



DIGITAL GENDER GAP IN MEXICO

***WHAT IS ACCESS?
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LESS CONNECTED?***

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Technology is much more than technical knowledge: it is a political space. Disconnecting has social and economic implications for us in this information society. To be outside the “digital world” is to lose agency to intervene, get work, inform ourselves, communicate, move and live.

With this in mind, Derechos Digitales, with support from the World Wide Web Foundation researched the digital gender gap in Mexico. This document makes public the inquiry on gender and internet access that gave rise to our conclusions and reflections.

What is access to digital technology?

How does gender influence how we understand it?

What is the situation in Mexico?

Worldwide, more men than women use the internet.¹ In addition, women with fewer economic resources are 50% less likely to be connected to the internet than men.² According to the International Telecommunication Union (ITU), the digital gender gap is growing despite numerous efforts.³ Women are half as likely as men to speak out online, and a third less likely to use the internet to look for work.

In Mexico, the outlook seems different at first sight since 51.5% of women had an internet connection in 2016 — a connectivity rate higher than that of men (48.5%). However, the revolution of information and communication technologies (ICTs) is not yet transforming the lives of women. From the Web Foundation and Derechos Digitales, we understand that “access” is much more than WiFi on a computer or data on a cell phone. True access to the internet exists when it serves as a tool to learn and acquire knowledge; when, as women, we can pay for connectivity without abandoning other priorities; if it has interesting and relevant content; if we can produce and co-create what we read and see; if the internet is a safe space to share and disagree, in community and in our language.

Understood like this, we can see that the digital gender gap still exists — even though there are formally more women “connected” than men in Mexico. Much remains to be done to achieve digital equality for women, especially for those with less resources and lacking of education. If the national and international trend persists, the benefits of connectivity will continue to be captured mainly by men, and this, in turn, will deepen existing inequalities.

1 World Wide Web Foundation. “Women’s Rights Online Digital Gender Gap Audit.” September 2016, webfoundation.org/research/digital-gender-gap-audit/

2 En el mismo rango de edad con niveles similares de educación e ingreso. Ver World Wide Web Foundation. “Women’s Rights Online: Translating Access into Empowerment.” Octubre 2015, webfoundation.org/about/research/womens-rights-online-2015/

3 Alliance for the Affordable Internet. Digging into Data on the Gender Digital Divide. October 2016, a4ai.org/digging-into-data-on-the-gender-digital-divide/

I. METHODOLOGY AND PRELIMINARY RESULTS

This report was made throughout the year 2017, and therefore is based on data prior to this year. Regarding digital equality, the Sustainable Development Goals (SDGs) provide a historic opportunity to halt and reverse growing digital inequality by turning political commitment into concrete interventions. With respect to digital equality, the SDGs commit UN member states to:

- enhance the use of enabling technology, in particular information and communications technology (ICT), to promote the empowerment of women (SDG 5b);
- achieve universal, affordable internet access in least developed countries by 2020 (SDG 9c);
- and ensure equal access to basic services [and] appropriate new technology for all women and men by 2030 (SDG 1.4)⁴

Based on these objectives, the Web Foundation developed a methodology to present policymakers and the private sector with clear, evidence-based policy recommendations, and to monitor progress towards implementation and impact.⁵ To date, this methodology has been applied in Cameroon, Colombia, Cote d’Ivoire, Dominican Republic, Egypt, Ghana, India, Indonesia, Kenya, Mozambique, Nigeria, the Philippines and Uganda. At Derechos Digitales, we applied it for Mexico.

Research is presented as a scorecard, based on available secondary data sources and expert assessment methodology. The following categories are given a score from 0 to 10: i) Internet access and women’s empowerment; ii) affordability; iii) digital skills and education; iv) relevant content and services to women; and v) online security. Each indicator is weighted the same and all indicators are assigned equal value.⁶

Initial data is taken from official national and international indicators of the National Institute of Statistics and Geography (INEGI), the International Telecommunications Union (ITU) and UNESCO, based on a table developed by the Web Foundation. At Derechos Digitales, we were concerned that the reality of many women was not reflected by this secondary data, which is

not uncommon. As noted by the Partnership on Measuring ICT for Development, “Aggregate data collection masks gender differences, which implies that women’s realities remain unrecorded and are ignored, not only in statistics but also in policy.”⁷

To counter this issue, we incorporated interviews and opinions of experts from civil society who have researched the subject in the field, including Article 19, Association for the Progressive Communications, Luchadoras, R3D, Rhizomatica and Social TIC.

Our final findings give Mexico an overall score of 52%.



4 United Nations Organization. Sustainable Development Goals. September 2015 <http://www.un.org/sustainabledevelopment/>

5 See full methodology at World Wide Web Foundation. “Digital Gender Gap Audit Scorecard Toolkit.” pp. 1-35 webfoundation.org/docs/2016/12/WRO-Digital-Gender-Gap-Audit_Toolkit.pdf

6 Idem

7 Idem pp.4

In the seven months of research, we found two specific difficulties in relation to the analysed data. First, even though national policies to promote access and the use of networks by women do exist, there are no official or concrete figures that allow us to measure progress. Second, the data that we did find was not disaggregated by gender. This issue is not trivial since initial data is the basis for the elaboration of new public policies. The Mexican government should incorporate a gender perspective into data collection methodologies taking into account social factors such as: cultural barriers and patriarchal attitudes (“women should not use the internet”), self-censorship that comes from online gendered violence, and the gender wage gap that diminishes the ability of women to afford internet access.⁸

Our research concludes by proposing five public policy recommendations for the Mexican government to close the gender digital divide: i) evaluate and reform Mexico Conectado – the country’s flagship programme for digital empowerment – to take a gendered perspective into consideration; ii) end online gender-based violence; iii) improve public internet infrastructure prioritising rural and non-urban areas; iv) prioritise digital education in schools and communities; v) eliminate barriers to women pursuing STEM education and careers.

The results of the scorecards are designed to be used as a starting point for broad national, regional and global consultations. With the proposed methodology it is possible to have approximate indicators and data that otherwise would not be available, thus allowing us to track the progress of the Mexican government on the subject.

II. WHAT IS ACCESS TO TECHNOLOGY?

Although this document does not intend to make an exhaustive analysis of access to ICT, at the Web Foundation and Derechos Digitales, we understand the notion of access to the internet as something that goes far beyond of mere connectivity.⁹ As previously stated, it is not enough to have WiFi at home, free data on WhatsApp, or the ability to go on Facebook: the internet must be an empowering tool in every area of our daily lives.

Real and holistic access implies the ability to physically access and modify technologies and their infrastructure; understand them deeply; integrate them into our daily lives; read content and relevant services that are also locally created; trust in ICT. It also implies affordable prices that women can pay without neglecting other priorities,¹⁰ a legal framework that provides legal security and allows autonomy, and finally a safe environment in which we as women are not afraid to express ourselves.¹¹ Online information should serve as an empowering tool, enabling us to look for work, exercise our freedom of expression, our creativity, our autonomy, our sexuality, our privacy. All that is access.

Finally, the participation of women in science, technology, engineering and mathematics (STEM) also counts as a measuring point in our analysis. As long as there is inequality offline, the internet will replicate it. It is crucial that more women become directly involved in the creation of technology – both infrastructure and applications – not only in Mexico, but around the world.

For the Web Foundation, key findings regarding their 2015 study of digital gender gap are the following:¹²

- Lack of know-how and high cost are the two main barriers keeping women offline.
- Women’s access to education is a strong determinant of internet use. Controlling for other variables, urban poor

8 OECD. “Gender Wage Gap.” Organisation for Economic Co-Operation and Development, 2016, data.oecd.org/earnwage/gender-wage-gap.htm

9 Association for Progressive Communications. “Developing Unesco’s Internet Universality Indicators (Unpublished Draft. Work in Progress).” internetuniversality.apc.org/index.php/developing-unesco-internet-universality-indicators-eng/

10 Julia Carpenter. “The Unpaid Work That Always Falls to Women.” CNN Money, February 2018, money.cnn.com/2018/02/21/pf/women-unpaid-work/index.html

11 Andrew Maunde, et al. “Evaluating the Relevance of the ‘Real Access’ Criteria as a Framework for Rural HCI Research.” University of the Western Cape, 2006, pp. 75–78., repository.uwc.ac.za/xmlui/handle/10566/663

12 World Wide Web Foundation. “Women’s Rights Online: Translating Access into Empowerment.” October 2015, webfoundation.org/about/research/womens-rights-online-2015/

women with at least some secondary education were six times more likely to be online than urban poor women with lower levels of schooling.

- Maintaining existing family and neighbourhood ties through social media is the main internet activity for urban poor women.
- Only a small minority of women internet users surveyed are tapping into technology's full empowering potential.
- Young people were most likely to have suffered harassment online, with over six in 10 women and men aged 18 – 24 saying they had suffered online abuse.

In Mexico, the obstacles that operate around the world affect indigenous rural women as well. However, aggregate data reflects predominantly urban realities.

Universal access cannot be achieved without concrete and focused efforts to enable all women to be online, just as full gender equality can not be achieved without allowing women access to an affordable, open and secure internet. Access to education, and the creation of skills and training opportunities are key for women to participate actively in a digital society.

III. RESEARCH AND SCORES

In this section, we apply the methodology developed by the Web Foundation. These are six main categories that in turn contain subcategories, each one qualified and averaged according to the criteria developed by the international organisation: A) access to internet as a tool of power for women; B) accessibility and prices; C) digital skills and education; D) content and services relevant to women; E) online security. The qualification granted by Derechos Digitales and evaluated by independent experts of Mexican civil society is found next to each title and subtitle in this document.

A. INTERNET ACCESS AND WOMEN'S EMPOWERMENT = 6

National collection and reporting of sex-disaggregated ICT data= 6

According to the latest survey conducted by the National Institute of Statistics and Geography (INEGI) in 2016, 51.5% of women and 48.5% of men had access to the internet.¹³ The data is easy to access, but it is not disaggregated into more concrete categories that are accessible to and readable by the public. On the other hand, ITU statistics show that in 2015, 60.5% of men had access to the internet, compared with 54.6% of women.¹⁴ It would seem that the digital gender gap was reduced, but a change in the statistics' methodology meant that the figures were not comparable year to year.¹⁵ In addition, according to Article 19 experts, this information leaves aside rural areas, where the reality is very different.¹⁶

Existence in national ICT strategies or broadband plans of clear time-bound targets to overcome gender and poverty divides in internet use, and provision of budget for implementation = 6

One of the goals of the National Digital Strategy, which is coordinated by the President's office, is the "inclusion of digital skills with gender equality in mind".¹⁷ According to the documents submitted to the Inter-American Development Bank,

13 Instituto Nacional de Estadística y Geografía. "Encuesta Nacional Sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares 2016." 2016, www.beta.inegi.org.mx/proyectos/enchogares/regulares/dutih/2016/ ; "Aumentan Uso de Internet, Teléfonos Inteligentes y TV Digital: Encuesta Nacional Sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares, 2016." March 2017, www.inegi.org.mx/saladeprensa/boletines/2017/especiales/especiales2017_03_02.pdf

14 International Telecommunications Union. Gender Statistics by Country 2012-2015, 2016, http://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2016/Gender_2012-2015.xls

15 José Merino, and Mariano Muñoz. "México Conectado: Más Internautas, Mismas Brechas." Horizontal.MX, Enero 2017, horizontal.mx/mexico-conectado-mas-internautas-mismas-brechas

16 Interview with Paulina Gutiérrez, Article 19.

17 Informe Estrategia Digital Nacional." Mexico Digital, November 2013, pp. 5-42., cdn.mexicodigital.gob.mx/EstrategiaDigital.pdf

there is a programme and a budget approved for this objective, but no further documents or follow-up are found.¹⁸ This seeks to incorporate a gender perspective into public policies to develop digital skills, understanding ICTs as technical and cultural tools. For this programme, ICTs will be used for the inclusion of girls and women, favoring their participation in political, economic and social matters, while strengthening prevention of violence and various forms of discrimination against women. In April 2016, the National Digital Strategy Coordination launched the initiative “CódigoX” that seeks to promote the inclusion of girls and women in the use of ICTs through the consolidation of efforts at national and international levels of industry, civil society, academy and the government.¹⁹ The initiative targets the empowerment of women and girls by providing them with tools to promote inclusion and equality through technology.²⁰ However, according to experts from the Association for Progressive Communications (APC), while this type of initiatives broaden the possibilities of ICT and gender in terms of ideas, access, careers and technical solutions, they are limited to a very urban group with a certain level of access due to their income and geographical location.²¹ For this organization, to enrich technological development and universal access such knowledge must be present in other states and rural areas.

Empowering use of the web = 2

Data exists regarding the use of the internet to look for jobs, education or to interact with the government, but it is not broken down by gender.²²

Gender gap in internet Access = 5

According to the data collected in the National Survey on Availability and Use of ICTs in Households 2016, 51.5% women have internet access compared to 48.5% men.²³ This gives us a -3% gender gap favouring women. The same survey in 2015 showed that a 4% gap favouring men.

Nonetheless, according to Mexican civil society organisations, these statistics present two problems.

First, they do not take into consideration a deep definition regarding access like the one previously stated in section II above. In addition, a gender perspective is not taken into consideration. Internet in a household does not imply true access for empowering reasons, because statistics that show an increase in general internet connectivity are not comparable between 2015 and 2016. According to the government, internet connectivity increased by 74% between 2012 and 2016, but for Red en Defensa de los Derechos Digitales (R3D), this increase lacks empirical support.²⁴ For Data 4, a non-governmental organisation that links data and activism, data between these years are not comparable because of a substantial change in the methodology, which in turn inhibits the evaluation and accountability of governmental public policies regarding internet connectivity.²⁵

18 <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=40185490>

19 Código X. Página del Gobierno de México gov.mx, 2018, www.gob.mx/codigox

20 CANIETI. “Por Segundo Año, CÓDIGOX Promueve La Inclusión De Niñas y Mujeres En La Tecnología.” Centro Nacional De La Industria Electrónica De Telecomunicaciones y Tecnologías De La Información, May 2017, www.canieti.org/Comunicacion/noticias/vista/17-05-09/POR_SEGUNDO_AÑO_CÓDIGOX_PROMUEVE_LA_INTRODUCCIÓN_DE_NIÑAS_Y_MUJERES_EN_LA_TECNOLOGÍA.aspx http://www.canieti.org/Comunicacion/noticias/vista/17-05-09/POR_SEGUNDO_AÑO_CÓDIGOX_PROMUEVE_LA_INTRODUCCIÓN_DE_NIÑAS_Y_MUJERES_EN_LA_TECNOLOGÍA.aspx

21 Interview with Erika Smith, Association for Progressive Communications

22 Instituto Nacional de Estadística y Geografía. “Encuesta Nacional Sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares 2016.” 2016, www.beta.inegi.org.mx/proyectos/enchogares/regulares/dutih/2016/

23 Instituto Nacional de Estadística y Geografía. “Encuesta Nacional Sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares 2016.” 2016, www.beta.inegi.org.mx/proyectos/enchogares/regulares/dutih/2016/

24 Juan Ortiz F. “El Estirón de México Conectado: ¿Cuánto Creció Realmente el Número de Usuarios de Internet En 2015?” R3D, March 2017, r3d.mx/2017/03/12/el-estiron-de-mexico-conectado-cuanto-crecio-realmente-el-numero-de-usuarios-de-internet-en-2015/

25 José Merino, and Mariano Muñoz. “México Conectado: Más Internautas, Mismas Brechas.” Horizontal.MX, January 2017, horizontal.mx/mexico-conectado-mas-internautas-mismas-brechas/

Second, according to Article 19 these numbers do not reflect rural realities.²⁶ This shows the degree in which the data is not disaggregated and lacking in context. The poverty and gender divide widens if we take into consideration that in rural areas only 27.9% of women have access to the internet, whereas 33.7% of men do.²⁷ For Article 19, in communities like Tabasco and Chiapas “having a device or having access to a technological tool with connectivity does not mean there is substantial access.”²⁸ In the organisation’s annual report for 2017, they consider that “in certain communities women perceive themselves as alien to the use of technology or the internet, mostly because they do not know how to read or write, or because they consider them tools for men and young people.”²⁹ In these terms, any public policy must take into account aspects such as indigenous languages, capacity-building to empower members of the community to be content creators as well as enable their participation as internet providers in their communities.³⁰

B. AFFORDABILITY = 7

Existence of specific policies to promote free or low-cost public internet access (such as budget allocations for internet access in public libraries, schools and community centers, or provisions for spectrum use by community WiFi options) = 8

The “Mexico Conectado” programme seeks to guarantee the constitutional right of access to broadband internet service as established in the Mexican Constitution.³¹ To achieve this goal, the programme deploys telecommunications networks that provide connectivity to sites and public spaces such as schools, libraries, health centers, parks or community centers at the federal, state and municipal levels. The official website of the programme reports that by 2015, connectivity had been contracted with 101,322 sites using terrestrial or satellite networks.³² Nonetheless, according to the organisation Data 4, it is unlikely that the “Mexico Conectado” programme will effectively contribute to closing the digital divide.³³ First of all, connectivity seems to have increased, but this is due to a methodological change, and not necessarily as a result of the programme itself. Secondly, there is no way of measuring how many people used the hotspots and for what purpose, as statistics do not exist. But most importantly, according to their analysis, such spots were set up in zones that were already very densely connected, which made them conclude that regardless of new users, the divide still pretty much remains the same.³⁴ Furthermore, such policies do not have a gender perspective and they tend to exclude rural communities, partly because to request an antenna, good light and electricity are necessary prerequisites. There are no current provisions that legally enable WiFi community networks to exist.

Internet affordability (price of 1 GB data / average monthly income) = 6

According to a 2015 study by the Alliance for Affordable Internet (A4AI), the price of 1GB of data in mobile phone plans represents 2.03% of the average income in Mexico.³⁵ This is usually related with income as well; the National Household Income and Expenditure Survey is the main source for determining monthly income in Mexican households. The survey

26 Interview with Paulina Gutiérrez, Article 19.

27 http://www.inegi.org.mx/saladeprensa/boletines/2017/especiales/especiales2017_03_02.pdf <http://www.beta.inegi.org.mx/proyectos/enchogares/regulares/dutih/2016/>

28 Interview with Paulina Gutiérrez

29 Artículo 19, “Democracia simulada, nada que aplaudir”, pp.129, 2017, <https://articulo19.org/wp-content/uploads/2018/.../Book-ARTICLE-2018-V03-web1.pdf>

30 Idem

31 Article 6. Constitución Política de los Estados Unidos Mexicanos ordenjuridico.gob.mx/Constitucion/cn16.pdf

32 “Mexico Conectado.” Sitio del Gobierno de México gob.mx, 2016, www.mexicoconectado.gob.mx/

33 José Merino y Mariano Muñoz. “Mexico Conectado: Más Internautas, Mismas Brechas.” Horizontal.MX, January 2017, horizontal.mx/mexico-conectado-mas-internautas-mismas-brechas/

34 Idem

35 Alliance for Affordable Internet. 2017 Affordability Report. World Wide Web Foundation, 2017, [a4ai.org/affordability-report/report/2017/#list_of_countries_price_of_1gb_mobile_prepaid_data_plan_as_a_percent_of_gni_per_capita_by_income_level_\(2015\)](http://a4ai.org/affordability-report/report/2017/#list_of_countries_price_of_1gb_mobile_prepaid_data_plan_as_a_percent_of_gni_per_capita_by_income_level_(2015))

also identifies the amount that households spend on different goods and how much of their income these expenses represent. According to the analysis done by experts of Data 4, in 2015 the average monthly expenditure on internet service in the lowest income households is \$ 238.8 pesos; for households with higher income, this expenditure is \$ 300 pesos. For lower income households, this represents 13.6% of their monthly income, while for those with higher monthly income, it represents only 0.6%.³⁶

According to OECD data, the gender wage gap in Mexico is 16.7%.³⁷ This gender wage gap diminishes the ability of women – and female-headed households in particular – to afford internet access.³⁸ The poverty and gender divide widens if we take into consideration that in rural areas, only 27.9% of women have access to the internet whereas 33.7% of men do.³⁹

C. DIGITAL SKILLS AND EDUCATION = 3

Proportion of ICT-qualified teachers in schools = 3

The National Digital Strategy aims to provide a “quality education” regarding the integration and use of ICTs in the educational process of the country. This is oriented to increase the performance, to give digital abilities to teachers and students, and to promote the creation and diffusion of culture.⁴⁰ On the other hand, the Ministry of Public Education considers as a national goal the scientific, technological and innovation pillars for sustainable economic and social progress to promote scientific and technological education to transform Mexico.⁴¹ Likewise, the @aprende 2.0 programme of the Ministry of Public Education offers various courses and digital materials for ICT training.⁴² Additionally, the biggest public autonomous university (UNAM) offer a training and updating programme for teachers on Technological and Digital Tools in Education.⁴³ Nevertheless, according to UNESCO, only 2% of teachers were qualified to teach using ICTs in 2010.⁴⁴ There are no more recent statistics on the matter.⁴⁵

Percentage of women in technology and engineering research and development (R&D) fields = 3

Regarding the role of women in technological fields, at the highest level of the National System of Researchers only 22% are women (2012).⁴⁶ On average, 8% of Mexican girls, but 27% of Mexican boys, plan to pursue a career in engineering or computing. For Adriana Caballero, CEO and founder of Metagraphos, a Mexican company specialising in technology,

36 José Merino, and Mariano Muñoz. “México Conectado: Más Internautas, Mismas Brechas.” Horizontal.MX, January 2017, horizontal.mx/mexico-conectado-mas-internautas-mismas-brechas/

37 OECD. “Gender Wage Gap.” Organisation for Economic Co-Operation and Development , 2016, data.oecd.org/earnwage/gender-wage-gap.htm

38 [http://a4ai.org/Alliance for Affordable Internet. 2017 Affordability Report. World Wide Web Foundation, 2017, a4ai.org/affordability-report-report/2017/#list_of_countries'_price_of_1gb_mobile_prepaid_data_plan_as_a_%20of_gni_per_capita_by_income_level_\(2015\)](http://a4ai.org/Alliance%20for%20Affordable%20Internet.%202017%20Affordability%20Report.%20World%20Wide%20Web%20Foundation,%202017,%20a4ai.org/affordability-report-report/2017/#list_of_countries'_price_of_1gb_mobile_prepaid_data_plan_as_a_%20of_gni_per_capita_by_income_level_(2015))

39 Instituto Nacional de Estadística y Geografía. “Encuesta Nacional Sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares 2016.” 2016, www.beta.inegi.org.mx/proyectos/enchogares/regulares/dutih/2016/; “Aumentan Uso de Internet, Teléfonos Inteligentes y TV Digital: Encuesta Nacional Sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares, 2016.” March 2017, www.inegi.org.mx/saladeprensa/boletines/2017/especiales/especiales2017_03_02.pdf

40 “Informe Estrategia Digital Nacional.” Mexico Digital, Noviembre 2013, pp. 5-42., cdn.mexicodigital.gob.mx/EstrategiaDigital.pdf

41 “Programa Sectorial De Educación 2013-2018.” Secretaría de Educación Pública, Diciembre de 2016, www.sep.gob.mx/work/models/sep1/Resource/4479/4/images/PROGRAMA_SECTORIAL_DE_EDUCACION_2013_2018_WEB.pdf

42 Secretaría de Educación Pública. “Desarrollo Profesional en TIC.” Prende 2.0, 2016, docentes.aprende.edu.mx/

43 UNAM. “Educación Continua.” Universidad Nacional Autónoma de México, 2017, educacioncontinua.dgire.unam.mx/cec/

44 “Uso De TIC En Educación En América Latina y El Caribe.” Uso de TIC en Educación en América Latina y el Caribe, UNESCO, 2010

45 Secretaría de Educación Pública. “Censo de Escuelas, Maestros y Alumnos de Educación Básica Especial”. 2013, censo.sep.gob.mx/index.php/tabulados-del-censo

46 CONACYT. “Aumenta Participación de Mujeres en la Ciencia.” Sitio del Gobierno de México, July 2017, conacyt.gob.mx/index.php/comunicacion/comunicados-prensa/725-aumenta-participacion-de-mujeres-en-la-ciencia

women represent only 10% of the entire industry.⁴⁷

According to the OECD, in Mexico, the general female labour force participation rate is 47% in comparison with an OECD average of 60%. Besides, the “share of female students that choose to pursue university education in science, technology and mathematics is even lower than that of their male counterparts.⁴⁸ Nonetheless, the percentage of tertiary qualifications in computing awarded to women in Mexico is quite high compared to other OECD countries (45%).⁴⁹

Internet access at secondary schools = 5

According the Ministry of Public Education, in 2013 53% of the country’s secondary schools had internet access.⁵⁰ The organisation “México Evalúa”, based on what is reported by the General Coordination of @prende 2.0, found that 48% of public junior high schools in the country have at least one computer with internet connectivity. Of this percentage of connectivity, 65% belong to schools in urban sites and 35% in rural sites.⁵¹

D. SERVICES AND CONTENTS RELEVANT FOR WOMAN = 5

Availability of user friendly information via ICTs (including web/internet, IVR and SMS) about reproductive and sexual health rights and services for women and girls = 7

Even though the government provides information on sexual and reproductive rights, there is no official statistic regarding how many people access it and use it online.⁵² The country could increase its score by collecting official statistics on this indicator.

The Ministry of Health has a specific Action Program on Sexual and Reproductive Health for Teenagers 2013–2018 aimed at establishing guidelines on sexual and reproductive health so that institutions belonging to the national health system can provide quality information and services on the subject.⁵³ The National Center for Gender and Reproductive Health, which seeks to contribute to the incorporation of a gender perspective in health and to improve sexual and reproductive health through programmes and actions, maintains a relatively updated. At the time of the present research, the last update had taken place in March 2016.⁵⁴

On the other hand, there are other programmes and initiatives focused on the sexual health of teenagers, mainly on the prevention and orientation on teen pregnancy. Since 2015, the government has launched an online page called “¿Cómo le hago?” aimed at providing guidance on the healthy exercise of sexuality and the prevention of pregnancy in the teenage

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- 47 Jair López. “Sector Tecnológico, El Más Innovador pero con Pocas Mujeres.” *El Financiero*, March 2016, <http://www.elfinanciero.com.mx/empresas/sector-tecnologico-el-mas-innovador-pero-con-pocas-mujeres.html>.
- 48 OECD. “Mexico. Policy Priorities to Upgrade the Skills and Knowledge of Mexicans for Greater Productivity and Innovation.” Organization for Economic Co-Operation and Development, May 2015, pp. 2–3., <https://www.oecd.org/mexico/mexico-policy-priorities-to-upgrade-skills-and-knowledge-of-mexicans.pdf>
- 49 OECD. “Percentage of Tertiary Qualifications Awarded to Women by Field of Education.” Organization for Economic Co-Operation and Development, 2010.
- 50 Secretaría de Educación Pública. “INEGI - SEP. Censo de Escuelas, Maestros y Alumnos de Educación Básica y Especial, CEMABE”. 2013, [censo.sep.gob.mx/docs/Centrosdetrabajo/Centrosdetrabajo14.pdf](http://sep.gob.mx/docs/Centrosdetrabajo/Centrosdetrabajo14.pdf)
- 51 Marco Antonio Fernández. “Las TICs en Clase. ¿Hemos Aprendido La Lección?” *México Evalúa*, Noviembre 2016, mexicoevalua.org/2016/11/16/las-tics-en-clase-hemos-aprendido-la-leccion/
- 52 Secretaría de Salud. “Encuesta Nacional de Salud y Nutrición (ENSANUT).” Instituto Nacional de Salud Pública, 2012, ensanut.insp.mx/informes/ENSANUT2012ResultadosNacionales.pdf
- 53 Secretaría de Salud. “Programa de Salud Sexual y Reproductiva de los Adolescentes. CNEGSR.” Sitio Del Gobierno De México, Septiembre de 2015, www.gob.mx/salud/acciones-y-programas/programa-de-salud-sexual-y-reproductiva-de-los-adolescentes-cnegsr http://cnegsr.salud.gob.mx/contenidos/Programas_de_Accion/SSRA/introduccion_SS.html
- 54 Idem

population.⁵⁵ This is done through videos, blogs, games and online courses, as well as other activities.⁵⁶

Percentage of women personally using mobile financial services = 3

According to World Bank data, 2.8% of women have access to mobile financial services.⁵⁷ On the other hand, the “Financial Inclusion Report” of 2013 made by National Banking and Securities Commission, which is a decentralised body of the Ministry of Finance and Public Credit, indicates that for that year, 363,748 women reported having used some mobile financial service. This represents 1.1% of the total number of users.⁵⁸ Since that year, none of the government’s annual reports on financial inclusion mentions the number or percentage of people using financial mobile services disaggregated by gender.

It is also important to note that none of the websites of the most important banks at the national level have available information about the percentage of users who use their mobile financial services.

E. Online Safety = 5

Extent to which law enforcement agencies and the courts are taking action in cases where ICT tools are used to commit acts of gender-based violence = 3

The National Commission to Prevent and Eradicate Violence Against Women as part of its work provides information to women about the types of gender violence that exist in digital spaces and the mechanisms of raising complaints that exist.⁵⁹

Among them is the Cyber Police of the National Security Commission and the internal complaints mechanisms with which social networks count.⁶⁰ However, victims and various civil society organisations have reported that the existing mechanisms to combat gender-based violence online are totally inefficient, since the authorities responsible for resolving these cases generally ignore or minimise complaints, hold the victim accountable and suggest as a solution to close the accounts or means by which the victim is being attacked.⁶¹

Existence and robustness of national data protection laws = 7

At constitutional level, Mexico recognises that “everyone has the right to the protection of their personal data, access, rectification and cancellation thereof, as well as to express their opposition, under the terms established by law, which will establish the exceptions to the principles governing the processing of data, for reasons of national security, public order provisions, public safety and health or to protect the rights of third parties.”⁶² In addition to the provisions of the Constitution, the Mexican legal framework regarding data protection is composed of the Federal Law on the Protection of

55 Secretaría de Salud. “¿Cómo le Hago? #EmbarazoAdolescente.” Sitio del Gobierno de México gov.mx, Octubre 2015, www.gob.mx/inmujeres/articulos/como-le-hago-embarazoadolescente

56 ¿Cómo le hago? Prevención del Embarazo Adolescente en México <https://comolehago.org/>

57 The World Bank. “Global Financial Inclusion.” Data Bank, 2017, databank.worldbank.org/data/reports.aspx?source=1228

58 Consejo Nacional de Inclusión Financiera. “Reporte de Inclusión Financiera.” 2013, [www.cnbv.gob.mx/Inclusión/Documents/Reportes de IF/Reporte de Inclusion Financiera 5.pdf](http://www.cnbv.gob.mx/Inclusión/Documents/Reportes%20de%20IF/Reporte%20de%20Inclusion%20Financiera%205.pdf)

59 Comisión Nacional para Prevenir y Erradicar la Violencia Contra las Mujeres. “¿Has Sufrido Acoso Cibernético? ¡Identifica Sus Modalidades y Protégete!” Sitio del Gobierno de México Gob.mx, June 2018, www.gob.mx/conavim/articulos/has-sufrido-acoso-cibernetico-te-decimos-a-donde-acudir

60 Comisión Nacional para Prevenir y Erradicar la Violencia Contra las Mujeres. “¿Existe Violencia Hacia las Mujeres en los Espacios Virtuales?” Sitio del Gobierno de México Gob.mx, Junio de 2016, www.gob.mx/conavim/articulos/existe-violencia-hacia-las-mujeres-en-las-redes-sociales?idiom=es

61 Gabriela O. Polanco y Erika Smith. “End Violence: Women’s Rights and Safety Online Internet Intermediaries and Technology- Related Violence against Women. Mexico.” Association for Progressive Communications, March 2015, www.genderit.org/sites/default/upload/mexico_analytical_report.pdf; Lourdes V. Barrera y Candy Rodríguez. “La Violencia en Línea Contra las Mujeres en México. Informe Para la Relatora Sobre Violencia Contra las Mujeres Ms. Dubravka Simonovict.” Internet es Nuestra, November 2017, internetesnuestra.mx

62 Article 16. Constitución Política de los Estados Unidos Mexicanos ordenjuridico.gob.mx/Constitucion/cn16.pdf

Personal Data held by Individuals, the Federal Law on Transparency and Access to Governmental Public Information, and the General Law on the Protection of Personal Data in Possession of Obligated Subjects, published in January 2017.

IV. CONCLUSION

Addressing the digital gender gap is fundamental to realise the significant potential benefits the internet can bring to women, their communities and the economy in general.⁶³ For this reason, we recommend to the government the following guidelines to follow in terms of public policies.

EVALUATE AND REFORM MEXICO CONECTADO FROM A GENDER PERSPECTIVE.

Mexico Conectado, the country's flagship programme for digital empowerment, must be evaluated from a gender perspective, and a concrete strategy with clear targets for furthering women's empowerment must be designed. Data on women's internet access and use should be collected annually factoring the urban/rural divides along with income and education levels. Furthermore, methodological changes must be communicated with absolute transparency to minimise problems that arise from non-comparable datasets over time.

END ONLINE GENDER BASED VIOLENCE.

Urgently develop a training and awareness strategy on digital gender-based violence for law enforcement and judicial authorities. Different parties (police, legal system representatives) should be trained on how to respond to ICT-based harassment and on relevant legislation. Government must ensure that the proper legal tools exist to deal with gender-based violence committed online, while respecting online freedom of expression.

IMPROVE EDUCATION AND PUBLIC INTERNET INFRASTRUCTURE.

The government should prioritise the construction and modernisation of internet infrastructure and legally enable the use of community networks to ensure 100% network coverage, prioritising rural and non-urban areas, where women are disadvantaged the most.

PRIORITISE DIGITAL EDUCATION IN ALL SCHOOLS AND COMMUNITIES.

Invest in digital skills training programmes in primary, secondary and tertiary schools. The government should provide free or subsidised digital skills and empowerment training in all schools and communities that go beyond giving out hardware, and instead incorporate holistic approaches to empowering all stakeholders with requisite digital skills.

ELIMINATE BARRIERS TO WOMEN PURSUING STEM EDUCATION AND CAREERS.

Investigate the barriers to women participating in STEM — right from attaining education and joining STEM-related workforce/industries. With such results in mind, establish training programmes focused on the needs of all Mexican women, aiming to promote STEM careers with a gendered perspective as well as foster access and use of the internet as a tool for the full enjoyment of women's political, civil, economic and social rights.

⁶³ United Nations Educational, Scientific and Cultural Organization. "Call to Action to Close Digital Gender Gap." UNESCO, 2017, www.unesco.org/new/en/media-services/single-view/news/call_to_action_to_close_digital_gender_gap/

