

# How and why teach Computer Science from a gender perspective in schools?

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## Abstract

This article analyzes how gender inequality is shaped in Computer Science and explores its possible causes. Based on this analysis, it proposes rethinking the role of schools in teaching Computer Science from a gender perspective, aiming to narrow the existing gender gap in the field. The proposal is developed within the normative and conceptual framework of the Comprehensive Sexual Education Law of the Argentine Republic and aims to serve as a reference for teachers in these disciplines and as guidance for organizations that are implementing curricular reforms to incorporate Computer Science.

## Keywords

Gender Gap, Computer Science, education, comprehensive sexual education, gender perspective.

## 1. Introduction

In a world that is increasingly influenced by Information and Communication Technologies (ICT), the debate on the incorporation of Computer Science (CS) in the educational system becomes necessary. This article seeks to consider the relationship between the teaching of Computer Science and gender inequality so that this dimension is taken into account in the debate on the incorporation of CC in schools.

I propose a path that articulates the knowledge of gender studies and CC with those related to gender equity in education. First, the particularities of gender issues in the CS, which is a strongly masculinized sector, are addressed, and some guidelines that may help to understand the different dimensions that make up this issue are analyzed.

Secondly, the importance of teaching CS from a gender perspective as part of the formal education system in order to reduce the gender gap is discussed. For its approach, we took the path taken from the Comprehensive Sexual Education (ESI) in Argentina [3]: both from the proposal and materials developed by the National Ministry of Education, as well as those coming from teachers and researchers that provide us with valuable inputs to work on how to bring CS to schools from a gender perspective. From this proposal, recommendations were made that can serve as input for the elaboration of curriculum designs and for teacher training.

Taking into account the debates on how to understand the gender category within the existing debates in feminisms, in this article gender will be understood as a social construction that disadvantages women, lesbians, gays, bisexuals, trans, intersex and queer people (LGTBIQ). Based on this conceptualization, a path to address gender issues in the teaching of the sciences and humanities was developed.

## 2. Gender inequality in computer science, a problem of the past?

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Despite the values of equality installed long ago in our society and the progress of legislation in terms of rights, there is a notable inequality in favor of the male gender. The field related to Computer Science (CS) is not only not exempt from this inequality, but this gap is even more pronounced than in other sectors.

A variety of reports, published by national and international organizations, show with concrete data and numbers how inequality continues to exist. According to a research conducted by ECLAC (2022), although in Latin America and the Caribbean there has been an increase in access, permanence and completion of women at all levels of the education system in recent decades, there are significant gender gaps in the participation of young women and girls in the field of science, technology, engineering and mathematics (STEM) at all levels of education. A Unesco report (2019) shows how inequality in access to equipment, connectivity and knowledge increases the digital divide and how this inequity aggravates the gender gap: as women have fewer opportunities to be in frequent and systematic contact with this knowledge, they have fewer opportunities to be interested in these subjects throughout their lives, to participate in professional training spaces and to practice as such in that field. This means that they are less and less present in the nuclei of technology, knowledge and information generation and have much less access to more qualified and better paying jobs offered by the sector. In other words, women's reduced access to digital technology negatively affects their economic development and opportunities for participation and leadership in decision-making positions.

Currently, women and girls are 25% less likely than men to know how to take advantage of digital technology for basic purposes, 4 times less likely to know how to program computers, and 13 times less likely to apply for a technology patent. At a time when all sectors are becoming technology sectors, these gaps should make political leaders, educators and ordinary citizens "blush" with alarm. (Unesco, 2019b: 148).

The aforementioned studies show the growing concern for making the digital divide between men and women visible. But what about the LGTBIQ+ population [4]? It is necessary to mention that we do not currently have a survey on access to equipment, connectivity, careers and STEM jobs for this population. However, it is possible to account for the historical discriminations and exclusions that people belonging to this group have gone through. In this sense, the trans population [5] "continues to have difficulties in accessing the effective exercise of the right to health, education, decent housing, equitable and satisfactory working conditions, as well as protection against unemployment, without any discrimination." [6] In this context, it can be assumed that the ICT sector is not exempt and that it is necessary to start generating surveys in this regard.

For the above reasons, a large part of this article focuses on the inequality between men and women and recovers research and literature on the subject. They are a great step forward to think about teaching Computer Science from a gender perspective, but they are insufficient as we need to generate strategies to address the difficulties faced by people belonging to the LGTBIQ+ group [7].

### **3. What do we understand by gender?**

As proposed by the Comprehensive Sex Education material produced by the National Ministry of Education in Argentina (2022); from the moment we are born, based on the observation of our genitals, we are assigned a gender and we learn the social patterns that arise from this way of classifying us. This classification is binary, that is, all people are placed in one of two categories: male or female. However, this way of classifying bodies is not natural, but historical. It depends on social and cultural circumstances, it is a construction process that does not derive from nature or genital anatomy, but implies a way of "reading" sexed bodies within the framework of a culture. That is to say that the sexual characteristics of these bodies cannot be thought of separately from the ways in which society interprets them and the power relations that are part of these interpretations. Sexuality goes far beyond the biology and physiology of sex; it constitutes a

particular way of inhabiting the sexed body at a given stage of life, at a given social moment and in a given culture.

Gender is linked to a social construction of masculinity and femininity, because people learn to be male and female. This way of classification is crossed by power relations that give more social value to masculinities than to femininities and non-binary identities -that is, those who do not recognize themselves as either male or female- and leaves women, lesbians, gays, bisexuals, trans, intersex and queer people (LGTBIQ+) at a disadvantage.

It is important to bear in mind that gender identity is the internal and individual experience of gender as each person feels it, which may or may not correspond to the sex assigned at birth [8]. Recently, Argentina recognized gender identities outside of binarism by legal decree 476/2021[9], with the possibility of opting for the nomenclature "x" on country identity documentation. This recognition marks a valuable milestone, but there is still much to be done.

The gender perspective is a useful analytical category for understanding gender inequalities and generating actions to reverse them. For researcher Morgade, the gender perspective denounces inequalities between sexed bodies, their conditions of production and challenges institutions in the search for greater justice and equality. This perspective "enables a profound debate that makes visible the persistent presence of androcentric (centered on andros, from the Greek 'man') and heteronormative discourses (establishing that heterosexuality is 'normal' and other identities become 'abnormal') that rule in social institutions, questioning -among others- science, medicine, the school itself" (Morgade, 2017: 150).

Incorporating the gender perspective implies generating the necessary conditions to reverse these inequalities, reviewing, reflecting and questioning many of the ideas and conceptions we have about how we relate to each other, what we expect from each other, what places we occupy in institutions and in society (Ministry of Education 2022).

#### **4. Some guidelines for thinking about the gender gap problem**

Research on gender issues in the educational field and in the epistemological field shifted from considering women as a problem - what happens to women that they are not interested in science - to directing the problem towards the shaping of science: what happens to science that women cannot access (Harding, 1996 cited in Ortmann, 2019).

As Ortmann (2019) states, the exact sciences, heirs of the positivist model of sciences, were historically occupied by a particular social subject: Western, heterosexual, middle or upper class males who applied the scientific method to the problems considered relevant by that particular subject, leaving out a wide variety of knowledge that does not respond to what positivism understands as science.

It is worth mentioning that this social subject that monopolized scientific knowledge, not only relegated women but also LGTBIQ+ people, racialized people and people with disabilities.

The challenge then is to identify the gender discrimination that is still present in the exact sciences and their teaching and to transform institutions to build a society that effectively provides equal opportunities.

It is also necessary to understand that there are structural gender inequalities, to review which ones we are reproducing and to generate actions to reverse them.

Some aspects that shape these inequalities are:

##### The burden of domestic and care work

Research on digital divides and unequal appropriation (Benítez Larghi et al., 2011 cited in Echeveste, 2021) shows that the lower intensity of use of technology by women could be linked, among other reasons, to greater demands on them in terms of domestic tasks. These first unequal approaches forge different digital capitals with which young people arrive at school.

Gender representations that associate these disciplines with the masculine and discourage the participation of women and other non-masculine gender identities.

Many young women and girls lose interest in STEM. However, this "lack of interest" is greatly influenced by the socialization process and stereotypical ideas about gender roles. Gender representations communicate the idea that studies and careers in these areas are male domains. This can negatively affect girls' interest, engagement, and performance in STEM and discourage them from pursuing related professional careers (Unesco, 2019).

These stereotypical ideas about gender roles influence the performance of young women and girls and their confidence in their abilities. A study carried out by the Sadosky Foundation (Marino et al., 2023), inquiring into the reasons why university students enrolled in these careers, showed differences according to gender: a lower percentage of women seem to choose the career because of their belief in their abilities (25%) compared to men (42%).

Research on gender and CS (Redmond et al., 2013 cited in Echeveste et al., 2021) mentions that women's lower exposure to computer use generates less security in their bond with CS, especially in cultures where access to toys and video games are crossed by cultural gender biases.

Gender representations in STEM cut across different spheres of society: families, the marketing industry, media representations, among others. Some examples are:

- Science games or video games focused on the male audience.
- Media representations of scientists, mostly male.
- Within the family, boys are usually encouraged to participate in different areas of training and recreation in these areas. In this way, boys have a greater approach to STEM outside of school knowledge.

Gender representations that associate these disciplines with masculinity are also prevalent in the educational sphere and deepen inequalities. For example, there are often differentiated performance expectations among teachers who expect better results from boys in disciplines such as mathematics and computer science.

STEM-related environments are strongly masculinized and generate discrimination and exclusion of women and other gender identities.

According to the Unesco report (2019), not only is female participation in STEM education and employment low, but the dropout rate is particularly high. Women drop out of STEM disciplines disproportionately during their university studies, during the transition to the world of work, and even during their career path. According to the report, there are various factors, including the perceived incompatibility of some of these disciplines with female identity, family obligations, working conditions and the environment.

Regarding the environment, a research conducted by Ortmann (2017) accounts for the multiple experiences of symbolic violence that women go through in the university environment in engineering careers in Argentina. These experiences are part of a structural phenomenon that show the systematic ways in which gender violence is produced, articulated and covered up in this environment. A study (Marino et al., 2023) investigates the violence and discrimination suffered by cis[10] women and trans and non-binary gender identities in the university environment of CS careers in Argentina. In the following section I will go into more detail on this topic.

## **5. What is it like to study CS for women and LGTBIQ+ people?**

A research (Marino et. al, 2023) surveyed the different forms of violence (symbolic and sexual) experienced by students of Computer Science university careers in Argentina. The gender categories used for the analysis were "cis-male", "cis-female" and "other". The term cis corresponds to people whose gender identity coincides with the sex assigned at birth [11]. The

category "other" groups those who responded to the question on gender identity to transgender women, transgender male and non-binary.

The results show that cis-males have systematically lower percentages than the rest of the genders with respect to the suffered violence in the university environment in CS studies. The category called "other" is the one that suffered the most violence, followed by cis women. "These situations have an impact as they generate conditions of dissuasion for entering CS studies, difficulties to transit and remain in the institutions, and conditioning factors that affect the construction of professional identity" (Marino et al., 2023: 65).

Ortmann (2017; 2019 cited in Marino et al., 2023) identifies that naturalizing masculinity as the predominant gender expression in these spaces is part of the symbolic violence suffered by all people not recognized as "masculine". This happens because they are spaces constructed as eminently masculine and they relegate everything that is recognized as "non-masculine". The different situations of violence identified show the characteristics expected for people who pursue these studies and the discrimination and exclusion experienced by those who do not fit in with them.

These experiences of violence have an impact on the path of the people who experience them: demotivation, frustration, anger or impotence are some of the feelings reported in the research that have repercussions generating insecurity about themselves. Some of them express a direct relationship with the abandonment of a course or the interruption of their studies.

This research provides information on the presence and effects of symbolic (and also sexual) violence in university CS careers in Argentina. It provides data on the exclusion of cis women, but it is also a first approach to the problems experienced by trans and non-binary people who are the main victims of violence in these spaces. It is necessary to carry out more research on the subject, considering gender identity as a necessary variable to collect data that contribute to generate inclusive educational environments.

## **6. Is there anything we can and should do at school to narrow the gender gap?**

A study conducted in elementary schools in Córdoba, Argentina (Martínez et al., 2015 cited in Echeveste et al., 2021) compared the performance in CS according to the gender of students in two schools: in one of them, these contents are part of the school curriculum and in the other they are not. The results were conclusive: in those schools where Computer Science was not part of the curriculum, boys obtained significantly better results than girls. In schools where this knowledge was part of the curriculum, the difference between boys and girls was imperceptible.

In other words, including CS content in the curricula from primary school onwards can contribute to narrowing the original gaps based on gender inequalities.

However, it is necessary to ask how to approach such teaching, given that gender inequality in STEM is also linked to inequalities present in the educational sphere.

### **6.1. Thinking about gender inequality within the framework of Comprehensive Sex Education**

In Argentina, since 2006, there is a law (26,150) on Comprehensive Sex Education (ESI). Since its enactment, the National Program for Comprehensive Sex Education [12] was created, with a great trajectory and important advances at the national level in terms of, working on gender equity in the educational environment, among other issues. In order to address gender issues in education, it is essential to situate them in the ESI proposal, which provides a conceptual and normative framework to understand sexuality in a comprehensive manner

[13], considering that it is part of the life, development and identity of all people and, in this sense, it is present in the school on a daily basis.

Graciela Morgade (2011) argues that in terms of gender relations and sexualities, formal education silences but, at the same time is a space for the performance of sexed bodies: it establishes body standards through acceptable and unacceptable dress and appearance codes, the use of the body in class and at recess, etc. The school, as an ideological apparatus, seeks to articulate "normal" gender identities to a single model of sexual identity: heterosexual identity. It argues that, although it is not explicitly stated, there has always been "sex education" in formal education, and its main purpose is to preserve an important part of the established social gender order. Building a fair sex education implies a profound revision of these institutionalized ways of conceiving genders and sexualities and generating agreements that allow all members of society to participate as equals.

One of the five axes proposed by the ESI is to guarantee gender equity [14]:

*"The inclusion of the gender perspective at school implies reviewing the ways in which, in more or less subtle ways, both in what is said and in what is silenced, the school can end up sustaining a single possible way of understanding and living sexuality on a daily basis. The gender perspective, as a critical view, requires educational institutions that can challenge the limits of the instituted in pursuit of greater equality and justice, and that collaborate with the deployment of autonomous, full and pleasurable sexualities". (National Ministry of Education: 10)*

## **6.2. Building Computer Science Education from the ESI perspective.**

From the perspective of ESI and recovering Ortmann's (2019) proposal for the teaching of exact sciences, some strategies are proposed that address different dimensions in which gender and sexuality can be present in school and that we can recover from the teaching of CS. Taking these contributions, adding some specificities of the discipline and also taking into account that the construction of gender does not only disadvantage women, but also LGTBIQ+ people, I suggest some recommendations for approaching the teaching of this discipline from a gender perspective that is involved in narrowing the gap present in the sector.

### **6.2.1. What to teach?**

#### **6.2.1.1. To make visible the historical and social aspects of women and people of the LGTBIQ+ collective in CS.**

Ortmann (2019) raises the importance of making visible the contributions of women scientists, researchers and academics in these disciplinary areas and demonstrating that they are not so few, in order to confront the "man of science" model commonly associated with these fields. "However, the mere fact of naming them or recounting their achievements keeps them in a place of exception and makes invisible the barriers they had in their own careers, as well as the obstacles encountered by other women who did not reach that place. In this sense, it is important to analyze the family, social and economic circumstances that made possible the progress of these women in an extremely hostile environment" (Ortmann, 2019: 12) characterized by the refusal to be accepted in this field, the lack of recognition or late recognition of their contributions, the strength and tenacity they had to sustain to be able to investigate, to learn and share their findings (with men's names, with acronyms or anonymity). As Ortmann (2019) states, this approach allows us to develop a better understanding of the dynamics of exclusion that, in some cases, remain in force. Starting from women and collectives far away in time, it becomes only the tip of the iceberg to investigate how these unequal representations are still in force today.

But women are not the only people who made great contributions to the sciences and who encountered difficulties or suffered discrimination. From the CS we have the challenge of tracing the history of the discipline from this perspective. As proposed in the article written by LasDeSistemas [15], we repeat its history always quoting the same protagonists, but they were not the only ones.

Ada Lovelace, Alan Turing, Lynn Conway are just some of the protagonists that we must make visible. As with women, the proposal is not only about rescuing their great contributions, but also the strong difficulties, discrimination and criminalization they suffered because of their gender identity or sexual orientation to generate reflections on the dynamics of discrimination and exclusion that may remain in force.

It is also proposed to trace the local stories of the discipline from this perspective. As a didactic strategy, students can investigate who are the women and LGTBIQ+ people currently participating in the CS in their context and about women's groups and sexual diversities [16] in science and their contributions. Doing this exercise in the classroom can help build more inclusive places.

### **6.2.1.2. Are computational systems neutral or do they also reproduce inequalities?**

It is necessary to review the approach we adopt when we talk about Computer Science. As teachers, we aim to demystify the magic associated with computers in order to make visible the existence of the people who program them. However, it is not so frequent to reflect on the interests, prejudices and stereotypes that these people impregnate in their developments and decisions and how these developments end up reinforcing prejudices and stereotypes.

Ko and Beitlers (2022) argue that computer science, as a discipline, has often viewed software as neutral. Algorithms, many times, are represented as independent of the data they process. Behind the appearance of neutrality of ones and zeros that make up codes that are presented as impartial, it is hidden that they are developed by people with certain interests and that they are part of an unequal society crossed by multiple discriminations.

Data systems and algorithms are related to different forms of inequity, injustice and prejudice such as racism, sexism, heterosexism, ableism, ageism, xenophobia and cis heteronormativity. It is necessary for educators to make these injustices visible [17].

For example, it is common to find biases in artificial intelligence systems that produce discrimination. It happened with a system of a major U.S. e-commerce and cloud services corporation. This system was intended to screen job applications for the company. Because the model was trained on the hiring records of the last 10 years, most of the examples it had analyzed were male, due to the huge gender inequality that exists in technology companies. It then chose a huge proportion of men over women and even discarded CVs if it detected some words that it associated as "typically female"[18].

## **6.2.2. What resources should we use to teach?**

### **6.2.2.1. Textbooks and the selection of didactic resources**

Following Ortmann's (2019) proposal, it is suggested to review and reflect on the messages we transmit implicitly in the treatment of disciplinary contents through didactic resources used for this purpose.

The Unesco (2019) report argues that the way people are portrayed in school textbooks conveys explicit and implicit messages about gender roles and their STEM skills. Such messages can reinforce gender stereotypes. Many of these books depict only males in these disciplines and often portray females in subordinate roles. It is therefore very important, when generating textbooks about the discipline, to be careful in the representations it employs.

In addition to textbooks, the examples, images, videos and texts that we select as didactic resources transmit representations and points of view. In order not to deepen asymmetries, it is relevant to analyze how gender representations are present in them. To make a selection of these didactic resources, taking care not to reproduce inequalities, we can take into account aspects such as:

- They should not reproduce stereotypes: people of different genders should be represented performing different activities and special attention should be paid to ensure that it is not only men who are associated with science and technology.
- That the voices of women and LGTBIQ+ people are represented.
- That they take into account the different interests of the group of students to whom the didactic resource is addressed.

### **6.2.2.2. Equipment, materials and technological resources**

As proposed by the Unesco report (2019), having the necessary technological resources such as computers and internet connection is essential to be able to teach Computer Science knowledge and also to narrow the digital divide, which is crossed by the gender gap. The availability of equipment, materials and technological resources is a key aspect to encourage the interest of girls and boys in CS and to favor learning in this area.

## **6.2.3. What daily practices to review?**

### **6.2.3.1. Reflecting on performance expectations and division of labor**

When we teach, what we think, feel and believe is always present. The historical inequalities present in the exact sciences in general and in the CS in particular, generate representations that we may have naturalized, which is why, from the ESI approach, it is recommended to reflect on ourselves and what happens to us as teachers with the representations of gender and sexuality. Reviewing our own educational trajectories, values and beliefs on gender is necessary to check if we are putting stereotypes into play in each pedagogical act.

Gender stereotypes are those simplified, incomplete and generalized representations that are made about the genders, linked to cultural patterns: an expected role, a norm, a mandate, etc. Some examples of how these representations can permeate pedagogical practices are performance expectations or gender-differentiated task divisions.

Given that the field of exact sciences and technology was historically conceived as eminently masculine, often without realizing it, we generate differentiated performance expectations for students according to their gender, not only with respect to their school experience, but also at the moment of projecting their academic and professional trajectories. In this context, the academic success of boys is considered "natural" and women have to prove that they can (Ortmann, 2019).

These stereotypical perceptions about skills considered masculine may also be present in the division of tasks in school contexts. Many times, in the same class, gender-differentiated tasks are assigned. These divisions reproduce the hierarchical system of divisions and classifications despite the promotion of gender equality in its theoretical discourse (Jacinto et al., 2020).

For example, in an investigation conducted by Echeveste (2021) in a technical school in Córdoba (Argentina), it was observed recurrently to hear "girls" and "boys" referred to as two separate groups. In 7th grade, when all the students worked on the same project, jointly articulating different subjects, the activities for female students were linked to aesthetics and handicrafts, and with a promise of perhaps programming "something quiet", while the boys were assigned the more complex programming tasks.

A thorough review of our teaching practice will allow us to pay attention not to unintentionally reproduce gender inequalities.



### 6.2.3.2. Review institutional culture

The National Comprehensive Sex Education Program proposes to rethink some daily practices institutionalized in the school culture.

*"School regulations, practices and rituals construct and transmit meanings that the school has about sexuality. To reflect on this dimension, an interesting exercise could be (1) to identify in the school environment those gestures, customs, routines in which stereotyped gender roles are put into play and to think, at the same time, how to retrace that path. It is also possible to move for a moment to the teachers' room, and remember (2) comments, jokes or expressions that circulate there, in which forms of discrimination are manifested by physical appearance or clothing, tattoos, use of piercings, not only in relation to students but also with colleagues. Or one can also think about the (3) sanctions applied to men and women for 'behavioral problems': are they applied in the same way to men and women? What is considered a transgression of the norm for some and for others?"*

*"Reviewing and transforming actions, discourses, school customs that may be unjust or unequal, is an indispensable objective for the school because it implies not exercising gender violence and educating in equal rights." (National Ministry of Education 2022:16).*

## 7. Conclusion

The aspects that shape the gender gap present in the science and technology sector in general and in Computer Science in particular cross different areas of society and are strongly associated with gender roles.

It is important to keep in mind that gender inequality does not only disadvantage women but also LGTBQ+ people. In this sense, it is necessary to begin to generate research that takes into account this dimension and helps to develop strategies that tackle the difficulties and discrimination faced by people belonging to this group in the field of STEM. Recent research (Marino et al., 2023) shows the violence against trans and non-binary people in strongly masculinized places such as the university studies in Computer Science. To reverse this situation, schools are relevant places to question and rethink violent mandates of masculinity, as well as to promote respect for diversity. ESI is a fundamental tool to address these issues.

The justification for the differences in access to STEM often relapses on the absence of women to a lack of interest in the subjects, naturalizing the dogmas and beliefs that keep science and technology in an impartial and independent sphere, instead of conceiving it as a social activity, a set of historically changing practices (Harding 1996 cited in Ortmann, 2015).

Offering Computer Science knowledge and technological resources at/informal education can help reduce this inequality, since it offers the possibility of bringing such knowledge and resources to everyone. However, it is crucial to work on how to teach from an approach that makes visible and questions the inequalities present in the discipline, in the educational environment and in society in general.

## 8. Notes

[1] The term "sexual diversity" refers to the gender identity and sexual orientation of individuals.

[2] For example, the Ministry of Women, Genders and Diversities developed [\(Re\) Naming, a guide for gender-sensitive communication](#) that served as an input for other state agencies to generate inclusive communication guides.

At the university level, different schools have approved the use and promotion of inclusive language. For example, the School of Philosophy and Letters of the University of Buenos Aires recognizes the validity of inclusive language in academic, administrative, technical and any other kind of productions from 2019.

[3] Argentina's [Law 26.150](#), enacted in 2006, incorporates comprehensive sexual education as a right for all students at all educational levels in the country. It understands sexuality as multidimensional, with biological, psychological, social, ethical and affective aspects. The

enactment of the Law creates the National Program of Comprehensive Sexual Education, which has a wide range of proposals and content. The ESI proposes, through a transversal approach, that the different disciplines are taught from a perspective of rights, gender and diversity.

[4] It is the acronym composed of the initials of the words Lesbian, Gay, Bisexual, Trans, Intersex and Queer. The + sign is used to show that gender, sexual and bodily identities are not limited to this list of possibilities.

[5] Trans people are those who have a gender identity that differs from the sex they were assigned at birth.

[6] Extracted from the [Law for the promotion of access to formal employment for transvestites, transsexuals and transgender persons "Diana Sacayán - Lohana Berkins 27636, 2021.](#)

[7] The + sign is used to show that gender, sexual and bodily identities are not limited to this list of possibilities.

[8] Definition taken from the [Gender Identity Law 26743](#) of Argentina.

[9] [Official Gazette of the Argentine Republic, National Registry of Persons, Decree 476/2021.](#)

[10] The term "cis" refers to people whose gender identity coincides with the sex assigned at birth. In contrast, trans persons are those whose gender identity is different from the sex assigned at birth.

[11] For example, people who are born with a vulva and identify with the female gender are cis-women.

[12] <https://www.argentina.gob.ar/educacion/esi>

[13] Law 26.150 understands comprehensive sexuality education as "that which articulates biological, psychological, social, affective and ethical aspects". In other words, sexuality is not restricted to genital or biological and medical aspects and, in this sense, it is present throughout people's lives, from early childhood onwards.

[14] Resolution [340/18](#) of the CFE stipulates 5 conceptual axes of ESI: taking care of the body and health, valuing affectivity, guaranteeing gender equity, respecting diversity and exercising our rights.

[15] [Maruglobina \(2020\), "In a world of zeros and ones let's go for diversity," in LasDeSistemas, Medium.](#)

[16] The term "sexual diversity" refers to the gender identity and sexual orientation of individuals.

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