is there gender and sexuality in ENEQ?

Therefore, moving in an attempt to achieve our goal and to find answers to our investigation clues, pointed out in the questions, and to enter into our work, in order to approach and deepen the debate on gender and sexuality, we will address next, what or who bases our research and our questions and world views.

2 What or who underlies our investigation

For Senem and Caramaschi (2017), from the biological view of the human being, sex is used for the definition of man or woman, presented by the genitalia, thus classifying, if you have a penis, you have a vagina, you have a vagina, you are female. In order to problematize this aspect, Ferreira (2016, p. 4) addresses these biological identities that

Our biological sex is not part of our choices, the same is configured from the third week of gestation, and later according to the identification of this one is informed to which sex we belong, with the purpose that we will fit within the perspectives of behavior patterns, according to the social representations of each one. (FERREIRA, 2016, p. 4).

When we think about the conceptions of sex, based on conservative patterns and the established representations, we have the presence of a configuration centered still on the biologizing body. This consensus is brought along with the birth of girls or boys, consolidating the prejudiced discourses binary cisheteronormativity, in which "boys wear blue, girls wear pink" – shouted, by Minister Damares acting in the Bolsonaro government – bringing the biological and hysterical conservatism of the extreme right that took over the presidency of the republic in 2018 (QUINALHA, 2019).

For Reis and Pinho (2016, p. 4), in our society, we have long lived two binary genres that "[...] it manifests itself when bodies are polarized in binarism in the various areas and knowledge of society." Bringing "[...] secondary characteristics of female bodies and male bodies, such as hair, breasts and hips [...]" as the only standard.

With regard to sexuality, we emphasize that it is related how the person is sexually oriented, their sexual desires, emotions, feelings, pleasure, personal and interpersonal relationships. According to Senem and Caramaschi (2017), individuals learn to express themselves and live sexuality, understanding some phenomena that are influenced by cultural media.

Thus, sexuality has its own identity and is not something immutable, but flexible, because historical and cultural factors contribute to the orientation of the individual. However, we no longer live in a world about the gender binarism of cis men and women. Unlike this, we have a whole diversity of genders that are built within existing identities, such as: non-binary ones that recognize themselves neither as men nor as women; or people of a fluid gender, who do not have a distinction of man or woman; trans men; trans women; between other.

Thus, we discuss that gender is a sociocultural construction, in which the individual identifies himself as "being" in society, not corresponding to the homogeneity that people think there is in the world of cis men/women, but rather a heterogeneity that has been diversifying peoples and cultures. We also point to the reality that gender identity is not simply an ideology, but rather loaded with experiences and experiences that cross our bodies.

Therefore, we oppose a society of conservative values, in which people are judged for not meeting cisheteronormative standards and not satisfying predetermined longings, especially commanded by Christian and prejudiced values. In addition, intolerance of the diverse and different, present in today's society, is not sated by physical, verbal, psychological, symbolic and sexual violence, leading to other types of suffering and anguish.

We understand, then, that this awareness should be initiated in the formative spaces, through the curricular institutionalization of policies of respect for people that differ from those said as "not recommended to society" (PRADO, 2014). After all, we are living times of institutionalized violence also in school institutions, as in the case of transphobia that occurred in two state schools, as reported below.

According to Alves and Dielú (2021), in an interview published on g1's communication portal, the situation occurred in the state of Pernambuco, inside the school where a student, who identifies herself as a trans woman, was attending the women's bathroom and, therefore, was assaulted by other students and removed by force of the environment. In addition to physical aggression, there was even verbal aggression saying that "she was not a woman". The student states that the former management of the school gave the freedom to choose how she would like to identify. However, with the change of school direction, she received the warning that it was only allowed to use the men's room.

Another similar case occurred in a school in the city of São Bernardo do Campo, São Paulo. According to Andrade (2021), a student suffered transphobia from school servers. The trans girl has been called "boy" several times, a gender-based violence, since she is registered at school with her social name.

This institutional violence is not restricted or stop in these spaces that should be welcoming and learning, permeate and pass through all spheres of society. These are actions that violate, abandon, exclude, invisibility, erase, silence, disrespect and kill, in the name of a standard no longer fit for a multicultural and diverse society.

With regard to educational actions, we bring a discussion beyond the perspectives of gender and sexuality, in a scenario of problematizations that should be based mainly on dealing with coping with difference and diversity, especially respect and tolerance to the LGBTQIA+ population.

In fact, we still live in a country that for the 13th consecutive time is considered the one that most kills the trans population in the world, according to the report of the National Association of Transvestites and Transsexuals (BENEVIDES, 2022), although homophobia, lesbophobia and transphobia are crimes, equated to the crime of racism.

With no prospect of a dignified future, in which the violence and genocide of the LGBTTQIA+ population ceases to exist, we must act on the basis of society, which is directly linked to the educational sphere, in the construction of knowledge and learning with students in class, building perspectives that bring dignity to this population. In addition, it is essential to talk about how important it is to discuss these themes in teacher education, as a proposal for relevant themes that plague Brazilian education, in an attempt to demystify this ignorance and inhumanity, which are expressed with actions of exclusion, violence and lack of dignity that *Queer people*⁴ end up suffering.

⁴ According to Figueiredo (2018, p. 43) "[...] The word queer, whose original meaning was bizarre, eccentric, strange, came to depreciate homosexuals from the nineteenth century. In the 1980s, however, the word was claimed by LGBT groups in a process of resignification in which it became valuable. With this transformation of meaning, the term began to be used in the syntagma "queer theory", initially by the Italian feminist Teresa de Lauretis (SAFATLE, 2015, p. 178). Guacira Lopes Louro states that 'who is the subject of devious sexuality who does not wish to be integrated or tolerated; "it is a way of thinking and being that does not aspire to the center or want it as a reference; he has been able to think and be that he challenges the regulatory norms of society, which assumes the discomfort of ambiguity, between-places, the undecidable" (LOURO, 2016, p. 7-8). She points out that the term queer had its meaning expanded in the 1990s and began to be used "in the theoretical and political sphere to indicate a position of contesting non-conformity in relation to norms, standardization processes or canons

According to Aquino and Martelli (2012), the discussions on gender and sexuality in Basic Education began from aspects presented in the curricular proposals, present in documents such as the National Curriculum Parameters (PCN) (BRASIL, 1997), which propose the discussion from the teaching of sexuality, human reproduction and combating sexually transmitted diseases (STD). However, however much at the time, the PCN brought a Notebook with the cross-cutting theme "Sexual Orientation", as a teaching proposal, which contributes "[...] so that students can exercise their sexuality with pleasure and responsibility", these discussions were left aside, placing greater emphasis on biological problems, abandoning the issue of identity or sexuality (SANTOS; PEREIRA and SOARES, 2018, p. 2).

According to the research by Santos, Pereira and Soares (2018), the theme on the teaching of gender and sexuality in Basic Education is also present in other curricular documents, such as that presented in the National Curriculum Guidelines (DCN) (BRASIL, 2013), the National Education Plan (PNE) (BRASIL, 2001) and the National Common Curriculum Base (BNCC) (BRASIL, 2018). The documents also highlight the importance of transversality of this theme in all areas of knowledge and in the elaboration of the Pedagogical Political Projects (PPP) of schools.

In the most recent basic education guiding document, BNCC, we can find fragments that are intrinsic to gender and sexuality. However, we emphasize that still, in the BNCC, this discussion is tied to conservative precepts, which in turn support the progress of discussions that foster "school without party" and "family education" projects.

In the BNCC, the word "gender" is related only to linguistics, because the ghost of gender ideology, created by neopentecostal churches hovered in the construction and were barred in such a document. In this regard, we cannot fail to record the troubled political process we were going through, especially after a political-media-neoconservative coup suffered by President Dilma Rousseff (PT). The first woman elected president of the country is destituous and, with this, religious-patriarchal-colonizing-sexist fundamentalism is based, as a central agenda for combating gender in the Ministry of Education.

In relation to sexuality, we emphasize that in the document, only two (2) mentions are made to the word and that are related to science teaching. For example, on page 327, which deals with the Basis for the final years of Elementary School, the Thematic Unit Life and Evolution, the expression sexuality is linked to aspects related to "reproduction and human sexuality" (BRASIL, 2018, p. 327), with this, the socio-anthropological-cultural bias is lost, which sustain the *cishetercentered dimension, which sustains the cisheterocentric dimension* and reinforces the patriarchal discourses that "girls were born to reproduce".

of any order" (LOURO, 2017, p. 37). Thus, we can conclude that queer has at least two aspects: on the one hand, it is an existential attitude that is reflected in transgressive behavior that does not respect heteronormativity and, on the other hand, is a theory that seeks to establish principles and create devices that lead to a rupture of values imposed by the doxa."

The second mention is found in the skill (EF08CI11) (BRASIL, 2018, p. 349) which makes the following reference: "Select arguments that evidence the multiple dimensions of human sexuality (biological, sociocultural, affective and ethical)". That said, it points out that discussions about human sexuality should be addressed in the classroom relating biological, sociocultural, affective and ethical aspects.

Thus, the document does not emphasize the relevance of discussions on the issue of educational equity, for understanding and respecting differences beyond discussions about race, ethnicity, gender and sexual orientation in educational spaces. We believe it is necessary because the school is an environment of formation of future individuals who will be working in diverse society and difference.

With this, although conservative groups, closely linked to evangelical benches in congress or reactionary entities, aim to exclude these terminologies from the documents that govern the organization of education systems, we can argue that it is necessary to act by teaching practice in the context of chemistry teaching that focuses on respect and consideration of sexuality and gender, considering that the guiding document on Basic Education, presents weaknesses and makes the subjects of the difference.

That said, and (re)known our authors that underlie our investigation, we will then discuss our tracks of the methodological path taken, in order to highlight our theoretical-methodological-epistemological and political conceptions in an attempt to deepen the debate on Gender and Sexuality in the ENEQ's annals.

3 Path taken for the preparation of the research

The National Meeting of Chemistry Teaching (ENEQ) is a biannual event promoted by the Brazilian Society of Chemistry Teaching (SBEnQ), in partnership with other public institutions in the country, such as federal institutes and federal, state and municipal universities. The event is in its 21st edition, which will be held in Uberlândia (MG), in 2023, bringing as its theme the "Democratization of Education in Chemistry: (dis)paths of Brazilian public policies". Until 2018 ENEQ was organized by the Teaching Division of the Brazilian Chemical Society (SBQ).

The information conveyed in these events may result in changes in the methodological procedures used by teachers of disciplines related to areas of Nature Sciences and their Technologies. Also, in a more comprehensive way, it can influence the development of curricular proposals that aim to transform the role played by the individual in society, as well as their conceptions related to diversity and respect for differences.

In order to analyze the last 6 editions of the event (2010-2020), this qualitative research and descriptive approach (BOGDAN; BIKLEN, 1994) sought, through bibliographic analysis, to identify how the issue of gender and sexuality in chemistry teaching is being discussed. Thus,

we searched for studies that refer to the terms "gender and sexuality" in complete works and abstracts, in their keywords, abstracts and titles.

This period selected for analysis was chosen due to the fact that discussions related to diversity increased from 2010 with the XV edition of ENEQ. In this space-time a session opens, the 11th - Teaching and Inclusion, in which aspects related to diversity begin to be inserted in the works presented at the event. Such discussions were paramount to drive research and work that addressed gender and sexuality.

At the beginning of the research, 18 complete papers and 13 abstracts were found in several lines of research. However, in order for the work to be as objective as possible, in order to cover the works produced and published in ENEQ in the last decade, we delimited the search only in work oriented from the perspective of teaching, curriculum and teacher education. This demand totaled 6 complete papers and 7 abstracts expanded to be analyzed as proposed by Bardin (2011), through content analysis.

In this way, we perform the floating reading, then the stemming, semantic approximation, coding and, finally, the creation of the dimension of analysis "Chemistry" and two categories s "Teaching chemistry in a context of Gender and Sexuality in the Teaching of Chemistry" and "Teacher Training in a context of Gender and Sexuality" . To understand the most expressive terms of the word cloud. Thus, we use the Word Art application (available in: <https://wordart.com/>) for the graphical summation of the terms contained in Table 1.

Table 1. More expressive terms for word cloud composition

Analysis dimension	Category of analysis	More expressive terms
Chemistry	Teacher Formation in a Context of Gender and Sexuality	Gender, Sexuality, Chemistry, Chemistry Teaching, Gender Issues, History of Science, Sex Education, PIBID...
	Chemistry Teaching in a Context of Gender and Sexuality	

Source: elaborated by the authors.

The papers were read in full in order to identify the most expressive aspects of the research, as presented in Figure 1 through the creation of the word cloud, which are: Gender, Sexuality, Chemistry, Chemistry Teaching, Gender Issues, History of sciences, Sex Education, PIBID. Thus, we sought to understand the messages expressed in the analyzed studies, making emerge the impressions that led to the analysis to which this research was proposed.

It is not surprising that there are still weaknesses in ENEQ's work when the themes are related to gender and sexuality, since the research in this area of research was still in small steps in Brazil, especially when it concerns Education. In the case of Chemistry Teaching, this situation worsens even, since in the interval of ten years, we were able to identify an

inexpressive number, compared with other investigations published in the proceedings of ENEQ, such as teaching-learning processes, experimentation in chemistry teaching, language and chemistry teaching, etc..

We collaborate with this thought, we present in Chart 2, the number of publications on gender and sexuality that were presented in the last 6 editions of ENEQ (2010-2020). All ENEQs total more than 5,000 jobs over 10 years. Thus, the presence of only 6 complete papers and 7 abstracts, we are presented with the need to invest in studies in the area of Chemistry Teaching that privilege the context of gender and sexuality, in an attempt to present in teacher education and brazilian schools, an anti-machist, decolonizing and difference chemistry.

Table 2. ENEQ Publications (2010-2020) on gender and sexuality

Congress	Local	Full work/Abstracts
XV/ 2010	Brasília - GO	0/0
XVI/2012	Salvador - BA	1/0
XVII/2014	Ouro Preto - MG	1/1
XVIII/2016	Florianópolis - SC	2/2
XIX/2018	Rio Branco - AC	0/4
XX/2020	Recife - PE - remote	2/0
Total		6 Full papers and 7 Abstracts

Source: elaborated by the authors.

Despite the low number of studies found, it is important to emphasize the relevance of the position of resistance that these studies present, from their scientific relevance, theoretical deepening, epistemological, arguments presented, as well as in the contribution with the progress of discussions in the area of Gender, sexuality and chemistry teaching in schools/universities in this country.

As shown in Table 2, the XV/2010 edition does not present complete works and/or abstract within the clipping presented for the search in the titles and keywords. The other editions of the event present at least one published paper, although this number is insufficient for the relevance of this discussion in the school space and in the fields of knowledge of Chemistry Teaching.

In the analyses we performed in the complete works and expanded abstracts of the events, we understand that these discussions are pertinent, both for teacher education and for the implementation of content related to chemistry teaching that discuss the issue of gender and sexuality in the context of learning Basic Education. Thus, we emphasize that this theme, transversal to the various areas of knowledge, is interrelated to school education and constitutes an essential element for the formation of individuals who know how to position themselves critically before the events of society.

5 Training of Chemistry Teachers in a context of Gender and Sexuality

In the XVII/2014 edition, Silveira et al (2014), demonstrate how the culture of masculinization of words, gestures or performance and the inferiority of neutral language that encompass the non-binaries. The researchers presented a video of an advertisement of a trans made by a woman who has male characteristics. Thus, in view, they try to encourage students to criticize about the video and addressing the languages and how this can be used in the teaching of chemistry, a more neutral language.

The work of Medeiros and Mazzé (2014) not only presents the term gender, but also sexuality in teacher education within the Institutional Program of Teaching Initiation Scholarship (PIBID). The research aimed to ascertain whether gender and sexuality were working at PIBID, and what was the conception of future teachers on the subject. In this sense, through the questionnaires applied, they could notice what happens in teacher education on this theme. Many scholars who participated in the lecture on the subject at PIBID said that it is important to discuss these topics in the classroom.

The authors also presented, however, that the understanding about the concepts of gender and sexuality, either do not know or have difficulty in understanding. In this perspective, there is the importance of inserting more lectures, more disciplines and consolidating groups/lines of research on the theme within the degree. Therefore, it is also important to have workshops among other mechanisms for teacher training, especially with regard to extension programs and even other means of rapprochement with the community that forms chemistry teachers.

As an example, it is the offer of the curricular component "Chemistry, diversity and pop culture" offered, although optional, in the Degree course in Chemistry of the Federal University of Recôncavo da Bahia (UFRB, 2019). Such action will provoke and sharpen in the licensees and licensees the need to realize that the world, the school, scientific knowledge is not only produced by binary people, in which they insist biologize in males and females. Therefore, we think that the actions that provoke the different representations of people, especially Queers, in chemistry courses, favor a closer look at students.

In this way, in the XVIII/2016 edition, Camilo and Soares (2016) discuss the conceptions of future teachers about gender, sexuality, in addition to the treatment of *queer people* in school. At first, graduates have a somewhat confusing view of how people choose their sexuality and gender. In the data presented, for the most part, they say that the choice is individual to be *or not to be queer* or even be forced to be. These are distorted visions that heteronormative society uses to extinguish gender diversity.

Thus, it is important to point out that, as presented by the interviews conducted by the authors, there was confusion when using the expressions "sexual option" or "gender ideology", since they are not more used terms, because there is the option of you studying chemistry, being

a fan of artists, etc., mas, for sexuality and gender, are internalized desires and desires that need to be oriented and directed. Therefore, we should use the term sexual orientation or gender identity.

The point discussed by Camilo and Soares (2016) is how the teacher and can act in certain situations in the classroom. The example of the dwed, not by us, bathroom use by trans people. In this perspective, the interviewees by the authors gave some very worrying answers, such as:

A8- "Men's room at school should be used only by those who have penises. Female for whom she has a vagina. Imagine me going into the ladies' room and facing a transvestite.”

A9- "I find it too complicated. It's too much sexuality, too much gender. Too much for a chemistry teacher."

A10- "As long as it's not in my class, I don't care." (CAMILO; SOARES, 2016, p. 9-10).

We can infer that these future teachers will reproduce in their classes what is expressed in their speeches, that is, neoconservative and patriarchal attitudes. Thus, symbolic representation, gender violence, the absence of policies of appreciation and respect for and the different, emerge, kidnap and invisibility people in the name of heteronormative, Christian, biblical discourses in which even the bathroom has become a political act and resistance to the trans and non-binaries population.

As pointed out by Teixeira and Raposto (2007, p. 1)

Bathrooms are spaces of high symbolic density for the investigation of gender and sexuality relations in the public and school context. They materialize and express conceptions and practices of care for the body and the environment - since they are places of deposit of excretions - marked by meanings of sex and gender: how are they architected and organized? How are they used? Who keeps them clean?

In addition to these questions, one summarizes what goes on in the head of a body "not recommended to society" (PRADO, 2014): Can I enter? It is these types of ideals that we must deconstruct within the training of chemistry teachers, because as previously discussed the sexual organ of the individual does not define his gender, and this needs pedagogical disciplines that discuss the inclusion of these people and not exclusion. It is a population that faces discrimination, the prospect of low life, the high death rate, and it is therefore necessary to include.

The work of Souza et al. (2016) presents an analysis of official educational documents or curriculum guidance of the country. The research places on what the guide documents talk about gender teaching in the area of science, basic education and teacher education, which is

the main focus. Of the documents studied by the authors were the National Curriculum Guidelines for the Training of Teachers of Basic Education (DCNPE, 2002) and National High School Curriculum Guidelines (DCNEM, 2012). As they point out, the DCNPE talks about "welcoming and treating diversity", there is no specific orientation on gender issues.

In addition, they researched the Pedagogical Projects of Undergraduate Courses in Chemistry (PPC), federal and state universities and federal institutes in the face-to-face model of Paraná. Thus, the PPC evaluated only 3 presented disciplines/component that partially discussed diversity and gender. Most of them are curriculum component topics that are discussed in one or two classes.

Finally, the work of Faustino et al. (2020) is aimed at training and acting teachers in non-formal educational spaces. In this line of research, the focus is on racial, gender and sexuality issues. First, the authors discuss the conceptions that theorists bring about the axes discussed, in addition to using the sciences of nature, chemistry, as a means of working these themes as transversal subjects.

Therefore, the teaching work of Teachers who work and generate knowledge in the area of Chemistry Teaching, are focused on the construction of the conception about what is or is not gender and sexuality. In addition, they range from non-binary language, even the analyses of PPC and point out the importance and possibility of agency of gender and sexuality issues, questioned by race in non-formal spaces.

Hinkel, Gonzaga and Fernandes (2020), in the XX/2020 edition, developed a state of the art with articles from the journal *Química Nova na Escola (QNEsc)* that resemble the studies of Souza et al. (2016). These authors discuss, highlight and defend the lack of material and publications in the area, and that there is a need for text to guide other researchers, researchers and teachers of Basic Education who work in chemistry teaching.

We see, however, that there are still few studies that are linked to the need to dialogue in the Formation of Chemistry Teachers on gender and sexuality policies. However, this should be understood as pioneering research in the country, in an attempt to bring the large areas of concentration and study closer together.

Based on this, we will present the category "teaching chemistry in a context of gender and sexuality" that aims to highlight the works that are carried out in-the-with-between students and schools.

6 Teaching Chemistry in a context of Gender and Sexuality

To teach Chemistry in a context of gender and sexuality, is to think about the performances, in a Butlerian sense, since they are in the edges, in the interstices, in the fissures that the teaching, students and dissident classes take place, especially in times of attacks, repression and the rise of conservatism that plagues school and university institutions in Brazil.

In this case, the work of Nunes and Loguércio (2012), in the XVI/2012 edition, is concerned with researching which conception of gender is treated and discussed in Basic Education. They are based on the results of an application of a questionnaire to students, on the conception that they had about gender and similar aspects. Thus, among these questions asked, we can mention some, such as: "If i could choose would you be someone else, of another sex?"; "Think about his behavior and explain if it has more to do with boys or girls?"

Thus, the work presents interesting aspects, such as stereotypes are well structured among students. However, there were rather intriguing responses, in which one student said she would like to change "sex" (gender), because in her justification she stressed that "women suffered a lot". She should probably be talking about the violence women suffer daily in a macho, patriarchal and colonized society.

Still in Nunes and Loguércio (2012), another girl said "no" to sex change, because, she claimed, that she should show and prove to people that women are capable. Certainly she meant that as all men always occupy prominent places, she should prove that women can too, because we know that we live in the face of an invisibility of prominent women.

The research by Fernandes et al. (2016) is concerned with addressing gender inequality within the fields of science, as in the case of chemistry. Thus, the male and female characteristics within the standard of society in which women are to "care" and man to do the "brute", are these aspects that influence the choices as it is approached. Thus, we highlight the tendency that women go to humanities, health and bachelor's degrees and men to exact and engineering.

An alternative exposed is the use of examples of female scientists and the success they have had and have, through websites and videos on the Internet, motivating girls and boys to choose what they like, thus differing and going in return for what society imposes, especially conservative standards.

Teixeira and Thomaz's work (2016) presents the term Feminism and Chemistry Class that came to discuss the importance of talking about women in science and subalternity within curricula. Thus, the research focuses on Marie Curie's history, her trajectory within the academy and the structural machismo that lived around her. The paper highlights the importance of presenting these stories as an example that science is not only produced by men.

Araújo, Xavier and Souza (2018), present characteristics similar to the one mentioned above, returning to the field of representation in history. Thus, the study developed is aimed at knowing if women were worked in science in chemistry class. The research is focused on female representation in science and subalternization within the history of science that erases and neglects the existence and contributions made by them.

It is important to show that these situations are related to how society is presented by this gender disparity, having dichotomous aspects, in which I need to be clearer and understood by students and students, in different classes, but especially in chemistry classes. This possibility, for example, is tied to the discussions of the History of Chemistry, when we bring to the fore, the importance of different scientists, such as Marie Curie, Lise Meitner (SILVA;

DUTRA-PEREIRA; TINÔCO, 2019), Alice Ball (SANTANA; PEREIRA, 2021), Clara Immerwahr (PEREIRA, 2021), among many others that are erased in spaces, and that the nature of the scientist man is left.

In the XIX/2018 edition, Pinho et al. (2018) discusses the use of condoms in chemistry class, how they are composed and the importance of preventing sexually transmitted infections (ISTS). Within this scenario, according to the studies, it obtained the possibility of addressing various topics such as organic chemistry and polymers that are produced to produce condoms.

Floriano e Souza (2018) also addresses the ISTS, but with a perspective of transversality of Teaching in Nature Sciences, in addition to addressing with the young women about the importance of using condoms in sexual relations. Thus, they can transpose various contents within chemistry and biology, such as: hydrogen bonds, polarity of cell membranes, points of physical chemistry, among others.

Such an initiative is of paramount importance, since didactic strategies in chemistry classes in Basic Education should also prevail with the concern about how to approach students' language with scientific language. Thus, didactic transposition is essential for the relations between chemistry, gender and sexuality teaching to take place in the classroom, without embarrassment, intimidation and or shame, especially if we consider the age group of our students.

Marin's study (2018) focuses on the experience of trans men in a social network. In this sense, selected some questions, one of them was the treatment of hormones for the transition of gender, the use of Minoxidil that is responsible for hair growth, widely used for beard or mustache growth.

As we can see in this category, different behaviors and uses of themes that can be discussed in the classroom within the teaching of chemistry are possible, such as the composition of hormones, the types of connections, among other factors that can encompass the relationship of gender and sexuality of trans men or trans women, especially tied to the transition process and that Chemistry can help in the demystification of pre-concepts and in the fight against transphobia in school, after all it is not only the bathroom that is a political artifact, the contents of Chemistry are also, when moments of dialogue and interactions of daily life with scientific knowledge in classes are opportunistic.

"We must be attentive and strong": clues of some final considerations

De fato, é possível encontrar nos resultados apontados pelas investigações realizadas, no âmbito dos Encontros Nacionais de Ensino de Química, que os estudos ainda são incipientes e que novos caminhos vêm sendo traçados para a construção de um ensino que se propõe a uma transformação das ações da sociedade que levem em consideração o meio social, cultural, político e ambiental.

These perspectives of reflection by researchers in the teaching area allow outdated points of view to be re-written and that teaching practices be renewed through contextualized

approaches and integrated into the school curriculum. These issues refer to the urgent and necessary renewal of curricular structures and the abandonment of simplistic views of teaching to adapt different languages to the real situation of the school, either by breaking with misrepresented opinions related to diversity or by the transformations in the teaching conceptions existing within schools and/or universities.

In order to problematize the importance of training within this context, gender and diversity, we can affirm that it is crucial the teaching role and our performance in the classroom on these thematic axes. Thus, it is clear and evident that the training of chemistry teachers is limited only to teaching issues, without having deepening, leaving transversal subjects that can be discussed in any area of science, which addresses gender and sexuality as a condition of human existence and that in teaching, we will come across the different conceptions, what is tied to the question: and now...

The importance given to the investigations carried out, based on the conceptions of gender diversity and sexuality, are associated with the fact that this approach raises the expression of the most vivacious ideas in individuals. However, they demonstrated their simplistic and sometimes generalized views on issues related to gender, sexuality, respect for diversity and others, still in predominance in society.

In this sense, it is important to plead that the non-formal spaces they educate (MARANDINO, 2017), are a possibility or even one of the best means to approach, even in the basic formative actions, the debates that intertwine and rebuild, the living and living of so many who are forgotten in the degree course in Chemistry.

Thus, we consider that the degree course in Chemistry, since its origin, because it has its genesis in positivist conceptions and bachelor's matrices, is thought of a Cartesian plan, of absolute truth, tracing, experienced and produced by visions, biologizing, heterocentric, colonized, homogeneous, patriarchal, conservative, capitalist, neoliberal, standardized and that excludes and invisibles the subjects of difference. Is this formation of teachers of Chemistry, plural, diverse, multicultural, decolonial that we so much crave?

It is urgent to think about other routes, other lanes, other possibilities, other means, others... that they train teachers and teachers who want and learn to deal with a Chemistry taught in school and university institutions, to live and enable well-being and the common good, in the inverse and inventive perspective of performing gender and knowing sexualities, as themes that emerge daily in pedagogical practice.

We live in a reality in which various themes affect and consolidate more and more the structure of patriarchy: machismo, structural racism, LGBTphobia, religious moralism, etc. They are segments that hinder the discussion of these themes within schools, and allow the coming of archaic, retrograde and unconstitutional political projects, such as the School Movement without party or even the defense of Home Education.

The results presented in this research that are related to chemistry teaching, bringing gender and sexuality as search terms, from the perspective of the school curriculum, highlight

the importance of the interactions involved in educational processes, with predominance of the language used and the objects of significance for teaching and interpersonal relationships.

Thus, the teaching strategies used by teachers so that students overcome their previous conceptions represent a path to science learning and transformation of a common sense culture. The important thing in this context is to demystify the knowledge originated in everyday life in order to expand the cultural universe of students. We also analyzed in the selected papers the issue of the training of teachers of Nature Sciences, because this condition is reflected in how this theme will be addressed in the classroom.

Thus, research clues were left and can be thought of from why we still have few studies in the ENEQs that involve Chemistry Teaching, gender and sexuality discussions. We think, even timidly, to be tied to the political spectrum that we are experiencing in Brazil, neoconservative, authoritarian, violent, which is consistent with the socio-economic-scientific conditions as well, since it is increasing the survival here.

Thus, while we are overcome by the overwhelming capitalist and neoliberal economic bias, school, chemistry, university, gender and sexuality, racial themes and LGBTQIA+ movements need to intersect, to survive and maintain, as Caetano Veloso said, "attentive and strong, we have to fear death...".

References

ALVES, Pedro; DIELÚ, Nathália. Impedida de usar banheiro feminino de escola, aluna trans não consegue fazer denúncia em delegacia: 'disseram que era desnecessário', diz. **G1 Pernambuco**, Pernambuco, p. 1, 29 out. 2021. Disponível em: <https://g1.globo.com/google/amp/pe/pernambuco/noticia/2021/10/29/impedida-de-usar-banheiro-feminino-de-escola-aluna-trans-nao-consegue-fazer-denuncia-em-delegacia-disseram-que-era-desnecessario-diz.ghtml>. Acesso em 1 nov. 2021.

ANDRADE, Jordânia. Adolescente de 17 anos sofre transfobia na escola e desabafa: 'Me senti constrangida e invalidada'. **BHAZ**, Minas Gerais, p. 1, 18 ago. 2021. Disponível em: <https://bhaz.com.br/noticias/brasil/adolescente-17-anos-sofre-transfobia-escola-faz-desabafo/>. Acesso em 1 nov. 2021.

AQUINO, Camila; MARTELLI, Cristina Andrea; Escola e educação sexual: uma relação necessária-UNIOESTE. In: Seminário de pesquisa em educação da Região Sul, 9.,2012, UNIOESTE-Santa Catarina. **Anais...** Santa Catarina: UNIOESTE, 2012.

ARAÚJO, Marcos Oliveira de; XAVIER, Miguel Gustavo; SOUZA, Gahelyka Agha Pantano. Relações de Gênero e o Papel Feminino na História da Ciência e da Química. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1, 2018.

BARDIN, Laurence. **Análise de conteúdo**. São Paulo: Edições 70 Brasil, 2011.

BENEVIDES, Bruna G. **Dossiê assassinatos e violências contra travestis e transexuais brasileiras em 2021**. Brasília: Distrito Drag, ANTRA, 2022. Disponível em:

<https://antrabrazil.files.wordpress.com/2022/01/dossieantra2022-web.pdf>. Acessado em 4 out. 2022.

BRASIL, Ministério da Educação. Diretrizes Curriculares Nacionais da Educação Básica. 2013.

BRASIL, Ministério da Educação. Parâmetros Curriculares Nacionais para o Ensino Fundamental. Brasília, MEC/SEF, 1997.

BRASIL. Ministério da Educação. Base Nacional Comum Curricular. Brasília, 2018.

BRASIL. Plano Nacional de Educação (PNE). **Lei Federal n.º 10.172, de 9/01/2001**. Brasília: MEC, 2001.

BUTLER, Judith. **Problemas de Gênero: Feminismo e Subversão da Identidade**. Tradução de Renato Aguiar. Rio de Janeiro: Civilização Brasileira, 2010.

CAMILO, Washington Marcos; SOARES, Márlon Herbert Flora Barbosa Soares. Intervenção Pedagógica: Sexualidade e Identidade de Gênero na Formação Inicial de Professores de Química. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1-12, 2016.

DE JESUS, Jaqueline Gomes. Transfobia e crimes de ódio: Assassinatos de pessoas transgênero como genocídio. **História agora**, v. 16, p. 101-123, 2013.

DOS REIS, Neilton; PINHO, Raquel. Gêneros Não-Binários: Identidades, Expressões E Educação. **Reflexão E Ação**, v. 24, n. 1, p. 7-25, 28 abr. 2016. DOI: <https://doi.org/10.17058/rea.v24i1.7045>. Acesso em: 30 ago. 2022.

FAUSTINO, Gustavo A.; BERNARDES, Clarissa A.; ALVES, Camilla F.; LIMA, Geisa L.; SILVA, Ludwaler R.; BASTOS, Morgana A.; VARGAS, Regina N.; OLIVEIRA, Marta C.; BENITE, Claudio R. M.; BENITE, Anna M. C. Estudos sobre os espaços de educação não formal na formação de professores/as de Química: uma discussão da temática racial, de gênero e sexualidade. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1-12, 2020.

FERNANDES, Fernanda Silva; FAUSTINO, Augusto Assis; BASTOS, Morgana Abranches; VARGAS, Regina Nobre; BENITE, Anna M. C. Sobre mulheres e produção em ciências: discutindo questões de gênero em aulas de química. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1, 2016.

FERREIRA, Daniele da Silva. **Construção da identidade de gênero: reflexões em contexto escolar**. 2018. Trabalho de Conclusão de Curso (Graduação em Psicologia) - Pontifícia Universidade Católica, Minas Gerais, 2016. Disponível em: <https://www.psicologia.pt/artigos/textos/TL0439.pdf>. Acesso em 1 nov. 2021.

FIGUEIREDO, Erídice. Desfazendo o gênero: a teoria queer de Judith Butler. **Revista Criação & Crítica**, n. 20, p. 40-55, 2018. DOI: 10.11606/issn.1984-1124.v0i20p40-55. Disponível em: <https://www.revistas.usp.br/criacaoecritica/article/view/138143>. Acesso em: 29 ago. 2022.

FLORIANO, Léo da Silva; SOUZA, Gahelyka Aghta Pântano. IST/HIV/AIDS: Enfrentando preconceitos e intolerâncias a partir de abordagens transdisciplinares no ensino de Química. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1, 2018.

HINKEL, Joice; GONZAGA, Rhaysa Terezinha; FERNANDES, Carolina dos Santos. A (in)visibilidade da educação sexual no ensino de Química: uma análise da produção na QNesc. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1-11, 2020.

JUSTO, Gabriel. Pelo 12º ano consecutivo, Brasil é país que mais mata transexuais no mundo. **Exame**, [S. l.], p. 1, 19 nov. 2020. Disponível em: <https://exame.com/brasil/pelo-12o-ano-consecutivo-brasil-e-pais-que-mais-mata-transexuais-no-mundo/>. Acesso em: 13 jan. 2022.

LOURO, Guacira Lopes. **Gênero, sexualidade e educação: Uma perspectiva pós-estruturalista**. Petrópolis, RJ. Vozes, 1997.

MARANDINO, Martha. Faz sentido ainda propor a separação entre os termos educação formal, não formal e informal?. **Ciência & Educação**, v. 23, n. 4, 2017. DOI: <https://doi.org/10.1590/1516-731320170030001>. Acesso em: 30 ago. 2022.

MARIN, Yonier Alexander Orozco. O homem trans e a química: Análise do potencial das situações que atravessam esses sujeitos e suas experiências, para a abordagem de questões de gênero e sexualidade no ensino de química. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1, 2018.

MEDEIROS, Lutemberg Lima de; MAZZÉ, Fernanda Marur. Gênero e sexualidade na formação de professores em ensino de ciências naturais e matemática: um olhar sobre o PIBID da UFRN. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1-12, 2014.

MEYER; Dagmar; FÉLIX, Jeane. "Entre o ser e o querer ser...": jovens soropositivos(as), projetos de vida e educação. **Educação em Revista**, v.30, n.02, p.181-206, 2014. DOI: <https://doi.org/10.1590/S0102-46982014000200009>. Acesso em: 20 ago. 2022.

MEYER; Dagmar; FÉLIX, Jeane. "Estamos preparados para lidar com a prevenção das DST/HIV/AIDS em nossas práticas educativas?" In. Paiva, Vera; Pupo, Ligia Rivero; Seffner, Fernando. **Vulnerabilidade e direitos humanos - prevenção e promoção da saúde: pluralidade de vozes e inovação de práticas**. Livro III. Curitiba, Juruá, 2012.

NUNES, Paula; LOGUÉRCIO, Rochele de Quadros. Rumores sobre gênero na educação básica. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1-8, 2012.

PEREIRA, Letícia. Uma química interrompida: Clara Immerwahr. **CADERNOS DE GÊNERO E TECNOLOGIA (CEFET/PR)**, v. 14, p. 391-409, 2021. DOI: <http://dx.doi.org/10.3895/cgt.v14n44.13411>. Acesso em: 30 ago. 2022.

PINHO, Uiara M. F. de; PANTOJA, Najara V.; MACHADO, Leandro J.; SILVA, Kennedy L. da; NASCIMENTO, Ana Emylli da S. Camisinha na sala de aula: saúde, sexualidade e prevenção a partir de testes de qualidade. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1, 2018.

QUINALHA, Renan. “Menino veste azul, menina veste rosa”: uma polêmica inútil?. **Cult**. Editora Bregantini, 2019. Disponível em: <https://revistacult.uol.com.br/home/menino-veste-azul-menina-veste-rosa/>. Acesso em 28 jan. 2022.

PRADO, Caio. **Não Recomendado**. © Deck Produções Artísticas Ltda, 2014.

SANTANA, Carol Queiroz; PEREIRA, Letícia dos Santos. O caso Alice Ball: uma proposta interseccional para o Ensino de Química. **Química Nova na Escola (online)**, v. 43, p. 380-389, 2021. DOI: <http://dx.doi.org/10.21577/0104-8899.20160246>. Acesso em: 30 ago. 2022.

SANTOS, Nathany Ribeiro Lima dos; PEREIRA, Sara; SOARES, Zilene Moreira Pereira. Documentos curriculares oficiais assegurando a abordagem de gênero e sexualidade para a educação básica: um olhar para o ensino de ciências. **V SIMPÓSIO GÊNERO E POLÍTICAS PÚBLICAS**, Londrina-Paraná, p. 1-15, 15 jun. 2018.

SENEM, Cleiton José; CARAMASCHI, Sandro. **Concepção de sexo e sexualidade no ocidente: origem, história e atualidade**. Santa Cruz do Sul, 2017, p. 166-189. <https://online.unisc.br/seer/index.php/barbaroi/article/view/6420>. Acesso em: 04 jan. 2021.

SILVA, Quézia Raquel Ribeiro; DUTRA-PEREIRA, Franklin Kaic; TINÔCO, Saimonton. Feminino e Ciência: entre poderes e resistências. In: Rosilene Dias Montenegro; Fábio Ronaldo da Silva; Raquel da Silva Guedes. (Org.). **Histórias da Ciências e Tecnologia: onde estão as mulheres?**. Campina Grande: Editora Amplla, 2021, v. 1, p. 288-297.

SILVA, Tomaz Tadeu da. A produção social da identidade e da diferença. In: SILVA, Tomaz Tadeu da (org.); HALL, Stuart; WOODWARD, Kathryn. **Identidade e diferença: a perspectiva dos estudos culturais**. Petrópolis, RJ: Vozes, 2000.

SILVEIRA, Luiz Bruno De Bom da ; SANTOS, Simone Birkheur dos; CORRÊA, Talytta Moreno; OLIVEIRA, Moisés Alves de. Olhares de alunas(os) de licenciatura em química sobre as teorias feministas e o currículo de ciências. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1, 2014.

SOUZA, Denise Caroline de; BROIETTI, Fabiele Cristiane Dias; SACHS, Juliane Priscila Diniz; RAMMAZZINA FILHO, Walter Anibal; BATISTA, Irinéa de Lourdes. Questões de Gênero em cursos de Licenciatura em Química do Estado do Paraná. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1-1, 2016.

TEIXEIRA, Adla B. Martins; RAPOSO, Ana E. S. Silva. Banheiros escolares promotores de diferenças de gênero. GT Gênero, Sexualidade e Educação. In: **Anais da 30ª Reunião Anual da ANPED – Associação Nacional de Pós Graduação e Pesquisa em Educação**. Minas Gerais: Caxambu, 2007.

TEIXEIRA, Danilo Augusto; THOMAZ, Caio Henrique. A ciência é feminina: o teatro junto à história das ciências e seus processos históricos de arregimentação que legitimam as mulheres em aulas de Química. **Encontro Nacional de Ensino de Química**, [S. l.], p. 1, 2016.

TILIO, Rogério. Reflexões acerca do conceito de identidade. **Revista Eletrônica do Instituto de Humanidades**, [s. l.], v. 8, n. 29, Abr-Jun. 2009.



ZOMPERO, Andreia Freitas Zompero; LEITE, Cristiane Mota; GIANGARELLI, Douglas Caldeira; BERGAMO, Maurilio Cristiano Batista. A temática sexualidade nas propostas curriculares no Brasil. **Revista Ciência & ideias**, v. 9, n. 1, p. 1-14, 15 jun. 2018.

