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## A gender perspective view of higher education teachers in Colombia vs. the Orinoco region --Manuscript Draft--

<b>Full Title:</b>	A gender perspective view of higher education teachers in Colombia vs. the Orinoco region
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<b>Abstract:</b>	<p>This analysis took into account the Higher Education Institutions (HEIs) at Colombia and Orinoco region level, made up of the departments of Arauca, Casanare, Meta, and Vichada. The objective was to identify the gender gaps between HEIs teachers in Colombia and the ones in the Orinoquia region. The data corresponded to the period 2019-2020, obtained from the National System of Science, Technology, and Innovation (SNCTI), the Ministry of National Education (MEN), and the National System of Higher Education Information (SNIES). In the organisation of findings, gender differences in the level of studies, teaching, and research of female and male teachers in the region were analysed, using some descriptive and comparative tools according to the information collected. When analysing the correlation between the data for the region and Colombia, interesting findings were found regarding the gaps and inequalities evident among teachers not only of the country and the region but also of the departments that make up a such region.</p>

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### **Abstract**

This analysis took into account the Higher Education Institutions (HEIs) at Colombia and Orinoco region level, made up of the departments of Arauca, Casanare, Meta and Vichada. The objective was to identify the gender gaps among HEIs teachers in Colombia and the ones in the Orinoquia region. The data corresponded to the period 2019-2020, obtained from the National System of Science, Technology and Innovation (SNCTI), the Ministry of National Education (MEN) and the National System of Higher Education Information (SNIES). In the organisation of findings, gender differences in the level of studies, teaching and research of female and male teachers in the region were analysed, using some descriptive and comparative tools according to the information collected. When analysing the correlation between the data for the region and Colombia, interesting findings were found regarding the gaps and

inequalities evident among teachers not only of the country and the region, but also of the departments that make up such region.

## **Keywords**

University education, gender, ICT, teachers, digital gap/divide, universities.

## **1. Introduction to the problem**

Before 2019, a number of inequalities had been exposed in the educational sphere, and the sudden arrival of COVID-19 managed to deepen them. These inequalities have hit girls and women the hardest, taking a kind of "social, economic and psychological toll" that can be traced in a gendered way (Ross, 2020; Flaherty, 2020; Kitchener, 2020; Minello, 2020). At the same time, and almost as if it were obligatory, all teachers, regardless of the level at which they taught or where they were located on the planet, had to incorporate Information and Communication Technology (ICT) into their daily work, forcibly changing from traditional teaching to virtual teaching and teleworking.

According to the World Bank (2021), there are more than 84 million teachers worldwide; of these, 14 million belong to higher education (HE). As a reaction to this reality, national governments around the world established different contingency measures to help institutions and their teaching staff to continue with their classes, where ICT was the protagonist. For example, in the case of Latin America, the *Plan de educación en tiempos de pandemia* was launched in Paraguay; the *Plan pedagógico de orientación y prevención*, in Venezuela; the *La estrella de la educación no se detiene* strategy, in Panama; the *Orientaciones para el apoyo del*

*proceso educativo a distancia*, in Costa Rica; and the *Plan Padrino*, in Colombia. The latter, worked as a support for professional development and free virtual teacher training, encouraged by universities across the country and hosted on the web platform called Aprender Digital (United Nations Educational, Scientific and Cultural Organization [Unesco], 2020). This platform seeks to strengthen teaching skills in ICT to transform pedagogical practices, in which some studies indicate that teachers at all levels incorporate it:

[...] Office tools, free software, internet search engines, social networks and institutional technological platforms (Cuadros et al., 2021; Garcés-Prettel and Ruiz-Cantillo, 2016) or free ones such as Classroom and Google Meet, which are now used worldwide as a working tool in teaching-learning processes. (Garcés, 2021)

In this sense, the exponential development, use and incorporation of ICT has brought unprecedented transformations, presenting them as a "panacea" in education. However, although their opportunities are innumerable, so are the inequalities that they reproduce, adding to existing inequalities, such as the gender gap. This leads to new challenges for the different scenarios of everyday activities, like education; therefore it is important to mention that the disadvantages and inequalities that ICTs reproduce do not stem from the technologies per se, but have to do with their access, coverage and use.

In addition, other emerging areas of concern in HE relate to research funding and output, the pause in recruitment processes, and the termination of staff, including those on research contracts; this, to such an extent that there is a risk that the crisis caused by the pandemic will reverse the gains in gender equality made in recent years. This will have consequences not only for women, but also for HEIs, research innovation and economic growth (O'Connor, 2020).

Moreover, the lack of digital competencies means that only some people know and understand how technology works, largely due to limited access to computers or a low level of development of the skills that enable the appropriate use of ICTs (García, 2017). While for more than 15 years there has been talk of "recognising and supporting the principle of universal access to the internet as a means to promote the exercise of human rights as defined in articles 19 and 27 of the Universal Declaration of Human Rights" (United Nations High Commissioner for Refugees [UNHCR], n.d., p. 3) –and, thus, promote linguistic diversity– and, in turn, democratise knowledge (Unesco, 2020), access to this service continues to be unequal between countries and their own regions. This has caused in some cases the massification of new technologies and the internet as a wave of social marginalisation and exclusion, widening the gap between rich and poor in terms of access and use of ICTs (Castells, 2000).

Along the same lines, authors such as Rueda and Franco (2014) have pointed out that for there to be social and digital inclusion and democratisation between science, technology, technoscientific research and social welfare, the following imaginaries must be considered: a) a salvationist technological determinism that attributes to technology an autonomy or social exteriority that it does not possess; b) an apparent neutrality of technoscientific knowledge and technocratic decision-making models, which implies the possibility of "eliminating" the subject and the subjectivity it embodies in the scientific-technological process; and c) an aproblematic perspective on this knowledge and its by-products, which sees them as good per-se both today and in the future.

Faced with this scenario, it is worth asking how or what are the gaps in HE teachers at the professional level in the Orinoco region. This, based on the premise that the levels of training

of teachers, the educational level at which they work and their recognition as researchers may in turn be causes or effects of other gaps, such as the digital divide and the gender digital divide. In order to answer this question, a statistical analysis was carried out with some descriptive and comparative tools, according to the information collected throughout the years 2019 and 2020 in the databases of the SNCTI, the MEN and the SNIES at Colombia and the Orinoco region, which allows to contrast the gender gap of teachers of HEIs at a professional level in the region, in relation to their level of studies, their role in teaching and their research.

The above situation affects not only HE. According to data from the magazine Llano Adentro (2018), the challenge of receiving a quality education in the region is a privilege that few can achieve, due to the conditions of rural schools and colleges that reproduce the growth of gaps between this and other regions of the country. In addition, inequalities due to geographic, demographic and territorial reasons in relation to other regions and departments in Colombia are not a minor issue to consider in any research. Considering this, the present document was developed in five stages: a) the context of HE in the Orinoco region; b) the gaps at a professional level for HEIs teachers in the Orinoco region; c) the gaps among the research teaching staff for HEIs in the Orinoco region; d) the need for an intersection between gender and other variables in HE; and e) the closing section.

### **1.1. The context of HE in the Orinoco region**

Table 1 shows the importance of Bogota in the representation of universities in Colombia, which corresponds to 32.9 % of them. In the same sense, it can be seen that, as a whole, the Orinoco region has a low participation, with 4.32 % of the country's total, and the

HEIs at the professional level in Bogota are almost eight times more than the institutions in the region under study.

<b>Tabla 1. Number of HEIs at a professional level by department in the Orinoco region, by character and by number of accredited institutions</b>				
<b>Compared to Bogota and the national level, 2020</b>				
Department	Number of HEIs	Number of HEIs with high quality accreditation	Public	Private
Meta	14	1	1	13
Arauca	1	1	0	1
Vichada	0	0	0	0
Casanare	1	0	0	1
Total Orinoco region	16	2	1	15
Total Bogota	122	26	20	102
Total national	370	91	114	256

In addition to the above, and according to the Colombian University Observatory (2021), the data show one of the largest "invasions" of public and private universities from other parts of the country, where only 37 % of the programmes offered are run by the only public university in the Orinoco region. This can be seen in the fact that almost 94 % of the universities in the region are private, a figure that contrasts with the 69 % participation of private universities for the national total and 83 % for Bogota.



On the other hand, when analysing enrolment data by educational level, an important contrast is observed between the national level and the region, since, while at the undergraduate level the country registers 92.17 % of enrolments, this educational level in the region absorbs 96.74 % of the student population. Considering this at the postgraduate level, while the nation registers 7.83 % of enrolments, the region has only 3.26 %. These figures show a relatively similar proportion between Colombia and the region; however, it is necessary to take into account the differences in terms of the size of the student population when making such a comparison.

For the country as a whole, in 2019 there was an enrolment of 2 396 250; and, for the region, this figure corresponded to 48 074 (Colombian University Observatory, 2020), which represented a total of 2 % of the country. This proportion is much lower for the postgraduate level: for the region, it represented 0.83 %, corresponding to 1565 students, out of a total of 187 637 for the country as a whole. These data reinforce the fact that the postgraduate level has a more representative gap in the region than in the country.

These data reflect the region's lag in postgraduate training, which may be a clue to the conditions of development opportunities offered in relation to other areas of the country, and implies a challenge in terms of academic supply and accessibility of the education system for its inhabitants. As it can be seen, the gap in undergraduate and postgraduate provision between Colombia and the region is approximately 4 percentage points. The supply of postgraduate courses is limited, which means that most of its inhabitants move to other regions of the country and even abroad to continue with their university education.

## **1.2. Some gaps at a professional level for HEIs teachers in the Orinoco region**

When taking into consideration the figures registered in the MEN, SNCTI and SNIES databases, it is necessary to recognise the differences that exist and express a gap between

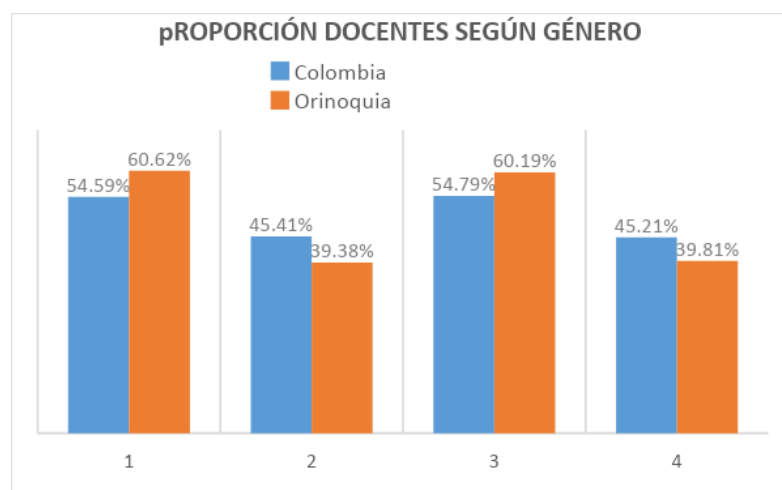
male and female teachers in Colombia. Thus, for the year 2019, the number of male teachers outnumbered female teachers by 74 073, while for the year 2020 the figure recorded was 49 641 at all educational levels. On the other hand, when analysing the behaviour of male and female teachers in HE at a professional level for the Orinoco region, there was a single register for the year 2020, where 12 736 (59.8 %) male teachers and 8549 female teachers (40.2 %) were found, resulting in a gap of 4187 men outnumbering women in the academic field, which is equivalent to 19.6 % of the data collected.

Although in the last 20 years the integration of universities in the region has undergone a constant and considerable evolution, the reality within the region is still very complex, due to the fact that gender inequalities in the teaching workforce are deeply rooted and systemic, and these are underpinned by reinforcements of gender stereotypes. At this point, it should be noted that the Colombia-region contrast data is interesting, since it shows a larger gender gap in the Orinoco region. This, given that, while the gap was 9.19 % at the national level in 2019, and in 2020 it was 9.58 %, in the region it was 21.24 % and 20.37 %, respectively.

As it can be seen in Figure 1, there is a ratio of 54.59 % for 2019 for male university teachers compared to 45.41 % for females, which is a difference of approximately 9 percentage points. Therefore, it is necessary to point out that the Colombia-region contrasting data are interesting, since these show a greater gap in terms of gender in the Orinoco region: while at the national level in 2019 the gap was 9.18 %, and in 2020 it was 9.58 %; in the region, it was 11.84% and 11.12%, respectively.

### **Figure 1**

Proportion of teachers by gender Colombia vs. Orinoco 2019-2020

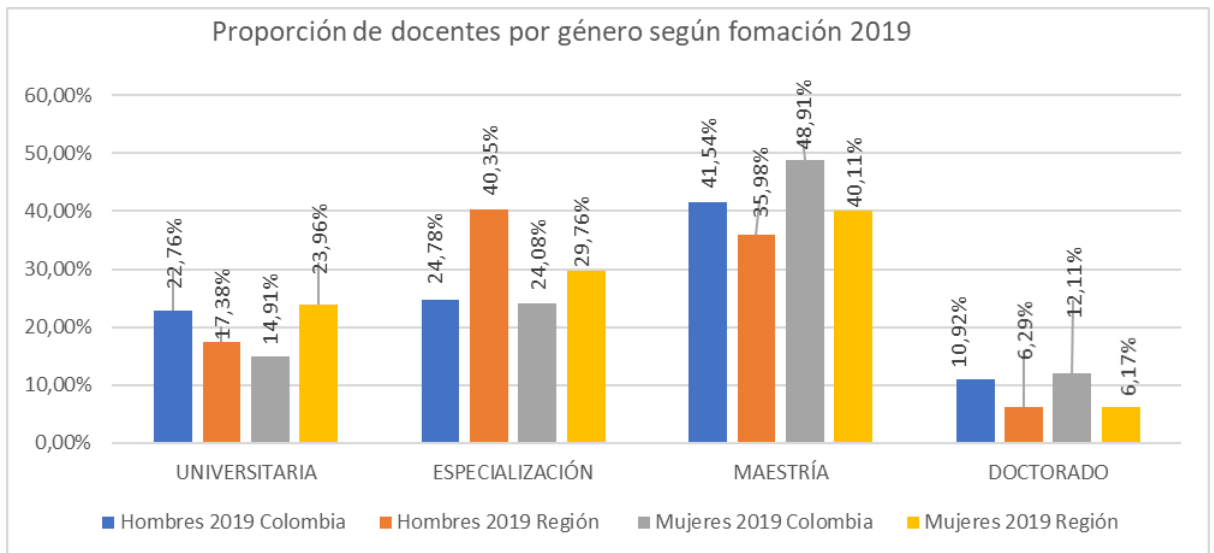


*Note.* Own elaboration based on data obtained from MEN (2019-2020).

It should be noted that the data referenced for the region correspond only to the departments of Arauca, Casanare and Meta, since Vichada has 0 % representation for both sexes, as it does not have HEIs at the professional level. Therefore, no figures for this department are recorded in the MEN database. Moreover, gender inequalities are more evident when analysed in relation to the level of education of the teaching staff during the years under study. Thus, it can be observed that, for 2019, of the 16 104 teachers registered in the SNIES database in Colombia, there were 8790 men and 7314 women. Among these, there was a gap of 9 percentage points difference in the university degree, 5.68 for specialisation, 8.8 for master's degree and 5.94 for doctorate. The higher female representation in university and master's degrees of female teachers in both Colombia and the region is striking, with women outnumbering men by more than 7 and 4.3 percentage points respectively in this scenario for 2019.

## Figure 2

Proportion of teachers by level of education by gender Colombia vs. Orinoco 2019



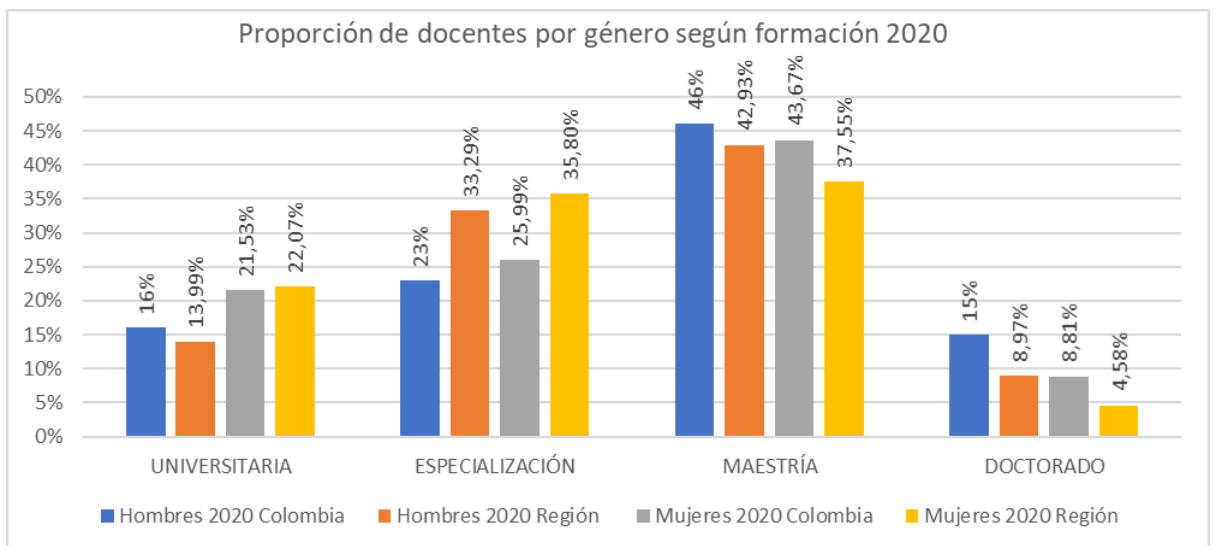
According to the above, Colombia stands out for its male and female representation with 5.56 and 8.8 percentage points of difference at the master's degree level, respectively. In fact, according to the data analysed, the representation of women at each of the levels is higher in the region than in Colombia, with the exception of the doctoral level, where both Colombia and the region have the lowest representation. This is striking, since considering the "invasion" of HEIs from other regions of the country in the Orinoco, the same may be happening with the teachers who exercise their profession there; this, taking into account the low supply of postgraduate programmes in the region and the data presented in Figure 3.

Additionally, as far as training is concerned, it is pertinent to point out that the panorama regarding the doctoral training at the national level is dark, and it is even worse when it comes to this level of studies in the region, since in all cases, whether we talk about male or female teachers, the rate of doctoral representation ranges between 4 % and 10 %, as it can be seen in Figure 4. The category with the greatest disparity in 2019 among female HE teachers at the professional level in Colombia vs. the region was the master's degree, with a representation of 48.91 % and 43.67 % in Colombia for the two years under study, while in the region it was 43.67 % and 37.55 %, respectively.

In both cases, there is a decrease in participation of between 5.24 and 2.56 percentage points, which corroborates, first, that academic training in the region has not increased in any way, on the contrary, it has decreased; and second, it is possible to recognise the superiority in numbers of male over female teachers that is maintained in both the 2019 and 2020 databases (see Figure 4). Although there is a higher proportion of women with master's degrees, this ratio decreases at the specialisation and doctoral levels. In summary, the higher the level of education, the lower the representation of female teachers in the region.

**Figure 3**

Proportion of teachers by level of education according to gender Colombia vs. Orinoco 2020



*Note.* Own elaboration based on data obtained from MEN (2019-2020).

At this point, it can be seen that, as in 2019, the level of master's studies for Colombia is led by both men, with 3.07 percentage points, and women, with 6.12, above the region; in contrast, when women led at the master's level in the region, they were more represented at the specialisation level, with 9.81 percentage points. The above shows a gender inequality at both national and regional level, where there is a configuration in terms of gender gaps that

are amplified by regional inequalities in the levels of studies of HEIs teachers at the professional level.

This can be linked to previous studies (Callister, Newell, Perry and Scott, 2006; Unesco, 2021, p. 17), where it is noted that, although women have made considerable progress in recent decades in their participation in HE and are more likely than men to further their education and obtain an undergraduate and postgraduate degree, it would be misleading to interpret this as a sign of absolute gender balance in HE (Unesco, 2021). In this sense, it is worth highlighting that the part of the literature reviewed so far is related to the above when it argues that the incorporation of women into the field of teaching is still a minority and it is still in tendency to occupy marginalised positions due to a male culture that encourages the representation of the ideal academic as a competitive individual dedicated to his work, without obligations of care inside and outside the university, which is strengthened by neoliberalism with its values of productivity and efficiency (Aavik, 2017; Acker, 1990; Acker, 1994; Brooks, 1997; Cummis, 2012; Diezmann and Grieshaber, 2019; Fernández Rius, 2000; Flores Garrido et al., 2017; García de León and García de Cortázar, 2000; Hernández Martín et al., 2004; Martínez Covarrubias, 2006; Morley, 1999; Ovando Crespo, 2006, as quoted in Castelao-Huerta, 2021).

Since HE, universities and, therefore, the academic community are conditioned by this masculine culture, in the contemporary world limits continue to be placed on the careers of many women (Fotaki, 2013; Morley, 2011; Knights and Richards, 2003), where persistent gender inequality can be evidenced in terms of university career choice, as it is discussed below (Benschop and Brouns, 2003). Also, with the inevitable integration of technologies in the classroom due to COVID-19, the label "digital" was added to the different educational institutions (García, 2017) where it is not clear how and for what purpose it is used in the teaching-learning process. In addition to the above, in terms of gender arrangements in

education, access to information and knowledge are also determined by the incorporation and use of ICT: "And so far, there are not many practices through them that seek to educate in gender equality" (Prendes et al., 2020, p. 11).

For example, Montenegro (2020) pointed out that, in terms of "social development, education, science and technology, and equity, the departments of the Orinoco region are lagging behind, especially in terms of access and coverage" (parr. 6). Similarly, the book *Género y TIC* (Tuñón, 2018) allows us to delve deeper into this aspect when Bonder (2006) raised the questions shared in the doctoral thesis under construction, which seeks to answer where women university teachers are in the digital context and what is their participation in the creation of the information and knowledge society, understanding that gender issues also correspond to the conceptual, analytical and political dimensions of this phenomenon. The above, in consideration of the approach to be taken regarding the gender digital divide in the fieldwork to be carried out after this analysis, and which may be characterised by the patterns suggested by Bonder (2006):

In this sense, the present study becomes even more relevant, as it is also a critical approach to ICTs, considering that it is not clear which ICTs we are talking about, if they are all the same and what they are for in education. (p. 8)

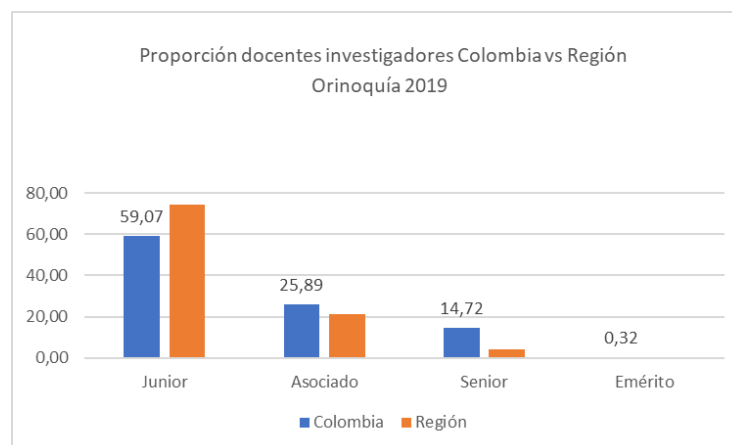
### **1.3. Some gaps in the research teaching staff of professional level HEIs in the Orinoco region**

Having presented the analysis, it is useful to know the panorama of women researchers in HEIs, understanding that research is one of the functions that characterise them both nationally and regionally. Thus, "for the year 2019, out of 16 796 researchers, 6411 are women, which is equivalent to 38 %" (Ministry of Sciences, Technology and Innovation [Minciencias], 2020, para. 3); while the remaining 62 % belong to male teachers. These data

are worrying not only in form, but also in substance: according to the Unesco Institute for Statistics (2014), women are considerably under-represented in all disciplines, with the exception of medical and health sciences, with a percentage representation of 59.6 %. Finally, it is important to mention that, for the year 2020, no data were recorded (see Figure 4).

#### Figure 4

Ratio of teacher researchers Colombia vs. Orinoco 2019



*Note.* Own elaboration based on data obtained from Minciencias (2019).

However, in line with the above, when the data corresponding to the categories recognised by Minciencias in the region are taken into consideration, it is worth noting that there are a total of 76 female researchers compared to 128 male researchers. It appears that HE in the Orinoco region does not follow similar trends to those in the country as a whole, as the gaps are visible not only between categories, but also between departments. The data show a centralisation in the department of Meta of teachers recognised in each of the categories and strongly in *junior* and *associate*, as it is the case for professional HEIs in the Orinoco region. This is interesting, since this department is considered to be the "Bogota" of the citizens of the other departments in the region in terms of study opportunities and social



advancement, because many of the universities there "have a national prestige", which refers to the idea of quality wherever they are located.

Having this in mind, it is important to zoom in on the data to understand the dimension of the gender gap presented here, since of the 9921 research teachers recognised in Colombia, only 204 belong to the region. This is even more worrying when gender discrimination is taken into account: of these 204, only 77 are women. Also, the picture becomes even darker when, of these 77 women, only 44 lead any of the research groups recognised for 2019.

The field of research is no exception in terms of gender equality, with a great disparity between men and women present in the Colombian scientific community, especially in the Orinoco region. This leaves the feeling of wanting to delve deeper into the obstacles faced by women scientists in Colombia, especially in the case of this study in the Orinoco region, in order to achieve the recognition granted by Minciencias in terms of research.

In general terms, it is possible to state that, although there is still a gap between men and women in the data presented, the databases show partial results that do not give a full account of what is happening in terms of gaps in professional HEIs, as they show disparities in the data collected, and that is reflected in the analysis of the data. This is addressed more succinctly in the next step of this doctoral study. Particularly in Colombia, there has been an increase in the average number of years of study for women, and in their participation in research and scientific knowledge production, so that there is a greater access to different levels of education. However, these have not been enough to overcome gender inequalities in the labour market (ECLAC, 2019).

Based on what has been presented so far, it could be said that women's level of education is and will continue to be a determining factor for their access to the different

labour markets; nevertheless, the biases that persist today due to the different social stereotypes in the professions they choose continue to mark the pace of their responsibilities, which are framed between domestic and care –even more with the arrival of COVID-19–, while they continue with their work and studies.

## **2. The need for an intersection of ICTs with gender and other variables in HE**

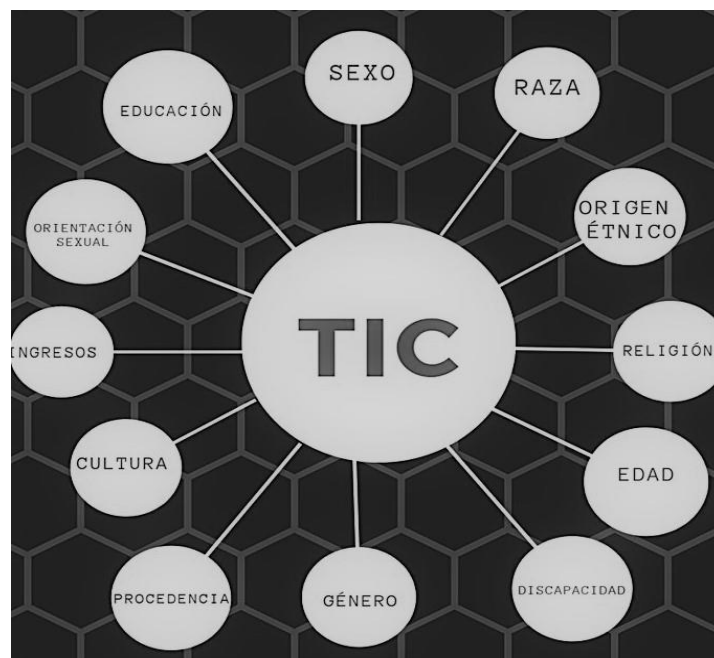
So far, we have presented some general data that show profound inequalities at the territorial level, where the gender gap, although not expressed in large proportions, continues to appear both Colombia vs. the Orinoco region, and the same departments of the region for HEIs teachers for educational and professional activities and research. Thus, it is necessary, for this doctoral study, to analyse in greater detail and depth the causes or effects of this gap in intersection with other variables that can help to understand others, such as the digital divide and the gender digital divide.

Also, there are many social inequalities in the role of women in their professional development, and it is worth questioning what they are and how they are being expressed in HE teachers at a professional level in Colombia and the Orinoco region. As far as social inequality is concerned, people's lives and the organisation of power are not only affected by a single axis of social division, such as race, gender or class, but by many axes that act together and influence each other (Collins and Bilge, 2020). These configurations can make visible different inequalities (social, educational, political, cultural, economic, educational) that people suffer and that, from the perspective of university professors in the Orinoco region, intersect moments and situations of life where, among other circumstances, "the lack of access to ICT could generate new forms of exclusion and new situations of vulnerability" (Villela and Contreras, 2021, p. 175), such as the digital divide and the gender digital divide.

Within this framework, various forms of domination emanate; among these, university teachers construct their identities (gender, cultural, ethnic, social class, digital skills, etc.), which may confront each other as a result of these forms of domination. This way, existing inequalities are reproduced and promoted with different degrees and multiple ways of expression of people, which also reinforce structures that last over time, feeding multiple discriminations and marginalisation (Vásquez, 2020). Considering the above, and given the reality of the arrival of ICTs in HE, further discussions on the intersections between ICTs, gender and other variables in HE could be addressed for the doctoral thesis in progress, as presented in Figure 5.

**Figure 5**

ICT Intersectionality



*Note.* Prepared by author based on *Gender-Based Analysis Plus (GBA+) Course* (Government of Canada, 2018).

As it can be seen, speaking about intersectionality implies to talk about the different conditions that intersect, making the incorporation and use of ICTs possible or not. In the words of Collins and Bilge (2020):

[...] Intersectionality is a way of understanding and analysing the complexity of the world, of people and of human experiences. The events and circumstances of social and political life and the individual can rarely be understood as determined by a single factor. (p. 13)

Approaching these issues from an intersectional perspective –for example, "how a particular individual stands at the crossroads of multiple groups" (Minow, 1997, p. 38)– can help to better understand the tensions of multiple identity and the ongoing need for group politics (Crenshaw, 1991), in which different social divisions, such as gender, race and age, are a natural outcome of life in society. In reality, it can have cultural affectations and variations (Yuval-Davis, 2006).

By considering identity factors such as sex, race, ethnicity, religion, age, disability, gender, background, culture, income, sexual orientation and education, actions can be taken to promote equality. Failure to consider these factors and impacts can lead to a greater inequality by ignoring the fact that people's identities are not homogenous and are permeated by lived experiences and shaped or affected by factors of domination and interrelationships with the socio-cultural, economic and political contexts.

Thus, the intersectional analysis of the gender digital divide to be carried out is aligned with the ideas put forward by great authors, such as Viveros (2016). She pointed out that it is necessary to understand social relations as simultaneous constructions in different orders, where multiple dimensions of oppression, exclusion and marginalisation coexist. Also, Yuval-Davis (2015) established that we must bet on a situated intersectionality, with

views, knowledge and imaginations that incorporate geographical, social and temporal locations.

Moreover, in the framework of normativity and other previous studies on gender equality in the HE framework (Benschop and Brouns, 2003; Heijstra et al., 2017; Morley, 1994, 2013; Nielsen, 2016; O'Connor, 2014, 2020c; Van den Brink and Benschop, 2011, 2012, as quoted in O'Connor and Irvine, 2020), it can be seen how they have focused on the persistence of gender inequality at the organisational level, where "gender equality is considered a human rights issue, which refers to having rights, status and opportunities regardless of gender" (European Institute for Gender Equality [EIGE], 2020; On, 2020, as quoted in O'Connor and Irvine, 2020, p. 1). Thus, the lack of an intersectional look at the traditional binary gender perspective often continues to focus efforts on gender parity issues, for example, relating the proportion of women in managerial positions to the proportion of these who are not decision-makers in managerial positions.

Therefore, including intersectionality in studies with a gender perspective makes it possible to visibilise and denounce the gender inequalities that encompass digital contexts with ICTs, and that meet along the way with cyberfeminism. The critical look at the incorporation and use of technology shows how the latter is being used more to repress than to liberate, since the cost of access is still too high and the language too codified, which is one of the characteristics of these ICTs that have not been characterised in education until now.

### **3. In closing**

It is clearly illusory to pretend to bring the subject of this intellectual production to a conclusion: as it is not a closed topic, it calls for interdisciplinarity, because, by revealing the serious problems derived from the gender gap in the context of Colombian university

education, and specifically in the Orinoco region, it calls for a permanent process of enquiry and dissertation, a reflection that is in permanent action in terms of intersectionality and the gender digital divide, since it is still not clear what the situation and the evolution of the gender gap is in terms of specific uses of ICTs by university teachers in the region. Also, studies such as this one show that it is possible that the underlying gender digital divide is the continuous reproduction of relative asymmetries in access, control and use of ICTs.

According to ITU News (2018), technology in its various forms, including ICT, continues to redefine and revolutionise the way we all live and work. Likewise, according to data from Consejería Presidencial para la Equidad de la Mujer (2020), 63 % of teachers in Colombia are women; and according to data from the Survey on Use, Appropriation and Access to ICTs, 19 % have not overcome the digital divide, a figure that doubles in rural regions, where female teachers have encountered difficulties when carrying out their work, due to lack of access to ICTs.

It is necessary to continue investigating this imbalance between women and men in the region's HEIs, both vertically (regarding job categories) and horizontally (by areas of knowledge), where previous studies have shown that there is a kind of "academic closure" for women in their professional development, especially in the areas of science and technology, engineering and mathematics (STEM).

For example, in Colombia, the male presence in STEM professions is 30 %, in contrast to 17 % of women (Castro, 2021). In addition to this, "the Ministry of Science, Technology and Innovation stated that only one in ten women study at university and less than 2 % choose a STEM career" (Castro, 2021, p. 1). This can be considered a Colombian female disadvantage, taking into account the unstoppable and exponential growth of ICTs as a key factor for the country's educational, social, cultural and political progress. Along the

same lines, a major disadvantage is that, although we are complying with Unesco's global estimate that 3 out of every 10 researchers are women, the gender gap, as we have seen up to now, continues to be striking.

Considering this, it is necessary to review whether the gender difference in this conglomerate of HEIs teachers at the professional level can affect their digital competences and other factors associated with their professional performance in a technological context of exponential transformation and change. Currently, the world is striving to achieve gender equality and the empowerment of girls and women as crucial issues in the provision of quality education, where analyses such as this one should be promoted, which also addresses the different gender inequalities and gaps, such as the gender digital divide in education systems, bearing in mind that structural and cultural barriers in HE mean that talent alone is not always enough to guarantee success (Wenneras and Wold 1997; Holman et al., 2018).

Therefore, we need to think in an intersectional way, so as not to generate a single interpretation of reality, which implies approaching it from different perspectives that include their own biases, limitations and interests. Overcoming these inequalities lies primarily in emphasising educational choices and occupations, and creating openness and opportunities beyond gender. It is difficult not to conclude that women face a number of organisational barriers to advancement that they do not experience to the same degree as their male counterparts.

On the other hand, the Colombian educational context is permeated by ICTs and reproduces inequalities that require an intersectional and gender-sensitive approach, as these exclusions not only add up, but also intersect and feed back to enhance the exclusion and vulnerability of women. This is a scenario that is only now beginning to be explored in Colombia, where there is no systematic national data on the gender digital divide; because of

this, it is necessary to raise awareness of the issue, as it touches all contexts and, in the universe of HE at a professional level, it often embodies the culturally valued contemporary hegemonic masculinities.

The different issues discussed so far require an emergency management approach with a regional perspective, in which the depth of women's historical lags and pending issues, as well as the need for the emergence of their movements and struggles for equality, a solid educational framework around ICTs and their relationship with gender as part of the processes of democratisation and openness to the new plurality have become evident. Therefore, illustrating the gender digital divide on various fronts, including education, is indispensable when addressing any issue with a gender perspective, because, although women are in the majority at the professional level of study in the contemporary world, they are still in the minority when it comes to teaching representation and researchers recognised by Minciencias, which suggests that they are also in the minority in scientific publications.

Likewise, the lack of infrastructure, connectivity and access to equipment (desktop computer, laptop, mobile phone, television or radio), and the need to combine different professional, academic and work activities at home have become the biggest challenges. These continue to be part of a historical reality to which challenges are simply added, where the idea is sold, that ICTs and new technologies can be the salvation of the day.

Clearly, neither the internet nor computers or smartphones reduce social inequalities, especially in the educational framework and the marginalisation and remoteness of different countries. In Latin America, more than 40 million households do not have an internet connection, which makes the acquisition, incorporation and use of ICTs even more difficult. As pointed out by Rodríguez (2006):



[...] If social, educational, economic and other problems were solved using technology alone, their solution, however costly, would be relatively simple [but] it is not because many of the problems that generate social differences have deep roots and complex solutions. (p. 3).

Therefore, it could be said that, in the words of Haddad, as cited in Rodriguez (2006), "the most important gap is in the extent and quality of human knowledge and learning. It is not a digital divide, it is an educational divide" (p. 6). At the same time, in HE, gender segregation is more resistant to change than a cursory analysis might suggest. Its remarkable degree of temporal and spatial stability, as well as a close examination of its qualitative pattern, indicate that the cultural forces underlying gender segregation are highly resilient, because they are underpinned by some structural changes in educational and professional institutions. In conclusion, educational institutions function as drivers of gender inequality, after all, gender inequalities are socially, culturally and institutionally shaped (Unesco, 2021).

The summary of aspects broken down above, as well as the analyses developed in this document, show the enormous challenges facing Colombian HE in the current digital era in terms of the incorporation and use of ICTs. Also, educational processes require a look at the intersection between women and technology, because the digital agenda of Colombian policy highlights ICTs as the most powerful tool to help people empower their daily activities. However, zooming in on the data presented so far, it can be found that the evidence points to the fact that the digital revolution and literacy are not happening in an equitable way for all; therefore, such policies are not enough, selling an (if you will) utopian idea of equality in terms of rights and services that, in reality, has only reproduced and strengthened different gaps between rich and poor, ignoring the differences in access and use of the internet between men and women; and, in this opportunity, the differences in access and use between women and men teachers.



## References

- Benschop, Y., & Brouns, M. (2003). Crumbling ivory towers: academic organizing and its gender effects. *Gender, Work and Organization*, 10(2), 194-212. <https://doi.org/10.1111/1468-0432.t01-1-00011>.
- Bonder, G. (2006). *Equidad de género y cultura de la innovación colaborativa: nutrientes para fortalecer la sociedad del conocimiento*.
- Castelao-Huerta, I. (2021). *Reflexividad compleja: prácticas de profesoras titulares en tiempos neoliberales*. Universidad Nacional de Colombia:  
<https://repositorio.unal.edu.co/bitstream/handle/unal/79699/G09865665.2021.pdf?sequence=4&isAllowed=y>
- Castells, M. (2000). Materials for an exploratory theory of the network society. *The British Journal of Sociology*, 51(1), 5-24. <https://doi.org/10.1111/j.1468-4446.2000.00005.x>.
- Castro, M. (2021). *Mujeres en las carreras STEM: desafío en Colombia*. La República:  
<https://www.larepublica.co/analisis/maria-consuelo-castro-2885988/mujeres-en-las-carreras-stem-desafio-en-colombia-3134114>
- Crenshaw, K. (1991). Mapping the margins: intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, 43(6), 1241-1299.
- Flaherty, C. (2020). *Early journal submission data suggest COVID-19 is tanking women's research productivity*.
- Fotaki, M. (2013). No woman is like a man (in academia): the masculine symbolic order and the unwanted female body. *Organization Studies*, 34(9), 1251-1275.  
<https://doi.org/10.1177/0170840613483658>.

- Garcés, M. (2021). *Importancia y uso de las TIC en la educación*. Universidad Tecnológica de Bolívar. <https://www.utb.edu.co/blog/las-nuevas-tecnologias-de-informacion-y-comunicacion-tic-aplicadas-en-contextos-sociales-y-educativos/>
- García, S. (2017). Alfabetización digital. *Razón y Palabra*, 21(3), 66-81.
- Holman, L., Stuart-Fox, D., & Hauser, C. (2018). The gender gap in science: how long until women are equally represented? *PLoS Biology*, 16(4), 1-20.  
<https://doi.org/10.1371/journal.pbio.2004956>.
- ITU News. (2018). *Reshaping the future: women, girls and tech for development*.  
<https://news.itu.int/reshaping-future-women-girls-icts/>
- Kitchener, C. (2020). *Women academics seem to be submitting fewer papers during coronavirus*.  
<https://www.thelily.com/women-academics-seem-to-be-submitting-fewer-papers-during-coronavirus-never-seen>
- Knights, D., & Clarke, C. (2014). It's a bittersweet symphony, this life: fragile academic selves and insecure identities at work. *Organization Studies*, 35(3), 335-357.  
<https://doi.org/10.1177/0170840613508396>.
- Minciencias. (2020). *En Colombia solo el 38 % de los investigadores son mujeres*.  
[https://minciencias.gov.co/sala\\_de\\_prensa/en-colombia-solo-el-38-los-investigadores-son-mujeres-minciencias#:~:text=En%20Colombia%2C%20para%20el%20a%C3%B1o,son%20solo%20el%2038%25%E2%80%9D](https://minciencias.gov.co/sala_de_prensa/en-colombia-solo-el-38-los-investigadores-son-mujeres-minciencias#:~:text=En%20Colombia%2C%20para%20el%20a%C3%B1o,son%20solo%20el%2038%25%E2%80%9D)
- Minello, A. (2020). *The pandemic and the female academic*.  
<https://www.nature.com/articles/d41586-020-01135-9>
- Minow, M. (1999). *Not only for myself: identity, politics and the law*. The New Press.

- Montenegro, C. (2020). *Retos y oportunidades del 2020 para la Orinoquía*. Universidad de Los Andes: <https://ceo.uniandes.edu.co/index.php/es/medios/editorial/370-retos-y-oportunidades-del-2020-para-la-orinoquia>
- Morley, L. (2011). Misogyny posing as measurement: disrupting the feminisation crisis discourse. *Contemporary Social Science: Journal of the Academy of Social Sciences*, 6(2), 223-235. <https://doi.org/10.1080/21582041.2011.580615>.
- O'Connor, P. (2020). Accessing academic citizenship: excellence or micropolitical practices? En S. Sümer, *Gendered academic citizenship. Citizenship, gender and diversity* (págs. 37-64). Palgrave Macmillan.
- O'Connor, P., & Irvine, G. (2020). Multi-level state interventions and gender equality in higher education institutions: the Irish case. *Administrative Sciences*, 10(4), 1-21. <http://dx.doi.org/10.3390/admsci10040098>.
- Prendes, M., García, P., & Solano, I. (2020). Igualdad de género y TIC en contextos educativos formales: una revisión sistemática. *Comunicar*, 28(63), 9-20. <https://doi.org/10.3916/C63-2020-01>.
- Rodríguez, A. (2006). *La brecha digital y sus determinantes*. Universidad Nacional Autónoma de México.
- Ross, J. (2020). *Pandemic 'risks reversing' Australia's research gender equity gains*. <https://www.timeshighereducation.com/news/pandemic-risks-reversing-australias-research-gender-equity-gains>
- Rueda, R., & Franco, M. (2018). Políticas educativas de TIC en Colombia: entre la inclusión digital y formas de resistencia-transformación social. *Pedagogía y Saberes*, 48, 9-25.
- Unesco. (2018). *Marco de competencias de los docentes en materia de TIC*. <https://es.unesco.org/themes/tic-educacion/marco-competencias-docentes>
- Unesco. (2020). *COVID-19*. [https://siteal.iiiep.unesco.org/respuestas\\_educativas\\_covid\\_19](https://siteal.iiiep.unesco.org/respuestas_educativas_covid_19)

Unesco. (2021). *Mujeres en la educación superior: ¿la ventaja femenina ha puesto fin a las desigualdades de género?*

Unesco Institute for Statistics. (n.d.). *Sustainable Development Goals*. <http://data.uis.unesco.org/>

Unesco. (n.d.). *Recomendación sobre la promoción y el uso del plurilingüismo y el acceso universal al ciberespacio*.

[https://www.acnur.org/fileadmin/Documentos/Pueblos\\_indigenas/recomendacion\\_plurilinguismo\\_unesco.pdf](https://www.acnur.org/fileadmin/Documentos/Pueblos_indigenas/recomendacion_plurilinguismo_unesco.pdf)

Villela, F., & Contreras, D. (2021). La brecha digital como una nueva capa de vulnerabilidad que afecta el acceso a la educación en México. *Academia y Virtualidad*, 14(1), 169-187.

Viveros, M. (2016). La interseccionalidad: una aproximación situada a la dominación. *Debate Feminista*, 52, 1-17. <https://doi.org/10.1016/j.df.2016.09.005>.

Wenneras, C., & Wold, A. (1997). Nepotism and sexism in peer review. *Nature*, 387, 341-343. <https://doi.org/10.1038/387341a0>.

Yuval-Davis, N. (2006). Intersectionality and feminist politics. *European Journal of Women's Studies*, 13(3), 193-209. <https://doi.org/10.1177/1350506806065752>.

# **A gender perspective view of higher education teachers in Colombia vs. the Orinoco region**

## **Abstract**

This analysis took into account the Higher Education Institutions (HEIs) at Colombia and Orinoco region level, made up of the departments of Arauca, Casanare, Meta and Vichada. The objective was to identify the gender gaps among HEIs teachers in Colombia and the ones in the Orinoquia region. The data corresponded to the period 2019-2020, obtained from the National System of Science, Technology and Innovation (SNCTI), the Ministry of National Education (MEN) and the National System of Higher Education Information (SNIES). In the organisation of findings, gender differences in the level of studies, teaching and research of female and male teachers in the region were analysed, using some descriptive and comparative tools according to the information collected. When analysing the correlation between the data for the region and Colombia, interesting findings were found regarding the gaps and inequalities evident among teachers not only of the country and the region, but also of the departments that make up such region.

## **Keywords**

University education, gender, ICT, teachers, digital gap/divide, universities.

## **1. Introduction to the problem**

Before 2019, a number of inequalities had been exposed in the educational sphere, and the sudden arrival of COVID-19 managed to deepen them. These inequalities have hit girls and women the hardest, taking a kind of "social, economic and psychological toll" that can be traced in a gendered way (Ross, 2020; Flaherty, 2020; Kitchener, 2020; Minello, 2020). At the same time, and almost as if it were obligatory, all teachers, regardless of the level at which they taught or where they were located on the planet, had to incorporate Information and Communication Technology (ICT) into their daily work, forcibly changing from traditional teaching to virtual teaching and teleworking.

According to the World Bank (2021), there are more than 84 million teachers worldwide; of these, 14 million belong to higher education (HE). As a reaction to this reality, national governments around the world established different contingency measures to help institutions and their teaching staff to continue with their classes, where ICT was the protagonist. For example, in the case of Latin America, the *Plan de educación en tiempos de pandemia* was launched in Paraguay; the *Plan pedagógico de orientación y prevención*, in Venezuela; the *La estrella de la educación no se detiene* strategy, in Panama; the *Orientaciones para el apoyo del proceso educativo a distancia*, in Costa Rica; and the *Plan Padrino*, in Colombia. The latter, worked as a support for professional development and free virtual teacher training, encouraged by universities across the country and hosted on the web platform called Aprender Digital (United Nations Educational, Scientific and Cultural Organization [Unesco], 2020). This platform seeks to strengthen teaching skills in ICT to transform pedagogical practices, in which some studies indicate that teachers at all levels incorporate it:

[...] Office tools, free software, internet search engines, social networks and institutional technological platforms (Cuadros et al., 2021; Garcés-Prettel and Ruiz-Cantillo, 2016)



or free ones such as Classroom and Google Meet, which are now used worldwide as a working tool in teaching-learning processes. (Garcés, 2021)

In this sense, the exponential development, use and incorporation of ICT has brought unprecedented transformations, presenting them as a "panacea" in education. However, although their opportunities are innumerable, so are the inequalities that they reproduce, adding to existing inequalities, such as the gender gap. This leads to new challenges for the different scenarios of everyday activities, like education; therefore it is important to mention that the disadvantages and inequalities that ICTs reproduce do not stem from the technologies per se, but have to do with their access, coverage and use.

In addition, other emerging areas of concern in HE relate to research funding and output, the pause in recruitment processes, and the termination of staff, including those on research contracts; this, to such an extent that there is a risk that the crisis caused by the pandemic will reverse the gains in gender equality made in recent years. This will have consequences not only for women, but also for HEIs, research innovation and economic growth (O'Connor, 2020).

Moreover, the lack of digital competencies means that only some people know and understand how technology works, largely due to limited access to computers or a low level of development of the skills that enable the appropriate use of ICTs (García, 2017). While for more than 15 years there has been talk of "recognising and supporting the principle of universal access to the internet as a means to promote the exercise of human rights as defined in articles 19 and 27 of the Universal Declaration of Human Rights" (United Nations High Commissioner for Refugees [UNHCR], n.d., p. 3) –and, thus, promote linguistic diversity– and, in turn, democratise knowledge (Unesco, 2020), access to this service continues to be unequal between

countries and their own regions. This has caused in some cases the massification of new technologies and the internet as a wave of social marginalisation and exclusion, widening the gap between rich and poor in terms of access and use of ICTs (Castells, 2000).

Along the same lines, authors such as Rueda and Franco (2014) have pointed out that for there to be social and digital inclusion and democratisation between science, technology, technoscientific research and social welfare, the following imaginaries must be considered: a) a salvationist technological determinism that attributes to technology an autonomy or social exteriority that it does not possess; b) an apparent neutrality of technoscientific knowledge and technocratic decision-making models, which implies the possibility of "eliminating" the subject and the subjectivity it embodies in the scientific-technological process; and c) an aporetic perspective on this knowledge and its by-products, which sees them as good per-se both today and in the future.

Faced with this scenario, it is worth asking how or what are the gaps in HE teachers at the professional level in the Orinoco region. This, based on the premise that the levels of training of teachers, the educational level at which they work and their recognition as researchers may in turn be causes or effects of other gaps, such as the digital divide and the gender digital divide. In order to answer this question, a statistical analysis was carried out with some descriptive and comparative tools, according to the information collected throughout the years 2019 and 2020 in the databases of the SNCTI, the MEN and the SNIES at Colombia and the Orinoco region, which allows to contrast the gender gap of teachers of HEIs at a professional level in the region, in relation to their level of studies, their role in teaching and their research.

The above situation affects not only HE. According to data from the magazine Llano Adentro (2018), the challenge of receiving a quality education in the region is a privilege that few can achieve, due to the conditions of rural schools and colleges that reproduce the growth of gaps between this and other regions of the country. In addition, inequalities due to geographic, demographic and territorial reasons in relation to other regions and departments in Colombia are not a minor issue to consider in any research. Considering this, the present document was developed in five stages: a) the context of HE in the Orinoco region; b) the gaps at a professional level for HEIs teachers in the Orinoco region; c) the gaps among the research teaching staff for HEIs in the Orinoco region; d) the need for an intersection between gender and other variables in HE; and e) the closing section.

### 1.1. The context of HE in the Orinoco region

Table 1 shows the importance of Bogota in the representation of universities in Colombia, which corresponds to 32.9 % of them. In the same sense, it can be seen that, as a whole, the Orinoco region has a low participation, with 4.32 % of the country's total, and the HEIs at the professional level in Bogota are almost eight times more than the institutions in the region under study.

<b>Tabla 1. Number of HEIs at a professional level by department in the Orinoco region, by character and by number of accredited institutions</b>				
<b>Compared to Bogota and the national level, 2020</b>				
Department	Number of HEIs	Number of HEIs with high quality accreditation	Public	Private

Meta	14	1	1	13
Arauca	1	1	0	1
Vichada	0	0	0	0
Casanare	1	0	0	1
Total Orinoco region	16	2	1	15
Total Bogota	122	26	20	102
Total national	370	91	114	256

In addition to the above, and according to the Colombian University Observatory (2021), the data show one of the largest "invasions" of public and private universities from other parts of the country, where only 37 % of the programmes offered are run by the only public university in the Orinoco region. This can be seen in the fact that almost 94 % of the universities in the region are private, a figure that contrasts with the 69 % participation of private universities for the national total and 83 % for Bogota.

On the other hand, when analysing enrolment data by educational level, an important contrast is observed between the national level and the region, since, while at the undergraduate level the country registers 92.17 % of enrolments, this educational level in the region absorbs 96.74 % of the student population. Considering this at the postgraduate level, while the nation registers 7.83 % of enrolments, the region has only 3.26 %. These figures show a relatively similar proportion between Colombia and the region; however, it is necessary to take into account the differences in terms of the size of the student population when making such a comparison.

For the country as a whole, in 2019 there was an enrolment of 2 396 250; and, for the region, this figure corresponded to 48 074 (Colombian University Observatory, 2020), which

represented a total of 2 % of the country. This proportion is much lower for the postgraduate level: for the region, it represented 0.83 %, corresponding to 1565 students, out of a total of 187 637 for the country as a whole. These data reinforce the fact that the postgraduate level has a more representative gap in the region than in the country.

These data reflect the region's lag in postgraduate training, which may be a clue to the conditions of development opportunities offered in relation to other areas of the country, and implies a challenge in terms of academic supply and accessibility of the education system for its inhabitants. As it can be seen, the gap in undergraduate and postgraduate provision between Colombia and the region is approximately 4 percentage points. The supply of postgraduate courses is limited, which means that most of its inhabitants move to other regions of the country and even abroad to continue with their university education.

## **1.2. Some gaps at a professional level for HEIs teachers in the Orinoco region**

When taking into consideration the figures registered in the MEN, SNCTI and SNIES databases, it is necessary to recognise the differences that exist and express a gap between male and female teachers in Colombia. Thus, for the year 2019, the number of male teachers outnumbered female teachers by 74 073, while for the year 2020 the figure recorded was 49 641 at all educational levels. On the other hand, when analysing the behaviour of male and female teachers in HE at a professional level for the Orinoco region, there was a single register for the year 2020, where 12 736 (59.8 %) male teachers and 8549 female teachers (40.2 %) were found, resulting in a gap of 4187 men outnumbering women in the academic field, which is equivalent to 19.6 % of the data collected.

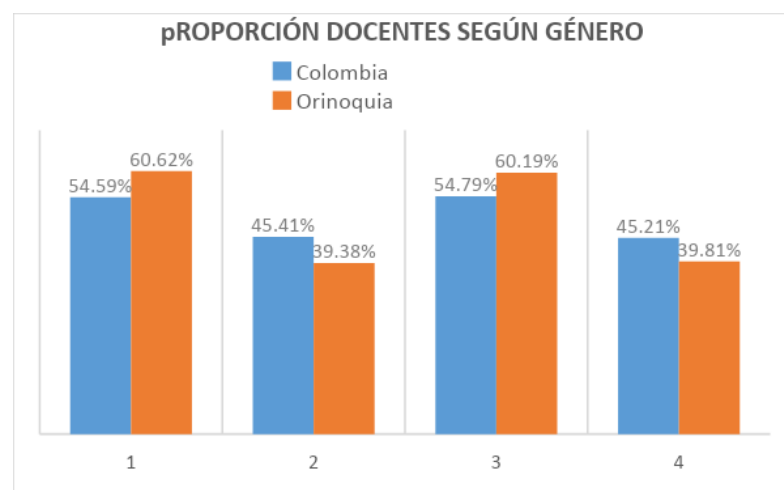
Although in the last 20 years the integration of universities in the region has undergone a constant and considerable evolution, the reality within the region is still very complex, due to the fact that gender inequalities in the teaching workforce are deeply rooted

and systemic, and these are underpinned by reinforcements of gender stereotypes. At this point, it should be noted that the Colombia-region contrast data is interesting, since it shows a larger gender gap in the Orinoco region. This, given that, while the gap was 9.19 % at the national level in 2019, and in 2020 it was 9.58 %, in the region it was 21.24 % and 20.37 %, respectively.

As it can be seen in Figure 1, there is a ratio of 54.59 % for 2019 for male university teachers compared to 45.41 % for females, which is a difference of approximately 9 percentage points. Therefore, it is necessary to point out that the Colombia-region contrasting data are interesting, since these show a greater gap in terms of gender in the Orinoco region: while at the national level in 2019 the gap was 9.18 %, and in 2020 it was 9.58 %; in the region, it was 11.84% and 11.12%, respectively.

**Figure 1**

Proportion of teachers by gender Colombia vs. Orinoco 2019-2020

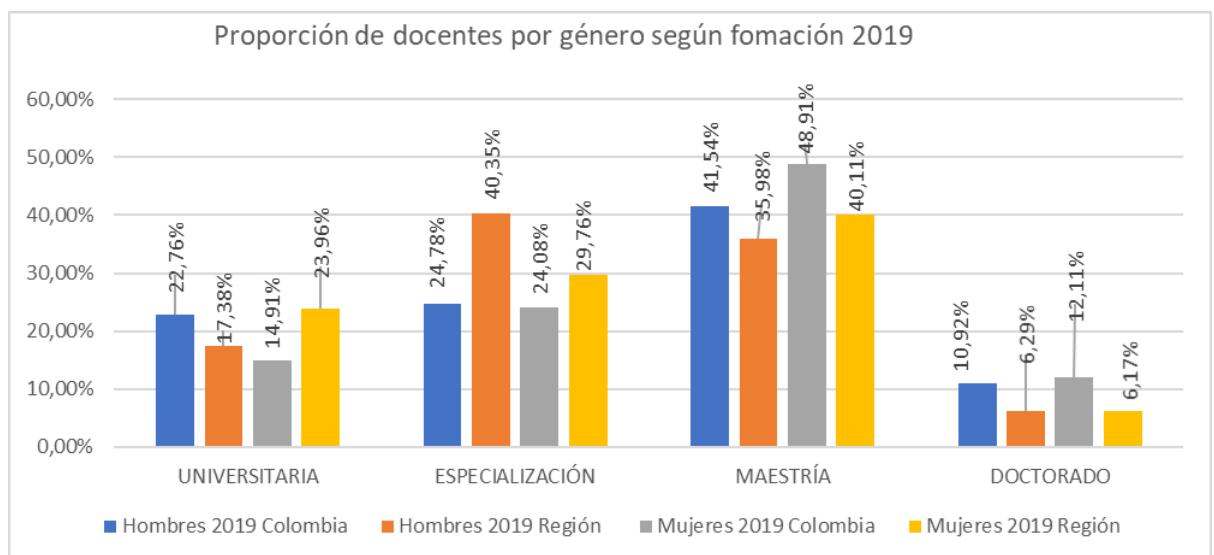


*Note.* Own elaboration based on data obtained from MEN (2019-2020).

It should be noted that the data referenced for the region correspond only to the departments of Arauca, Casanare and Meta, since Vichada has 0 % representation for both sexes, as it does not have HEIs at the professional level. Therefore, no figures for this department are recorded in the MEN database. Moreover, gender inequalities are more evident when analysed in relation to the level of education of the teaching staff during the years under study. Thus, it can be observed that, for 2019, of the 16 104 teachers registered in the SNIES database in Colombia, there were 8790 men and 7314 women. Among these, there was a gap of 9 percentage points difference in the university degree, 5.68 for specialisation, 8.8 for master's degree and 5.94 for doctorate. The higher female representation in university and master's degrees of female teachers in both Colombia and the region is striking, with women outnumbering men by more than 7 and 4.3 percentage points respectively in this scenario for 2019.

**Figure 2**

Proportion of teachers by level of education by gender Colombia vs. Orinoco 2019



According to the above, Colombia stands out for its male and female representation with 5.56 and 8.8 percentage points of difference at the master's degree level, respectively. In fact, according to the data analysed, the representation of women at each of the levels is higher in

the region than in Colombia, with the exception of the doctoral level, where both Colombia and the region have the lowest representation. This is striking, since considering the "invasion" of HEIs from other regions of the country in the Orinoco, the same may be happening with the teachers who exercise their profession there; this, taking into account the low supply of postgraduate programmes in the region and the data presented in Figure 3.

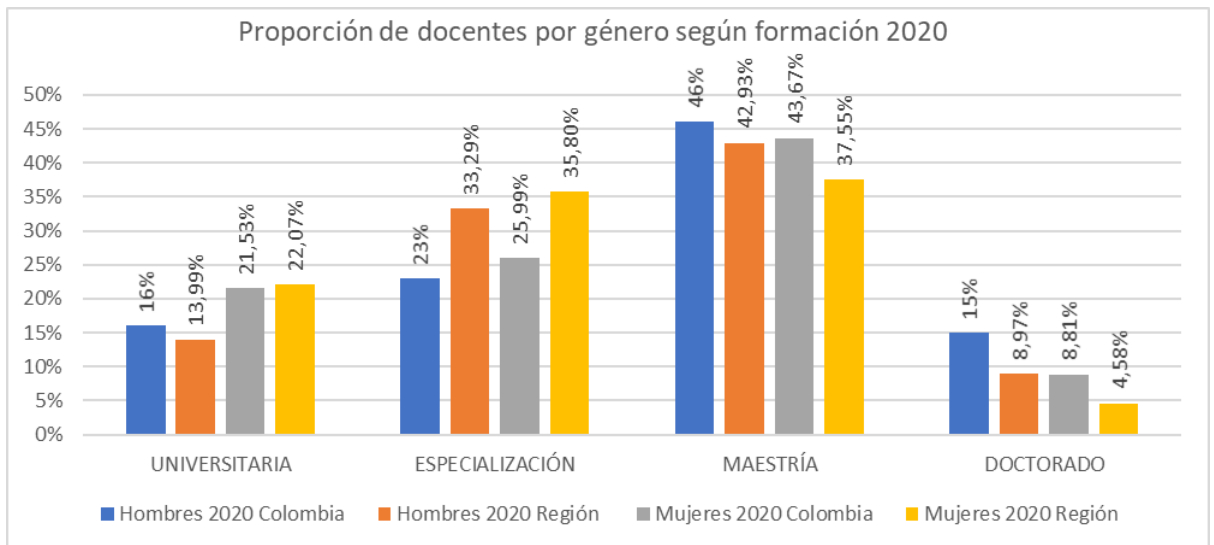
Additionally, as far as training is concerned, it is pertinent to point out that the panorama regarding the doctoral training at the national level is dark, and it is even worse when it comes to this level of studies in the region, since in all cases, whether we talk about male or female teachers, the rate of doctoral representation ranges between 4 % and 10 %, as it can be seen in Figure 4. The category with the greatest disparity in 2019 among female HE teachers at the professional level in Colombia vs. the region was the master's degree, with a representation of 48.91 % and 43.67 % in Colombia for the two years under study, while in the region it was 43.67 % and 37.55 %, respectively.

In both cases, there is a decrease in participation of between 5.24 and 2.56 percentage points, which corroborates, first, that academic training in the region has not increased in any way, on the contrary, it has decreased; and second, it is possible to recognise the superiority in numbers of male over female teachers that is maintained in both the 2019 and 2020 databases (see Figure 4). Although there is a higher proportion of women with master's degrees, this ratio decreases at the specialisation and doctoral levels. In summary, the higher the level of education, the lower the representation of female teachers in the region.

### **Figure 3**

Proportion of teachers by level of education according to gender Colombia vs. Orinoco 2020





*Note.* Own elaboration based on data obtained from MEN (2019-2020).

At this point, it can be seen that, as in 2019, the level of master's studies for Colombia is led by both men, with 3.07 percentage points, and women, with 6.12, above the region; in contrast, when women led at the master's level in the region, they were more represented at the specialisation level, with 9.81 percentage points. The above shows a gender inequality at both national and regional level, where there is a configuration in terms of gender gaps that are amplified by regional inequalities in the levels of studies of HEIs teachers at the professional level.

This can be linked to previous studies (Callister, Newell, Perry and Scott, 2006; Unesco, 2021, p. 17), where it is noted that, although women have made considerable progress in recent decades in their participation in HE and are more likely than men to further their education and obtain an undergraduate and postgraduate degree, it would be misleading to interpret this as a sign of absolute gender balance in HE (Unesco, 2021). In this sense, it is worth highlighting that the part of the literature reviewed so far is related to the above when it argues that the incorporation of women into the field of teaching is still a minority and it is still in tendency to occupy marginalised positions due to a male culture that encourages the

representation of the ideal academic as a competitive individual dedicated to his work, without obligations of care inside and outside the university, which is strengthened by neoliberalism with its values of productivity and efficiency (Aavik, 2017; Acker, 1990; Acker, 1994; Brooks, 1997; Cummis, 2012; Diezmann and Grieshaber, 2019; Fernández Rius, 2000; Flores Garrido et al., 2017; García de León and García de Cortázar, 2000; Hernández Martín et al., 2004; Martínez Covarrubias, 2006; Morley, 1999; Ovando Crespo, 2006, as quoted in Castelao-Huerta, 2021).

Since HE, universities and, therefore, the academic community are conditioned by this masculine culture, in the contemporary world limits continue to be placed on the careers of many women (Fotaki, 2013; Morley, 2011; Knights and Richards, 2003), where persistent gender inequality can be evidenced in terms of university career choice, as it is discussed below (Benschop and Brouns, 2003). Also, with the inevitable integration of technologies in the classroom due to COVID-19, the label "digital" was added to the different educational institutions (García, 2017) where it is not clear how and for what purpose it is used in the teaching-learning process. In addition to the above, in terms of gender arrangements in education, access to information and knowledge are also determined by the incorporation and use of ICT: "And so far, there are not many practices through them that seek to educate in gender equality" (Prendes et al., 2020, p. 11).

For example, Montenegro (2020) pointed out that, in terms of "social development, education, science and technology, and equity, the departments of the Orinoco region are lagging behind, especially in terms of access and coverage" (parr. 6). Similarly, the book *Género y TIC* (Tuñón, 2018) allows us to delve deeper into this aspect when Bonder (2006) raised the questions shared in the doctoral thesis under construction, which seeks to answer where women university teachers are in the digital context and what is their participation in the creation of the information and knowledge society, understanding that gender issues also

correspond to the conceptual, analytical and political dimensions of this phenomenon. The above, in consideration of the approach to be taken regarding the gender digital divide in the fieldwork to be carried out after this analysis, and which may be characterised by the patterns suggested by Bonder (2006):

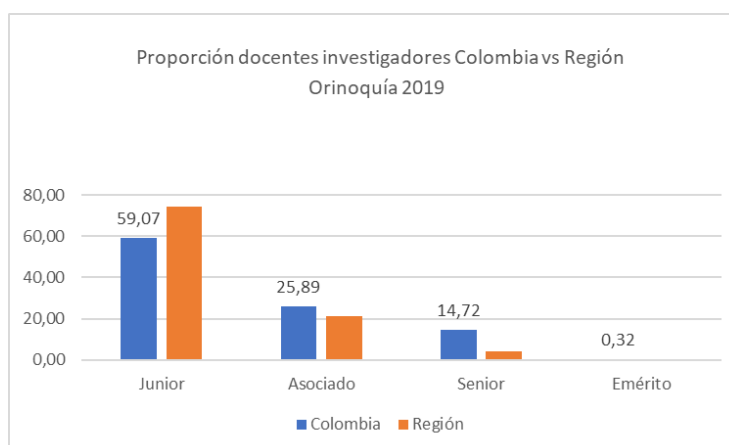
In this sense, the present study becomes even more relevant, as it is also a critical approach to ICTs, considering that it is not clear which ICTs we are talking about, if they are all the same and what they are for in education. (p. 8)

### **1.3. Some gaps in the research teaching staff of professional level HEIs in the Orinoco region**

Having presented the analysis, it is useful to know the panorama of women researchers in HEIs, understanding that research is one of the functions that characterise them both nationally and regionally. Thus, "for the year 2019, out of 16 796 researchers, 6411 are women, which is equivalent to 38 %" (Ministry of Sciences, Technology and Innovation [Minciencias], 2020, para. 3); while the remaining 62 % belong to male teachers. These data are worrying not only in form, but also in substance: according to the Unesco Institute for Statistics (2014), women are considerably under-represented in all disciplines, with the exception of medical and health sciences, with a percentage representation of 59.6 %. Finally, it is important to mention that, for the year 2020, no data were recorded (see Figure 4).

#### **Figure 4**

Ratio of teacher researchers Colombia vs. Orinoco 2019



*Note.* Own elaboration based on data obtained from Minciencias (2019).

However, in line with the above, when the data corresponding to the categories recognised by Minciencias in the region are taken into consideration, it is worth noting that there are a total of 76 female researchers compared to 128 male researchers. It appears that HE in the Orinoco region does not follow similar trends to those in the country as a whole, as the gaps are visible not only between categories, but also between departments. The data show a centralisation in the department of Meta of teachers recognised in each of the categories and strongly in *junior* and *associate*, as it is the case for professional HEIs in the Orinoco region. This is interesting, since this department is considered to be the "Bogota" of the citizens of the other departments in the region in terms of study opportunities and social advancement, because many of the universities there "have a national prestige", which refers to the idea of quality wherever they are located.

Having this in mind, it is important to zoom in on the data to understand the dimension of the gender gap presented here, since of the 9921 research teachers recognised in Colombia, only 204 belong to the region. This is even more worrying when gender discrimination is taken into account: of these 204, only 77 are women. Also, the picture becomes even darker when, of these 77 women, only 44 lead any of the research groups recognised for 2019.

The field of research is no exception in terms of gender equality, with a great disparity between men and women present in the Colombian scientific community, especially in the Orinoco region. This leaves the feeling of wanting to delve deeper into the obstacles faced by women scientists in Colombia, especially in the case of this study in the Orinoco region, in order to achieve the recognition granted by Minciencias in terms of research.

In general terms, it is possible to state that, although there is still a gap between men and women in the data presented, the databases show partial results that do not give a full account of what is happening in terms of gaps in professional HEIs, as they show disparities in the data collected, and that is reflected in the analysis of the data. This is addressed more succinctly in the next step of this doctoral study. Particularly in Colombia, there has been an increase in the average number of years of study for women, and in their participation in research and scientific knowledge production, so that there is a greater access to different levels of education. However, these have not been enough to overcome gender inequalities in the labour market (ECLAC, 2019).

Based on what has been presented so far, it could be said that women's level of education is and will continue to be a determining factor for their access to the different labour markets; nevertheless, the biases that persist today due to the different social stereotypes in the professions they choose continue to mark the pace of their responsibilities, which are framed between domestic and care –even more with the arrival of COVID-19–, while they continue with their work and studies.

## **2. The need for an intersection of ICTs with gender and other variables in HE**

So far, we have presented some general data that show profound inequalities at the territorial level, where the gender gap, although not expressed in large proportions, continues to appear both Colombia vs. the Orinoco region, and the same departments of the region for

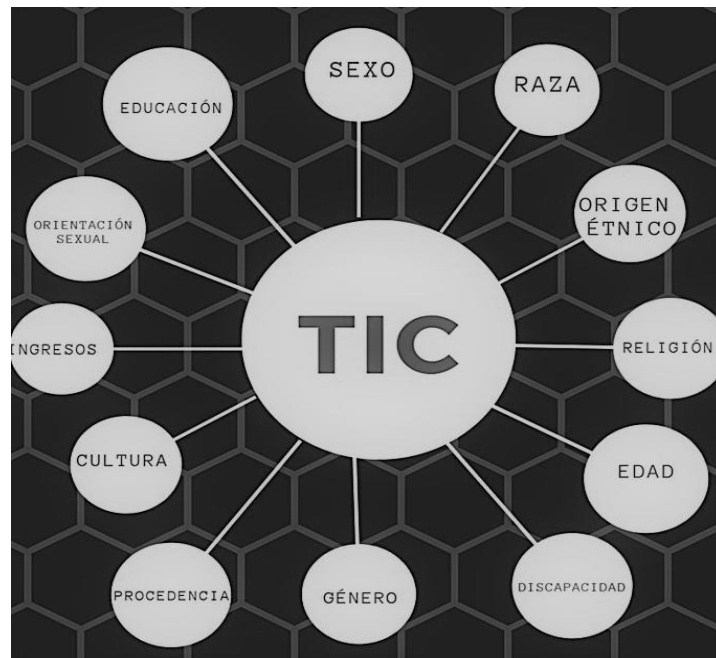
HEIs teachers for educational and professional activities and research. Thus, it is necessary, for this doctoral study, to analyse in greater detail and depth the causes or effects of this gap in intersection with other variables that can help to understand others, such as the digital divide and the gender digital divide.

Also, there are many social inequalities in the role of women in their professional development, and it is worth questioning what they are and how they are being expressed in HE teachers at a professional level in Colombia and the Orinoco region. As far as social inequality is concerned, people's lives and the organisation of power are not only affected by a single axis of social division, such as race, gender or class, but by many axes that act together and influence each other (Collins and Bilge, 2020). These configurations can make visible different inequalities (social, educational, political, cultural, economic, educational) that people suffer and that, from the perspective of university professors in the Orinoco region, intersect moments and situations of life where, among other circumstances, "the lack of access to ICT could generate new forms of exclusion and new situations of vulnerability" (Villela and Contreras, 2021, p. 175), such as the digital divide and the gender digital divide.

Within this framework, various forms of domination emanate; among these, university teachers construct their identities (gender, cultural, ethnic, social class, digital skills, etc.), which may confront each other as a result of these forms of domination. This way, existing inequalities are reproduced and promoted with different degrees and multiple ways of expression of people, which also reinforce structures that last over time, feeding multiple discriminations and marginalisation (Vásquez, 2020). Considering the above, and given the reality of the arrival of ICTs in HE, further discussions on the intersections between ICTs, gender and other variables in HE could be addressed for the doctoral thesis in progress, as presented in Figure 5.

**Figure 5**

ICT Intersectionality



*Note.* Prepared by author based on *Gender-Based Analysis Plus (GBA+) Course* (Government of Canada, 2018).

As it can be seen, speaking about intersectionality implies to talk about the different conditions that intersect, making the incorporation and use of ICTs possible or not. In the words of Collins and Bilge (2020):

[...] Intersectionality is a way of understanding and analysing the complexity of the world, of people and of human experiences. The events and circumstances of social and political life and the individual can rarely be understood as determined by a single factor. (p. 13)

Approaching these issues from an intersectional perspective –for example, "how a particular individual stands at the crossroads of multiple groups" (Minow, 1997, p. 38)– can help to better understand the tensions of multiple identity and the ongoing need for group politics (Crenshaw, 1991), in which different social divisions, such as gender, race and age,

are a natural outcome of life in society. In reality, it can have cultural affectations and variations (Yuval-Davis, 2006).

By considering identity factors such as sex, race, ethnicity, religion, age, disability, gender, background, culture, income, sexual orientation and education, actions can be taken to promote equality. Failure to consider these factors and impacts can lead to a greater inequality by ignoring the fact that people's identities are not homogenous and are permeated by lived experiences and shaped or affected by factors of domination and interrelationships with the socio-cultural, economic and political contexts.

Thus, the intersectional analysis of the gender digital divide to be carried out is aligned with the ideas put forward by great authors, such as Viveros (2016). She pointed out that it is necessary to understand social relations as simultaneous constructions in different orders, where multiple dimensions of oppression, exclusion and marginalisation coexist. Also, Yuval-Davis (2015) established that we must bet on a situated intersectionality, with views, knowledge and imaginations that incorporate geographical, social and temporal locations.

Moreover, in the framework of normativity and other previous studies on gender equality in the HE framework (Benschop and Brouns, 2003; Heijstra et al., 2017; Morley, 1994, 2013; Nielsen, 2016; O'Connor, 2014, 2020c; Van den Brink and Benschop, 2011, 2012, as quoted in O'Connor and Irvine, 2020), it can be seen how they have focused on the persistence of gender inequality at the organisational level, where "gender equality is considered a human rights issue, which refers to having rights, status and opportunities regardless of gender" (European Institute for Gender Equality [EIGE], 2020; On, 2020, as quoted in O'Connor and Irvine, 2020, p. 1). Thus, the lack of an intersectional look at the traditional binary gender perspective often continues to focus efforts on gender parity issues,



for example, relating the proportion of women in managerial positions to the proportion of these who are not decision-makers in managerial positions.

Therefore, including intersectionality in studies with a gender perspective makes it possible to visibilise and denounce the gender inequalities that encompass digital contexts with ICTs, and that meet along the way with cyberfeminism. The critical look at the incorporation and use of technology shows how the latter is being used more to repress than to liberate, since the cost of access is still too high and the language too codified, which is one of the characteristics of these ICTs that have not been characterised in education until now.

### **3. In closing**

It is clearly illusory to pretend to bring the subject of this intellectual production to a conclusion: as it is not a closed topic, it calls for interdisciplinarity, because, by revealing the serious problems derived from the gender gap in the context of Colombian university education, and specifically in the Orinoco region, it calls for a permanent process of enquiry and dissertation, a reflection that is in permanent action in terms of intersectionality and the gender digital divide, since it is still not clear what the situation and the evolution of the gender gap is in terms of specific uses of ICTs by university teachers in the region. Also, studies such as this one show that it is possible that the underlying gender digital divide is the continuous reproduction of relative asymmetries in access, control and use of ICTs.

According to ITU News (2018), technology in its various forms, including ICT, continues to redefine and revolutionise the way we all live and work. Likewise, according to data from Consejería Presidencial para la Equidad de la Mujer (2020), 63 % of teachers in Colombia are women; and according to data from the Survey on Use, Appropriation and Access to ICTs, 19 % have not overcome the digital divide, a figure that doubles in rural

regions, where female teachers have encountered difficulties when carrying out their work, due to lack of access to ICTs.

It is necessary to continue investigating this imbalance between women and men in the region's HEIs, both vertically (regarding job categories) and horizontally (by areas of knowledge), where previous studies have shown that there is a kind of "academic closure" for women in their professional development, especially in the areas of science and technology, engineering and mathematics (STEM).

For example, in Colombia, the male presence in STEM professions is 30 %, in contrast to 17 % of women (Castro, 2021). In addition to this, "the Ministry of Science, Technology and Innovation stated that only one in ten women study at university and less than 2 % choose a STEM career" (Castro, 2021, p. 1). This can be considered a Colombian female disadvantage, taking into account the unstoppable and exponential growth of ICTs as a key factor for the country's educational, social, cultural and political progress. Along the same lines, a major disadvantage is that, although we are complying with Unesco's global estimate that 3 out of every 10 researchers are women, the gender gap, as we have seen up to now, continues to be striking.

Considering this, it is necessary to review whether the gender difference in this conglomerate of HEIs teachers at the professional level can affect their digital competences and other factors associated with their professional performance in a technological context of exponential transformation and change. Currently, the world is striving to achieve gender equality and the empowerment of girls and women as crucial issues in the provision of quality education, where analyses such as this one should be promoted, which also addresses the different gender inequalities and gaps, such as the gender digital divide in education

systems, bearing in mind that structural and cultural barriers in HE mean that talent alone is not always enough to guarantee success (Wenneras and Wold 1997; Holman et al., 2018).

Therefore, we need to think in an intersectional way, so as not to generate a single interpretation of reality, which implies approaching it from different perspectives that include their own biases, limitations and interests. Overcoming these inequalities lies primarily in emphasising educational choices and occupations, and creating openness and opportunities beyond gender. It is difficult not to conclude that women face a number of organisational barriers to advancement that they do not experience to the same degree as their male counterparts.

On the other hand, the Colombian educational context is permeated by ICTs and reproduces inequalities that require an intersectional and gender-sensitive approach, as these exclusions not only add up, but also intersect and feed back to enhance the exclusion and vulnerability of women. This is a scenario that is only now beginning to be explored in Colombia, where there is no systematic national data on the gender digital divide; because of this, it is necessary to raise awareness of the issue, as it touches all contexts and, in the universe of HE at a professional level, it often embodies the culturally valued contemporary hegemonic masculinities.

The different issues discussed so far require an emergency management approach with a regional perspective, in which the depth of women's historical lags and pending issues, as well as the need for the emergence of their movements and struggles for equality, a solid educational framework around ICTs and their relationship with gender as part of the processes of democratisation and openness to the new plurality have become evident. Therefore, illustrating the gender digital divide on various fronts, including education, is indispensable when addressing any issue with a gender perspective, because, although

women are in the majority at the professional level of study in the contemporary world, they are still in the minority when it comes to teaching representation and researchers recognised by Minciencias, which suggests that they are also in the minority in scientific publications.

Likewise, the lack of infrastructure, connectivity and access to equipment (desktop computer, laptop, mobile phone, television or radio), and the need to combine different professional, academic and work activities at home have become the biggest challenges. These continue to be part of a historical reality to which challenges are simply added, where the idea is sold, that ICTs and new technologies can be the salvation of the day.

Clearly, neither the internet nor computers or smartphones reduce social inequalities, especially in the educational framework and the marginalisation and remoteness of different countries. In Latin America, more than 40 million households do not have an internet connection, which makes the acquisition, incorporation and use of ICTs even more difficult. As pointed out by Rodríguez (2006):

[...] If social, educational, economic and other problems were solved using technology alone, their solution, however costly, would be relatively simple [but] it is not because many of the problems that generate social differences have deep roots and complex solutions. (p. 3).

Therefore, it could be said that, in the words of Haddad, as cited in Rodriguez (2006), "the most important gap is in the extent and quality of human knowledge and learning. It is not a digital divide, it is an educational divide" (p. 6). At the same time, in HE, gender segregation is more resistant to change than a cursory analysis might suggest. Its remarkable degree of temporal and spatial stability, as well as a close examination of its qualitative pattern, indicate that the cultural forces underlying gender segregation are highly resilient, because they are underpinned by some structural changes in educational and professional

institutions. In conclusion, educational institutions function as drivers of gender inequality, after all, gender inequalities are socially, culturally and institutionally shaped (Unesco, 2021).

The summary of aspects broken down above, as well as the analyses developed in this document, show the enormous challenges facing Colombian HE in the current digital era in terms of the incorporation and use of ICTs. Also, educational processes require a look at the intersection between women and technology, because the digital agenda of Colombian policy highlights ICTs as the most powerful tool to help people empower their daily activities. However, zooming in on the data presented so far, it can be found that the evidence points to the fact that the digital revolution and literacy are not happening in an equitable way for all; therefore, such policies are not enough, selling an (if you will) utopian idea of equality in terms of rights and services that, in reality, has only reproduced and strengthened different gaps between rich and poor, ignoring the differences in access and use of the internet between men and women; and, in this opportunity, the differences in access and use between women and men teachers.

## References

- Benschop, Y., & Brouns, M. (2003). Crumbling ivory towers: academic organizing and its gender effects. *Gender, Work and Organization*, 10(2), 194-212. <https://doi.org/10.1111/1468-0432.t01-1-00011>.
- Bonder, G. (2006). *Equidad de género y cultura de la innovación colaborativa: nutrientes para fortalecer la sociedad del conocimiento*.
- Castelao-Huerta, I. (2021). *Reflexividad compleja: prácticas de profesoras titulares en tiempos neoliberales*. Universidad Nacional de Colombia:

<https://repositorio.unal.edu.co/bitstream/handle/unal/79699/G09865665.2021.pdf?sequence=4&isAllowed=y>

Castells, M. (2000). Materials for an exploratory theory of the network society. *The British Journal of Sociology*, 51(1), 5-24. <https://doi.org/10.1111/j.1468-4446.2000.00005.x>.

Castro, M. (2021). *Mujeres en las carreras STEM: desafío en Colombia*. La República: <https://www.larepublica.co/analisis/maria-consuelo-castro-2885988/mujeres-en-las-carreras-stem-desafio-en-colombia-3134114>

Crenshaw, K. (1991). Mapping the margins: intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, 43(6), 1241-1299.

Flaherty, C. (2020). *Early journal submission data suggest COVID-19 is tanking women's research productivity*.

Fotaki, M. (2013). No woman is like a man (in academia): the masculine symbolic order and the unwanted female body. *Organization Studies*, 34(9), 1251-1275. <https://doi.org/10.1177/0170840613483658>.

Garcés, M. (2021). *Importancia y uso de las TIC en la educación*. Universidad Tecnológica de Bolívar. <https://www.utb.edu.co/blog/las-nuevas-tecnologias-de-informacion-y-comunicacion-tic-aplicadas-en-contextos-sociales-y-educativos/>

García, S. (2017). Alfabetización digital. *Razón y Palabra*, 21(3), 66-81.

Holman, L., Stuart-Fox, D., & Hauser, C. (2018). The gender gap in science: how long until women are equally represented? *PLoS Biology*, 16(4), 1-20. <https://doi.org/10.1371/journal.pbio.2004956>.

ITU News. (2018). *Reshaping the future: women, girls and tech for development*. <https://news.itu.int/reshaping-future-women-girls-icts/>

Kitchener, C. (2020). *Women academics seem to be submitting fewer papers during coronavirus*.

<https://www.thelily.com/women-academics-seem-to-be-submitting-fewer-papers-during-coronavirus-never-seen>

Knights, D., & Clarke, C. (2014). It's a bittersweet symphony, this life: fragile academic selves and insecure identities at work. *Organization Studies*, 35(3), 335-357.

<https://doi.org/10.1177/0170840613508396>.

Minciencias. (2020). *En Colombia solo el 38 % de los investigadores son mujeres*.

[https://minciencias.gov.co/sala\\_de\\_prensa/en-colombia-solo-el-38-los-investigadores-son-mujeres-](https://minciencias.gov.co/sala_de_prensa/en-colombia-solo-el-38-los-investigadores-son-mujeres-)

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Minello, A. (2020). *The pandemic and the female academic*.

<https://www.nature.com/articles/d41586-020-01135-9>

Minow, M. (1999). *Not only for myself: identity, politics and the law*. The New Press.

Montenegro, C. (2020). *Retos y oportunidades del 2020 para la Orinoquía*. Universidad de Los

Andes: <https://ceo.uniandes.edu.co/index.php/es/medios/editorial/370-retos-y-oportunidades-del-2020-para-la-orinoquia>

Morley, L. (2011). Misogyny posing as measurement: disrupting the feminisation crisis discourse.

*Contemporary Social Science: Journal of the Academy of Social Sciences*, 6(2), 223-235.

<https://doi.org/10.1080/21582041.2011.580615>.

O'Connor, P. (2020). Accessing academic citizenship: excellence or micropolitical practices? En S.

Sümer, *Gendered academic citizenship. Citizenship, gender and diversity* (págs. 37-64).

Palgrave Macmillan.



- O'Connor, P., & Irvine, G. (2020). Multi-level state interventions and gender equality in higher education institutions: the Irish case. *Administrative Sciences*, 10(4), 1-21.  
<http://dx.doi.org/10.3390/admsci10040098>.
- Prendes, M., García, P., & Solano, I. (2020). Igualdad de género y TIC en contextos educativos formales: una revisión sistemática. *Comunicar*, 28(63), 9-20. <https://doi.org/10.3916/C63-2020-01>.
- Rodríguez, A. (2006). *La brecha digital y sus determinantes*. Universidad Nacional Autónoma de México.
- Ross, J. (2020). *Pandemic 'risks reversing' Australia's research gender equity gains*.  
<https://www.timeshighereducation.com/news/pandemic-risks-reversing-australias-research-gender-equity-gains>
- Rueda, R., & Franco, M. (2018). Políticas educativas de TIC en Colombia: entre la inclusión digital y formas de resistencia-transformación social. *Pedagogía y Saberes*, 48, 9-25.
- Unesco. (2018). *Marco de competencias de los docentes en materia de TIC*.  
<https://es.unesco.org/themes/tic-educacion/marco-competencias-docentes>
- Unesco. (2020). *COVID-19*. [https://siteal.iiiep.unesco.org/respuestas\\_educativas\\_covid\\_19](https://siteal.iiiep.unesco.org/respuestas_educativas_covid_19)
- Unesco. (2021). *Mujeres en la educación superior: ¿la ventaja femenina ha puesto fin a las desigualdades de género?*
- Unesco Institute for Statistics. (n.d.). *Sustainable Development Goals*. <http://data.uis.unesco.org/>
- Unesco. (n.d.). *Recomendación sobre la promoción y el uso del plurilingüismo y el acceso universal al ciberespacio*.  
[https://www.acnur.org/fileadmin/Documentos/Pueblos\\_indigenas/recomendacion\\_plurilinguismo\\_unesco.pdf](https://www.acnur.org/fileadmin/Documentos/Pueblos_indigenas/recomendacion_plurilinguismo_unesco.pdf)
- Villela, F., & Contreras, D. (2021). La brecha digital como una nueva capa de vulnerabilidad que afecta el acceso a la educación en México. *Academia y Virtualidad*, 14(1), 169-187.

Viveros, M. (2016). La interseccionalidad: una aproximación situada a la dominación. *Debate Feminista*, 52, 1-17. <https://doi.org/10.1016/j.df.2016.09.005>.

Wenneras, C., & Wold, A. (1997). Nepotism and sexism in peer review. *Nature*, 387, 341-343. <https://doi.org/10.1038/387341a0>.

Yuval-Davis, N. (2006). Intersectionality and feminist politics. *European Journal of Women's Studies*, 13(3), 193-209. <https://doi.org/10.1177/1350506806065752>.

## Reviewer Invitation for A gender perspective view of higher education teachers in Colombia vs. the Orinoco region

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A gender perspective view of higher education teachers in Colombia vs. the Orinoco region

Cogent Social Sciences

Dear Syhraini Tambak,

This is a reminder that your review of "A gender perspective view of higher education teachers in Colombia vs. the Orinoco region" for Cogent Social Sciences was due by Mar 04, 2023, so is now 3 days late. I would therefore be grateful if you would submit your review as soon as possible

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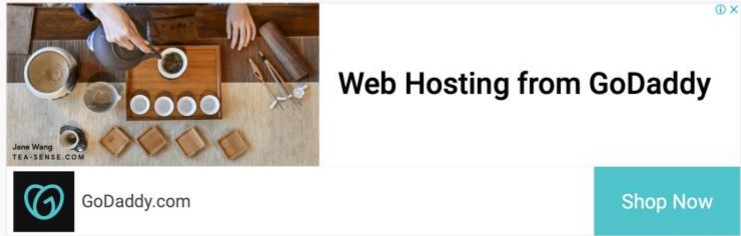
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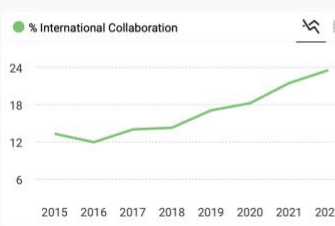
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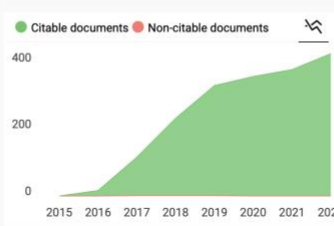
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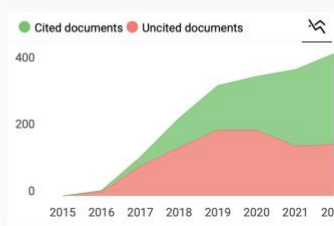
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