



A toolkit for researching women's internet access and use

This toolkit is the result of a collaboration between the Alliance for Affordable Internet, the World Wide Web Foundation, Association for Progressive Communications and the GSMA.



GSMA Connected Women

The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 300 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai, Mobile World Congress Americas and the Mobile 360 Series of conferences.

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The GSMA Connected Women Programme works with mobile operators and their partners to address the barriers to women accessing and using mobile internet and mobile money services. Connected Women aims to reduce the gender gap in mobile internet and mobile money services and unlock significant commercial opportunities for the mobile industry and socio-economic benefits for women.

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Established in 1990, APC's mission is to empower and support organisations and social movements and individuals in and through the use of information and communications technologies (ICTs) to build strategic communities and initiatives for the purpose of making meaningful contributions to equitable human development, social justice, participatory political processes and environmental sustainability. APC Women's Rights Programme (APC WRP) has played a pioneering role in engaging the broader women's movements in the politics of technology. It does this through network of over 58 organisational members and 28 individual members active in 74 countries.

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The World Wide Web Foundation is an independent, international organisation working for digital equality – a world where everyone has the same rights and opportunities online. Established in 2009 by web inventor Sir Tim Berners-Lee, the Web Foundation works to advance a free and open web 'for everyone' by influencing government and corporate policies to ensure everyone can use the web freely and fully.

<https://webfoundation.org/>



The Alliance for Affordable Internet (A4AI) is the world's broadest technology sector coalition working to reduce the cost of internet access to enable universal, affordable access for all. Initiated by the Web Foundation in 2013, the Alliance is composed of 80+ member organisations from across the private, public, and not-for-profit sectors in both developed and developing countries. Working through a consultative, locally-driven and locally-led process in member countries throughout Africa, Asia, and Latin America, A4AI works to shape the policies and regulations needed to drive down prices and enable everyone, everywhere to afford to connect.

<http://a4ai.org/>

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The GSMA, Association for Progressive Communications (APC), The Web Foundation and A4AI would like to thank the following for their input to this project:
International Telecommunication Union, LIRNEasia, Research ICT Africa and Alexandra Tyers.

The GSMA Connected Women programme is currently funded by the UK Department for International Development (DFID), and supported by the GSMA and its members.



1. Introduction



In an increasingly connected world, women are being left behind. Although internet access is expanding, there is a persistent digital gender gap. Gender-disaggregated data on internet access and use is critical to measuring and understanding this gap and informing policy and actions to address it. However, this data is still limited. This toolkit seeks to address this issue by providing example research topics and questions that stakeholders can use to understand and measure differences between women's and men's internet access and use. Ideally, this will produce more comparable data and contribute to a fuller global picture of the digital gender gap.

Internet access and use has grown rapidly, transforming people's lives. Digital inclusion offers a variety of benefits for women and men, societies, industry and the economy, such as access to information, communication, learning and business opportunities. However, internet growth has been unequal; the ITU estimates that, globally, women are 12% less likely than men to use the internet, and in two-thirds of countries, there is a higher proportion of men using the internet than women.¹

The gender gap is wider in certain parts of the world; in the least developed countries, women are 33% less likely than men to use the internet, which means only one out of seven women in these countries are using the internet compared to one out of five men.² Mobile is the main channel to access the internet in low- and middle-income countries, where women are 26% less likely than men to use mobile internet. This gender gap also varies by region and country; in South Asia, women are 26% less likely to own a phone than men and 70% less likely to use mobile internet.³ Even when women are online, they tend to use the internet less frequently and in different ways than men. The result is that existing gender inequalities are being compounded.

The lack of gender-disaggregated data and insights on internet access and use masks the true extent of the digital gender divide. Without this data, gender differences – and the underlying reasons for this gender gap – are also obscured. Research shows that barriers to internet adoption and use are complex and interlinked, and vary by factors such as location, age, geography and culture.⁴ Barriers to internet access and use include, but are not limited to: cost of devices and data, lack of awareness and understanding of the internet, lack of education, low confidence, lack of digital skills, poor literacy, a feeling that the internet is not relevant, concerns around safety and security,⁵ and lack of access to infrastructure, such as quality network coverage and electricity. The available literature documents that women often feel these barriers more acutely than men, largely due to gender discrimination and entrenched social norms in more patriarchal and conservative societies.⁶ To address the digital gender divide, the gap in internet access and use must be measured and understood, including how and where women are accessing and using the internet, why they use it or fail to use it, as well as their circumstances, needs, capabilities and preferences.

1. International Telecommunication Union (ITU), 2017, "ICT Facts and Figures 2017", <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2017.pdf>. Globally 50.9% of men are estimated to use the internet versus 44.9% of women. Thus, worldwide the proportion of women using the internet is 12% lower than the proportion of men where 'proportion' refers to the number of women/men using the internet, as a percentage of the respective total female/male population.
2. Ibid.
3. GSMA, 2018, "The Mobile Gender Gap Report 2018", <https://www.gsma.com/mobilefordevelopment/programmes/connected-women/the-mobile-gender-gap-report-2018/> (based on women aged 18+). The GSMA calculates the gender gap in mobile phone access and mobile internet use as the difference between the proportion of male and female owners/users divided by the proportion of male owners/users, expressed as a percentage.
4. Sources: GSMA, 2015, "Bridging The Gender Gap: Mobile Access And Usage In Low- And Middle-income Countries", <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/Connected-Women-Gender-Gap.pdf>; The Web Foundation, 2016, "Women's Rights Online: Digital Gender Gap Audit", <https://webfoundation.org/research/digital-gender-gap-audit/>; M. Deen Swarry, A. Gillwald, A. Morrell and S. Khan, 2016, "Lifting The Veil On ICT Gender Indicators In Africa", Research ICT Africa, https://www.researchictafrica.net/publications/Evidence_for_ICT_Policy_Action/Policy_Paper_13_-_Lifting_the_veil_on_gender_ICT_indicators_in_Africa.pdf; GSMA, 2017, "Triggering Mobile Internet Use among Men and Women in South Asia", https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/11/GSMA-Triggering-Mobile-Internet-Use_Web.pdf; GSMA, 2018, "The Mobile Gender Gap Report 2018", <https://www.gsma.com/mobilefordevelopment/programmes/connected-women/the-mobile-gender-gap-report-2018/>.
5. Safety and security refers to concerns about being contacted by strangers, as well as concerns around information security and they can vary by country and context. These concerns are not just the concerns of women, but also those of gatekeepers that are projected onto women.
6. Sources: IGF Internet Governance Forum, 2016, "IGF Best Practice Forum Gender: Gender and Access: Overcoming Barriers to Enable Women's Meaningful Internet Access", http://www.intgovforum.org/multilingual/index.php?q=filedepot_download/3406/437; A. Kovacs and N. Ranganathan, 2017, "Gendering Surveillance", <https://genderingsurveillance.internetdemocracy.in/>.

Currently, there is little statistically significant, comparable gender-disaggregated quantitative data on this topic at either the national level or for certain sub-segments of women, and there are also few qualitative insights.⁷ The challenge is to collect sound, gender-disaggregated data (both qualitative and quantitative) on women's internet access and use, highlighting the issue. This data can be used by a range of stakeholders, including policymakers, the private sector and others, to inform and develop strategies to close the gender gap in internet access and use and track the progress of these efforts. Proactive collection of robust and comparable data across countries and contexts can help to construct a global picture of the digital gender gap and support the UN Sustainable Development Goals (SDGs) for gender equality.⁸

This toolkit is the result of a collaboration between A4AI, the Web Foundation, the GSMA and APC, which have committed to advance the recommendations for action of the Broadband Commission Working Group on the Digital Gender Divide.⁹ The toolkit builds on previous efforts by the GSMA, ITU, UNCTAD, USAID, the Web Foundation and others to develop research approaches and ICT indicators to better understand women's internet access and use, but it does not necessarily represent the views of these organisations. It outlines both core and supplementary research topics to gain insights into women's internet access and use, and provides example questions for both qualitative and quantitative research. Building on existing indicators and initiatives, these questions are linked to the core list of indicators for ICT access and use produced by the Partnership on Measuring ICT for Development.¹⁰



7. In particular, there is a lack of data and understanding of access barriers and challenges experienced by women in low- and middle-income countries in general and in different situations and circumstances in particular (e.g. women refugees, women with disabilities, youth and indigenous women).

8. In particular Sustainable Development Goal 5: Achieve gender equality and empower all women and girls.

9. Broadband Commission Working Group on the Digital Gender Divide, 2017, "Recommendations for Action: Bridging the Gender Gap in Internet and Broadband Access and Use", <http://broadbandcommission.org/Documents/publications/WorkingGroupDigitalGenderDivide-report2017.pdf>.

10. Partnership on Measuring ICT for Development, 2016, "Core List of ICT Indicators". This list of over 60 ICT indicators was developed to help guide countries measure their information society. The list was agreed upon through a consultation process involving governments, international organisations and experts in the field of information society measurement, and has been endorsed by the UN Statistical Commission. The list covers the following areas: ICT infrastructure and access; access and use of ICT by households and individuals; ICT access and use by enterprises; the ICT sector and trade in ICT goods; ICT in education; and ICT in government. See https://www.itu.int/en/ITU-D/Statistics/Documents/coreindicators/Core-List-of-Indicators_March2016.pdf.

2. Overview of the toolkit



This toolkit has been designed to be a digestible, introductory guide for those interested in researching women and the internet. It is not intended to provide in-depth advice on methodological approaches, research protocols or tools.¹¹

Objectives

- To suggest core and supplementary research topics to explore when conducting research on women's internet access and use;
- To suggest example questions for both quantitative and qualitative research tools to investigate the proposed research topics;
- To illustrate how research questions can be used to measure and track indicators on women's internet access and use;¹² and
- To provide a list of relevant resources with additional advice on collecting gender-disaggregated data (qualitative and quantitative), including examples of survey tools for researching women and the internet.

Audience

This toolkit is aimed at a wide range of audiences interested in conducting both qualitative and quantitative research on women's internet access and use. The primary target audience are researchers and research agencies who have skills and practice in conducting quantitative and/or qualitative research. They can use this toolkit as a guideline for incorporating gender into their research studies, helping deliver comparable data on this topic that can build a global picture of the internet access and use gender gap. The secondary target audience for the toolkit includes, but is not limited to: governments and policymakers, intergovernmental organisations, the private sector, NGOs, and academic and research institutions. It is assumed the audience has some basic knowledge and skills in conducting research.

Scope

In scope:

- The toolkit has been designed to help researchers collect **comparable, accurate data**¹³ that is **reliable and valid**, by using example questions, for both **qualitative and quantitative research approaches**.
- The focus of the toolkit is on **women as users of technology**.
- The toolkit is relevant for qualitative and quantitative data collection in any country, but the example research questions and considerations for researching women have been designed with **low- and middle-income countries** in mind as this is where the gender gap in internet access and use is largest.
- The example research questions are intended to be used for:
 - **Researching women and men** (aged 18+), but they could be adapted for girls and boys. When researching children, be sure to check the country's legal requirements for permissions first.¹⁴
 - **Researching individuals** rather than households, to obtain gender-disaggregated insights and data.¹⁵
 - **Face-to-face interviews**, although they could be adapted for online or telephone surveys or other methodologies. For quantitative research, using a face-to-face approach means that respondents do not have to use a device to qualify to be interviewed. This enables more accurate and representative data collection on internet access

11. Research tools are the instruments used to collect quantitative and qualitative data. These include, but are not limited to, quantitative tools such as surveys, qualitative tools such as interview or focus group discussion guides and screeners. For more information on appropriate methodologies and quality assurance of the research process see the Appendix.

12. The indicators are aligned with the Partnership on Measuring ICT for Development core list of ICT Indicators for access and use of ICT by households and individuals. An example of such an indicator is 'proportion of individuals using the internet'. While these indicators are constructed to measure ICT access and use at an aggregated level, this toolkit advocates for the collection of gender-disaggregated data. See https://www.itu.int/en/ITU-D/Statistics/Documents/coreindicators/Core-List-of-Indicators_March2016.pdf.

13. The word 'data' in this toolkit refers to both qualitative and quantitative research results, unless otherwise stated.

14. See Section 6 for additional reading suggestions on doing research with younger respondents.

15. It is worth noting that while the Partnership on Measuring ICT for Development Core List of ICT Indicators cover all areas of ICT from both a household and individual perspective, this toolkit is designed to measure internet access and use at the individual rather than household level.

and use, capturing **users and non-users, both male and female** (using online or telephone surveys is unlikely to reach respondents who do not use a mobile or the internet).

Out of scope:

- This toolkit is not designed to investigate women's employment in technology or women as designers and creators of ICT.¹⁶
- This toolkit alone will not provide a comprehensive investigation of all the underlying factors driving or creating barriers to women accessing and using the

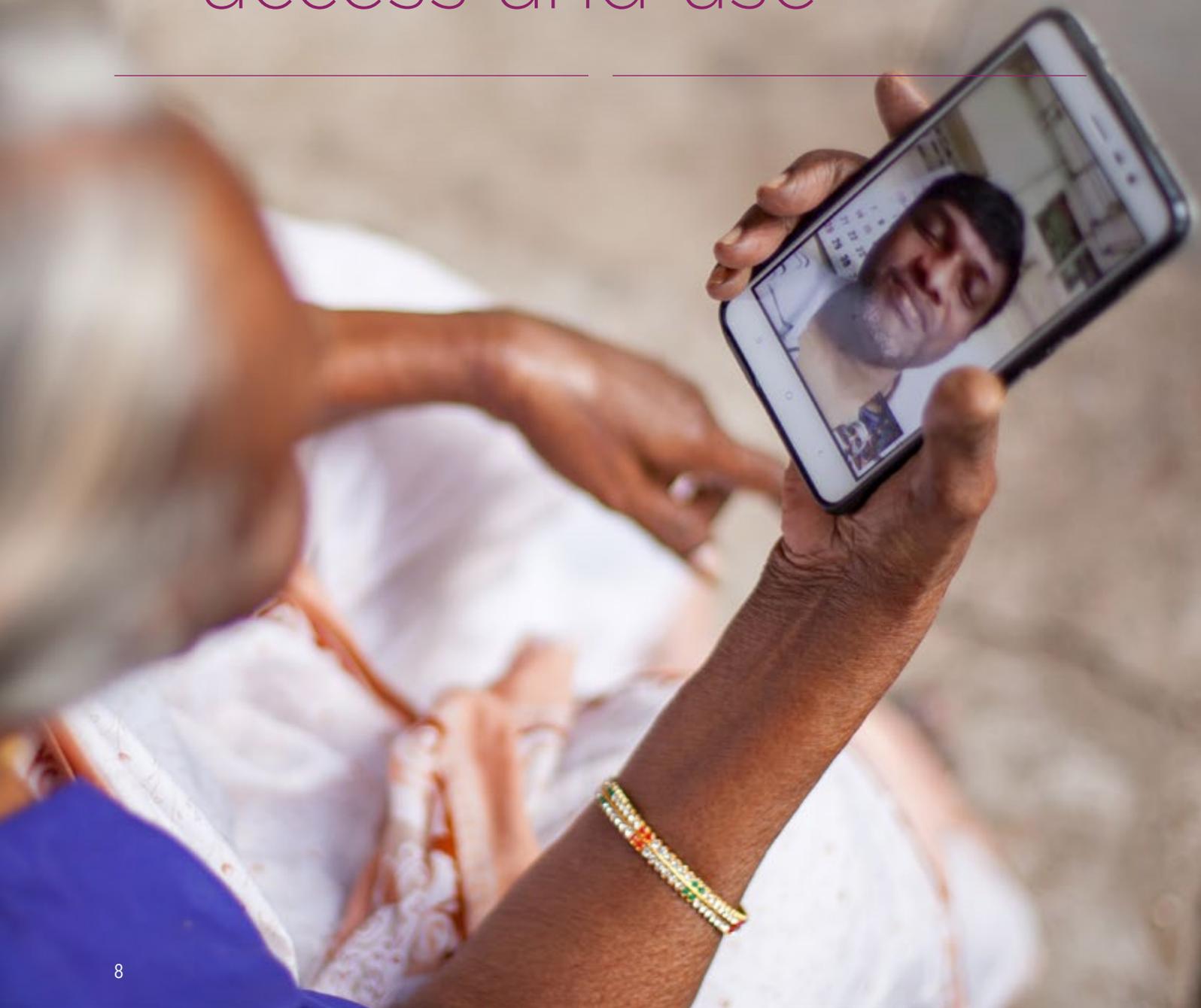
internet. For example, factors such as the impact of regulation, or how much content is available online that is pertinent to women, or whether the technology has been designed with a female user in mind, while important areas to understand to contextualise the consumer research, are not topics explored here.

- It does not provide in-depth guidance on research methodology, such as selecting appropriate sampling methods or data analysis techniques.



16. See, for example, GIZ and Panopoly Digital, 2017, "Women's Pathways to the Digital Sector: Stories of Opportunities and Challenges", https://www.enterprise-development.org/wp-content/uploads/GIZ_WEE-digital-sector_2017.pdf.

3. Core and supplementary topics for researching women's internet access and use



To understand women's internet access and use and capture a full picture of the gender gap, including underlying dynamics, data must be collected on both women and men and on a variety of relevant topics.

- The core research topics listed in table 1 are priority areas in which to collect quantitative and qualitative data in order to understand women's internet access and use.
- The supplementary research topics listed in Table 2 are additional areas of investigation that researchers may want to include to gain more in-depth insights.
- Tables 1 and 2 summarise the type of data to be collected. Example questions are provided in Section 4.
- Where research topics align with ICT indicators from the Partnership on Measuring ICT for Development, these have been indicated in the right-hand column.

Table 1

Core research topics

Research topic	Summary of quantitative and qualitative data to collect	Relevant ICT indicators from the Partnership on Measuring ICT for Development
 1. Internet awareness, understanding, access and use	<ul style="list-style-type: none"> • Awareness and understanding of the internet • Whether women and men have ever used the internet and whether they are current users (e.g. have used it in the last three months) • When women and men first started to use the internet • How frequently or recently women and men have used the internet 	<p>HH7: Proportion of individuals using the internet</p> <p>HH12: Proportion of individuals using the internet, by frequency</p>
 2. Internet-enabled device access and ownership / control	<ul style="list-style-type: none"> • Women's and men's access to the internet through different devices, and which ones they use to go online • Personal versus shared ownership of devices • How and where women and men access the internet (i.e. the location and personal versus shared / public access) 	<p>HH4: Proportion of households with a computer</p> <p>HH5: Proportion of households using a computer</p> <p>HH8: Proportion of individuals using the internet, by location</p> <p>HH10: Proportion of individuals using a mobile cellular telephone</p> <p>HH18: Proportion of individuals who own a mobile phone</p>
 3. Barriers to internet access and use	<ul style="list-style-type: none"> • The main reasons why women and men do not access or use the internet¹⁷ • How the social context influences access and use 	<p>HH19: Proportion of individuals not using the internet, by type of reason</p>
 4. Types of online activity	<ul style="list-style-type: none"> • The main things women and men do on the internet, and what they use it for (including content creation) 	<p>HH9: Proportion of individuals using the internet, by type of activity</p>

17. Women often feel barriers to internet access and use more acutely than men. The types of barriers to be considered in research on women's internet access and use include affordability (women tend to be more price sensitive than men), usability and skills (women often have lower levels of confidence and skills in using the internet than men, as well as lower levels of literacy), accessibility (women can be less likely than men to have access to quality network coverage and connections, handsets and electricity), safety and harassment (women can be more concerned about security and experience harassment more than men) and relevance (internet products and services often do not meet women's needs as well as men's). Underpinning these barriers are social and cultural norms; that is, underlying societal gender inequalities that often restrict women's internet access and use more than men's. It is important to understand these gendered barriers to internet access when researching women and the internet, and to consider the social context to understand the gender digital divide and why it exists. This toolkit suggests specific wording of quantitative questions to cover female-specific experiences, as well as specific prompts in the qualitative questions to examine these issues in more depth. For further reading, see GSMA, 2018, "The Mobile Gender Gap Report 2018", <https://www.gsma.com/mobilefordevelopment/programmes/connected-women/the-mobile-gender-gap-report-2018/>.

Table 2

Supplementary research topics

	Research topic	Summary of quantitative and qualitative data to collect	Relevant ICT indicators from the Partnership on Measuring ICT for Development
	5. Use of specific internet products and services	<ul style="list-style-type: none"> Current use of specific, named services and websites when online 	n/a
	6. Type of internet connection	<ul style="list-style-type: none"> Types of connection women and men use to access the internet (e.g. mobile network, Wi-Fi) 	HH17: Proportion of individuals using the internet, by type of portable device and network used to access the internet
	7. Digital skills	<ul style="list-style-type: none"> Women's and men's current levels of internet literacy skills 	n/a
	8. Barriers to increased internet use	<ul style="list-style-type: none"> Appetite for using the internet more, and the barriers stopping those who want to use the internet more¹⁸ How the social context influences access and use 	n/a
	9. Aspirations for internet access and use	<ul style="list-style-type: none"> How women and men would like to use the internet (i.e. the device or connection) Where women and men would like to use the internet (i.e. location) What women and men would like to do or find out online that they currently do not or cannot 	n/a
	10. Perceptions of the internet	<ul style="list-style-type: none"> What effects (positive and negative) women and men think using the internet has had, or can have What women and men think of the internet generally (including trust and attitudes towards female internet access) 	n/a
	11. Online safety and harassment experiences and concerns ¹⁹	<ul style="list-style-type: none"> What online safety issues have women and men experienced or are concerned about What women and men think about safety and the internet 	n/a

18. Women not only face more barriers to initial internet access than men, they also face more barriers to using the internet more than they currently do. It is important to understand these gendered barriers to increased internet use in detail, including the social context.

19. Researching safety and harassment issues can be challenging, but concerns about online safety can be a barrier to internet use. For further reading, see GSMA, 2018, "A Framework to Understand Women's Mobile-Related Safety Concerns in Low- And Middle-Income Countries", <https://www.gsma.com/mobilefordevelopment/programme/connected-women/a-framework-to-understand-womens-mobile-related-safety-concerns-in-low-and-middle-income-countries/>

4. Example questions



To encourage the collection of comparable data on women's internet access and use this section provides example questions for both quantitative and qualitative approaches. The wording of these example questions are generic and may need to be adapted in order to be appropriate for different local contexts.

Guidelines for using the example questions

- To encourage the collection of comparable data on the gender gap in internet access and use, the questions for the four core research topics should ideally be included. The proposed quantitative questions for the core research topics should take on average 10 minutes to complete.
- The example questions for the supplementary research topics are additional stand-alone questions that can be added to a survey as needed to build on the core research topics. While the core example questions should be asked in the order they appear in this toolkit, the order of the supplementary example questions is more flexible and researchers can amend and revise the order as needed.
- The example questions are generic and will need to be adapted to the local context (e.g. language, examples of apps and platforms). The qualitative questions (probes) in particular are designed to stimulate a semi-structured conversation where moderators ask follow-up questions to gather more information and should be adapted as needed. Piloting the questions first with a small sample similar to the target research respondents will help to refine the questions and adapt them to the local context.
- As with all consumer facing research, the responses are what people *claim* they know or do rather than actual behaviour. Some segments may over-claim or under-claim depending on social pressure and their own confidence and this should be taken into consideration when designing and asking the questions, (e.g. is someone present at the interview who may influence responses) and also during the analysis phase.
- Each quantitative question is followed by a list of potential answers. These lists are not exhaustive (i.e. there may be other possible answers) and need to be tailored to the degree of detail required and the local context. When using a pre-set list of answers, it is recommended to include an 'other' and/or 'don't know' option. The 'other' option can be followed by an open-ended question asking the interviewee to explain or describe the 'other'. This is useful for at least two reasons. First, if enough people give a similar explanation or description for 'other', then this should be added as an answer option for future questionnaires. Second, a respondent's explanation or description of 'other' can sometimes be classified under one of the pre-set answers. It is also recommended to include a 'prefer not to say' option, particularly for sensitive questions. Non-responses can help you understand your target audience better and flag any issues with a question.
- Some of the quantitative questions call for 'multiple response', but can also be changed to 'single response'. While multiple response questions can capture a wide range of issues, they do not allow the respondent to prioritise their answers.
- The example qualitative questions have been designed primarily for focus group discussions however they can be adapted for other types of qualitative approaches, for example in-depth interviews or when talking to friendship pairs.
- The example questions are designed to meet research needs while keeping the number of questions to a minimum. They should be phrased as simply as possible and be easy to translate while still retaining their meaning.
- Each example question has a specific type of respondent associated with it. For example, when trying to understand the main things women and men use the internet for, only ask that question of respondents who claim to use the internet ('internet users'). Similarly, when trying to understand why women do not use the internet, only ask that question of female respondents who are aware of the internet but have never used it ('non-internet users who are aware of the internet') or have not used it for a certain period, such as in the last three months.

- This toolkit focuses on the most important research topics for understanding women's internet access, use and perceptions. The resource list in section 6 includes other research tools and questions, some of which explore further topics of internet access and use that researchers can draw on as needed, including examples of complete questionnaires with instructions.

It is important to keep in mind that women and men are not homogeneous groups and responses are likely to vary by community, race, class, age, caste or ethnicity. The

appendix provides example questions to capture socio-demographic information. These can be used to analyse and cut the data, providing an opportunity to understand the behaviour of different segments of the population, for example, poorer rural women and poorer urban women. It is recommended that the categories of the example socio-demographic questions be aligned with other well-known survey categories (from the national statistics office, World Bank surveys, etc.) to validate the sample composition and facilitate comparison.

Core research topics: example questions

The following questions are examples of how data on the core topics can be collected. The list of potential answers may need to be adapted depending on country and context, and responses can be standardised during the analysis phase to allow comparability between different studies.

Please note: Previous research has shown that while some people, most notably in low- and middle-income countries, may use platforms like Facebook, they have not heard of 'the internet' per se (in other words, Facebook is the internet for some or they are not aware that by using Facebook they are using the internet). Hence, if the respondent has never heard of the internet but does in fact use it, the moderator/interviewer is advised to remind the respondent what the internet is during the survey.

 RESEARCH TOPIC 1: Internet awareness, understanding, access and use		
Respondent type	Example questions <i>[Considerations for interviewer / moderator are in blue italics]</i>	
	Quantitative	Qualitative
All	<p>SINGLE RESPONSE</p> <p>Have you ever heard of the internet?</p> <ol style="list-style-type: none"> 1. Yes, I have heard of the internet 2. No, I have not heard of the internet 3. Unsure / do not know <p>SINGLE RESPONSE</p> <p>Someone is using the internet when they are doing any of the following:</p> <ul style="list-style-type: none"> - Browsing websites (e.g. Google, Yahoo, Amazon, Wikipedia) - Visiting social networking sites (e.g. Facebook, Twitter, Kakao, Weibo, LinkedIn, Pinterest, YouTube, Instagram) - Sending emails or instant messages (e.g. via Facebook Messenger, WhatsApp, KakaoTalk, LINE, Viber, Snapchat) <p>Have you ever done any of the things I have just mentioned?</p> <ol style="list-style-type: none"> 1. Yes 2. No 	<ul style="list-style-type: none"> • Can you draw me a picture of what the internet means to you? Draw whatever comes into your head: your feelings about it, what it does for you, the things you think about when you think about the internet, anything. If you aren't very good at drawing, you can write extra words on it to explain what you mean. <i>[This may need to be adapted for illiterate respondents.]</i>²⁰ • What did you draw? Can you show me, and explain? • Can you tell me what people do when they use the internet? What do you think most people use the internet for? <i>[Explore depth of understanding of the internet and what they think it is capable of doing.]</i> • <i>[For those aware of the internet]</i> Can you tell me the story of how you first heard about the internet? For example, through TV, other people, or education? Can you remember how you felt when you first learnt about it? • Have you ever connected to the internet / used anything that involved the internet?

20. Note: by asking respondents to draw, it may mean that they adapt their response to produce something they feel comfortable drawing. It is important that the moderator emphasises that the picture does not have to look good; it's more about respondents drawing whatever comes into their head.

 RESEARCH TOPIC 1: Internet awareness, understanding, access and use		
Respondent type	Example questions <i>[Considerations for interviewer / moderator are in blue italics]</i>	
	Quantitative	Qualitative
All internet users	<p>SINGLE RESPONSE</p> <p>You say that you have used the internet. When did you first start using it?</p> <p>Please choose one answer only</p> <ol style="list-style-type: none"> In the last year Two to three years ago Four to five years ago More than five years ago Unsure / do not know 	<ul style="list-style-type: none"> Can you tell me how long ago since you had your first experience of the internet? <i>[For regular internet users]</i> Think back to the first time you used the internet. Please explain to me what you used to connect to the internet. <ul style="list-style-type: none"> And how did you feel when you first used / saw the internet? Can you describe where you were and who you were with? Please tell me about what you did, the first time you used the internet.
All internet users	<p>SINGLE RESPONSE</p> <p>You say that you have used the internet. When is the last time that you used it?²¹</p> <p>Please choose one answer only</p> <ol style="list-style-type: none"> Today Yesterday Within the last seven days Within the last month In the last three months Longer than three months ago Unsure / do not know 	<ul style="list-style-type: none"> Thinking about an average week, please tell me how often you use the internet and how this might change depending on the day. For example, do you use it more or less at the weekend? Have you always used it this often or has it changed over time, for example do you use it more or less now than when you first started to use it? Tell me about which times of the day you usually use the internet. Are there some times that are more convenient than others? Why? When did you last use the internet? Tell me about what you did, and the sites you visited or apps you used. How long did you spend on it? How long do you think you spend using the internet each time?²² Is that over a continuous stretch of time, or are you ever interrupted? <i>[Explore whether they use it at a continuous stretch on the same network, or if they switch between SIM cards, and the reasons for this. Explore any issues of battery life or power / Wi-Fi outages or issues with mobile network quality and coverage and how these impact their frequency of use.]</i>

21. This is an example question to measure how recently someone has used the internet. Alternatively, or as well as, a question could be asked about how frequently they use it. Frequency adheres more closely to ICT indicator HH12. Responses to recency of use can be used to determine those who are defined as internet 'users'. For example, if the response was 'not used in the last three months', then the researcher may decide to categorise them as a 'non-user' depending on the context. The time period could be adjusted to reflect the local context.

22. Capturing data on duration can be challenging and more prone to inaccuracy, as it may be difficult for respondents to have an accurate sense of how long they spend on the internet at a time. Research shows that low-income women often switch between SIM cards, developing workarounds to stretch data because of concerns around cost. Research from India has also shown that when low-income women use public Wi-Fi networks in their village, for example, even though they may report using the internet for one hour, it may actually be much less than that since they are often interrupted by power or network outages.



RESEARCH TOPIC 2: Internet-enabled device access and ownership / control

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in blue italics]</i>																																					
	Quantitative		Qualitative																																			
All	<p>SINGLE RESPONSE PER ROW</p> <p>Do you personally own and/or use regularly any of these technology-related items?²³</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Own this</th> <th colspan="2">Use this on a regular basis</th> </tr> <tr> <th>Yes</th> <th>No</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Desktop computer</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Laptop computer (including notebooks and netbooks)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tablet (iPad, Galaxy Tab etc.)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Gaming console (Playstation, Nintendo Wii, etc.)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Mobile phone</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Own this		Use this on a regular basis		Yes	No	Yes	No	Desktop computer					Laptop computer (including notebooks and netbooks)					Tablet (iPad, Galaxy Tab etc.)					Gaming console (Playstation, Nintendo Wii, etc.)					Mobile phone				
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Mobile phone																																						
All who own or use a mobile phone	<p>SINGLE RESPONSE PER ROW</p> <p>You say that you personally own or use a mobile phone. Do you personally own and/or use regularly one that you can use the internet on?²⁴</p> <p><i>[Clarify that this could be a feature phone (which allows you to go on the internet but cannot download third party applications) or a smartphone (which allows you to go on the internet and download applications).</i></p> <p><i>Ask the respondent to show you their phone (if they own one and have it on them) to help determine what type they own. Also, be prepared to show examples of a basic phone, feature phone, and a smartphone, either real ones or pictures of them to help respondents categorise their phone.]</i></p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Own this</th> <th colspan="2">Use this on a regular basis</th> </tr> <tr> <th>Yes</th> <th>No</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Feature phone</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Smartphone</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Own this		Use this on a regular basis		Yes	No	Yes	No	Feature phone					Smartphone																			
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23. For women in low- and middle-income countries, technology access and use can be more restricted than men's. They are less likely to own their own devices, and are more likely to share or borrow them. See <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/Connected-Women-Gender-Gap.pdf>. Women also tend to have more restrictions placed on them because of social norms, for example, a woman visiting a local internet café to use a computer may not be perceived as acceptable behaviour. It is therefore very important for researchers to understand the dynamics of women's ownership and access to technology, and questions have been suggested accordingly. It is worth noting that devices can be owned by more than one person, for example, a couple may jointly own a smartphone and claim to have equal share and access to it. A follow-up question could be asked in a quantitative survey, for example, 'Do you have sole or shared ownership?' The extent of shared ownership can vary by country or context and is often better explored in qualitative research.

24. Women in low- and middle-income countries are more likely to own or use basic mobile phones than men, and are also more likely to share or borrow handsets. This question explores gender differences in ownership, use and borrowing / sharing of internet-enabled mobile phones. Even if women have internet-enabled mobile phones, they are less likely to use the internet on their mobile than men and often have more restrictions / control placed on their internet access and use (by gatekeepers such as male family members, or parents). These differences are explored in the qualitative prompts questions.



RESEARCH TOPIC 2: Internet-enabled device access and ownership / control

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in blue italics]</i>	
	Quantitative	Qualitative
All internet users	<p>MULTIPLE RESPONSE</p> <p>Which devices have you ever used to access the internet?</p> <p><i>[Interviewer should have a show card with locally relevant examples of the different devices and descriptions of them to use if respondents are not clear what they are.]</i></p> <p>Please select all that apply.</p> <ol style="list-style-type: none"> 1. My own personal feature phone 2. Someone else's feature phone 3. My own personal smartphone 4. Someone else's smartphone 5. Computer at home 6. Laptop at home 7. Tablet at home 8. Computer at work or place of education 9. Laptop at work or place of education 10. Tablet at work or place of education 11. Computer at family member / friend's house 12. Laptop at family member / friend's house 13. Tablet at family member / friend's house 14. Computer at internet café 15. Laptop at internet café 16. Tablet at internet café 17. Computer in public place (e.g. library, community centre) 18. Laptop in public place (e.g. library, community centre) 19. Tablet in public place (e.g. library, community centre) 20. Other (please specify) 21. Unsure / do not know <i>[exclusive]</i> 	<ul style="list-style-type: none"> • Tell me about all the different devices you've used to access the internet. Are they personal devices or shared devices? How regularly do you use the internet on these devices you've mentioned? • Where do you usually use the internet? Why? <i>[Explore locations used and whether internet access is free / paid for (e.g. in internet café). Explore any restrictions on choice of location (e.g. internet cafés may be viewed as male-dominated spaces that are not safe for women).]</i> • Tell me about when you use the internet – are you alone or with others? How does this make you feel? <i>[Explore whether internet use (and sites visited) is policed or controlled by someone else, particularly for women. Explore any privacy concerns when using public Wi-Fi versus using more private mobile networks, and the trade-off of using more expensive mobile data, but having more privacy.]</i> • Do you ever have to ask permission to use these devices? Which ones? Who do you need to ask permission from? And how does this make you feel? <i>[Explore power dynamics / control and any gatekeepers. Explore whether they need to give PINs or passwords to gatekeepers and if they have ever been punished, or worry about being punished, because of what they do online.]</i>
All internet users	<p>SINGLE RESPONSE</p> <p>Of the devices you've just mentioned that you have used to access the internet, which one do you use most often? <i>[If needed, remind the respondent what they said in answer to the previous questions.]</i></p> <p>Please choose one answer only.</p>	<ul style="list-style-type: none"> • Which devices do you prefer to use for accessing the internet? Why? • Which ones(s) do you use most regularly? Why? <i>[Explore any differences between preferred device, and device used regularly, and any restrictions women may have with using / not using their preferred device.]</i>

RESEARCH TOPIC 3: Barriers to internet access and use		
Respondent type	Example questions <i>[Considerations for interviewer / moderator are in blue italics]</i>	
	Quantitative	Qualitative
Non-internet users who are aware of it ²⁵	<p>SINGLE RESPONSE PER STATEMENT</p> <p><i>[The order of this list should ideally be varied between respondents to avoid order effects, but it is best to keep the cost options together.²⁶</i></p> <p><i>Explain to respondents that they need to choose one of the four options for each statement.]</i></p> <p>Please listen to the following statements about why someone might not use the internet.²⁷ For each statement, please tell me how much it is true for you.²⁸</p> <ol style="list-style-type: none"> a. This is one of the main reasons stopping me b. This is a consideration, but not one of the main reasons c. This is not a reason or consideration for me d. Unsure / do not know <ol style="list-style-type: none"> 1. The cost of buying a device (e.g. mobile phone or computer) that can access the internet is too high for me 2. The cost of using the internet is too high for me (data top-up, app charges, monthly bills, travel to internet cafes, etc.) 3. I do not have access to a device that can use the internet 4. I do not have time to use the internet 5. Using the internet on my device uses too much battery 6. There is limited or no coverage to access the internet in my area 7. Using the internet on my device is too slow (e.g. connection speed) 8. There is not enough information written in my own language on the internet 9. I do not have time to learn how to use the internet on a device 10. I do not find the internet relevant enough for me (not useful or not interesting) 11. I have difficulties reading and/or writing 12. I find it difficult to use a mobile phone / laptop / computer in general 13. I do not feel confident using the internet 14. I do not have the right skills 15. There is nobody to teach me or to help me to use the internet 16. My family doesn't approve of me using the internet 17. I am concerned that I would be contacted by strangers 18. I am concerned that using the internet might expose myself or my family to harmful content <i>cont...</i> 	<p><i>[Moderator draws a circle on paper and writes "I do not use the internet because..." Explain to respondents that we're interested in all the reasons, however big or small, that might stop them from using the internet; it could be things that they know or do not know, people, things about their life in general, worries or concerns.</i></p> <p><i>Moderator to populate barriers (in respondent's language) as 'legs' of a spider, with the circle as the body, as respondents tell them the reasons. For illiterate respondents, use pictures too, but you may need to adapt the approach and wording.]</i></p> <p><i>[Probe to make sure all possible reasons that respondents can think of are covered.]</i></p> <ul style="list-style-type: none"> • Let's talk more about each reason you've mentioned: what did you mean by that? What is the main obstacle? Why? How much of a factor are things like...²⁹ <ul style="list-style-type: none"> - Not having the right device? <i>[Ask the reasons for not getting the right device and any specific restrictions for female respondents.]</i> - Not knowing how to actually use the internet on your device, and/or not knowing how to use internet-enabled devices in general? <i>[Explore confidence and technical literacy, particularly for women.]</i> - Family members / community / society not approving of the internet / internet-enabled devices? <i>[Explore social and cultural norms / perceptions of women using the internet versus men.]</i> - Other people restricting / controlling use of the internet? <i>[Ask about gatekeepers, control and permissions.]</i> - Other social and cultural norms and gender norms? <i>[Ask about restricted mobility for women to travel to places to use the internet; internet cafés being seen as 'male spaces', etc.]</i> - Cost, both the cost of the devices and the cost of accessing the internet? <i>[Explore gender differences in controlling finances and financial decision making.]</i> - Understanding the different things that you can do on the internet? <i>[Explore any perceptions about relevance or usefulness of internet for women's lives versus men's lives.]</i> - Reading and writing ability? - The language of the content on the internet? - Security / safety / harassment? <i>[Explore in particular any perceptions of women's online safety versus men's, and what restrictions women may have because of this compared to men.] cont...</i>

25. To ensure research results are valid, the researcher is strongly advised to only ask this question to men and women who are aware of the internet. This is because if an individual is not aware of the internet and/or does not understand it, then they cannot reliably answer why they do not use it.

26. 'Order effects' refer to how the sequence in which options appear in a survey can affect responses to later questions. Respondents may answer questions differently depending on the order in which the questions are asked. To remove the possibility of bias, it is good practice to present the options / lists on surveys in random order between respondents.

27. There are many potential responses to this question. The aim of this example is to provide an extensive list of options, however, it may not be exhaustive. For example, access to ID documents is not listed here as a potential barrier. Some may be more or less relevant depending on the context, and piloting any questionnaire will help refine questions before full roll-out. It is important with questions like this the answer options are single-minded i.e. they don't cover two different points in one option, that is, they are mutually exclusive with no overlap, otherwise analysis will be difficult.

28. This question can be simplified to have respondents just answer yes or no to each of the statements, but this will lose some of the nuance.

29. These can be amended to create additional qualitative probes if needed, depending on the context and particular barriers women may face in that context.

 RESEARCH TOPIC 3: Barriers to internet access and use		
Respondent type	Example questions <i>[Considerations for interviewer / moderator are in blue italics]</i>	
	Quantitative	Qualitative
	19. I am concerned that my identity or other private information will be stolen or misused 20. Other (please specify)	<ul style="list-style-type: none"> - Privacy? <i>[Ask about any concerns with this, and cost barriers of mobile data for private browsing versus having free public Wi-Fi, but less privacy.]</i> • Is there anyone in your life who might encourage you to use the internet or discourage you? Who are they? <i>[Ask about gatekeepers and social norms around women's use of the internet. Consider also exploring the impact of organisations and institutions like schools, government or local NGOs.]</i> • Please tell me why you do not use the internet, is it because you do not want to, or because you aren't able to? <i>[Explore general perceptions of the internet and any gender differences in how the respondent(s) are influenced by social and cultural norms for how and when women should (and shouldn't) use the internet.]</i> • How much do you think you would like to use the internet one day? If I asked you to tell me, out of 10 – where 10 is 'I definitely would like to' and 1 is 'I definitely would not want to – what would you say? Why? • What do you think or know about the internet that makes you say that?

 RESEARCH TOPIC 4: Types of online activity		
All internet users	<p>MULTIPLE RESPONSE</p> <p><i>[This list of broad categories can be adapted depending on areas of interest and context, e.g. expanding work uses or information uses]</i></p> <p>What do you use the internet for?³⁰</p> <p><i>[If necessary, remind the respondent what the internet is.]</i></p> <p>Please select all that apply:</p> <ol style="list-style-type: none"> 1. Communication that is mainly 'one to one' (using instant messaging / chatting, sending / receiving emails, making videos / voice calls) 2. Social / communicating to lots of people at once (e.g. sending a group a message via WhatsApp or Viber, sharing photos / videos / music on the internet, accessing social networks like Facebook) 3. Entertainment (e.g. playing games online, listening to radio or watching videos / TV / movies / music, reading about celebrities and gossip) 4. For medical / health advice and information 5. Information seeking (browsing the internet, reading the news or weather, reading sports updates and articles, research, and finding information for personal use) <p><i>cont...</i></p>	<p><i>[Moderator has sort cards for the types of activities someone can use the internet for. These can be taken from the categories for the example quantitative question, but can also be adapted for different contexts.^{31]}</i></p> <ul style="list-style-type: none"> • Which of these activities do you currently use the internet for? <i>[Explore their reasons for using the internet for these activities, and the influences / restrictions on using online services that female respondents in particular may experience. Ask which sites / apps / services they use for these activities.]</i> • Can you put them in order, from the most important to you to the least? Can you explain to me why you've chosen this order? Are we missing anything? • Thinking back to when you first started using the internet, which of these activities did you start with? Which ones did you start using later? Why? • How do you feel about your experience using the internet for these activities? Is it what you expected? • How do you use the internet for your work? <i>[Explore different types of work use, from advertising goods and services to checking for prices or fact finding.]</i> <i>cont...</i>

30. This is a question to be asked to all internet users to capture general patterns of use. This question can be amended to ask about recent activity and whether respondents have used the internet for any of these purposes in the last four weeks, for example. This may generate more meaningful answers, but can only be asked to current internet users (i.e. used in the last three months), not to all internet users.

31. This question is designed to capture data on how women in particular use the internet, what activities they use it for, and if there are any restrictions on what they do online compared to men.



RESEARCH TOPIC 4: Types of online activity

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in blue italics]</i>	
	Quantitative	Qualitative
	<ol style="list-style-type: none"> 6. Education (e.g. online training courses, support with schoolwork) 7. Shopping (e.g. researching goods or ordering and purchasing goods online) 8. Banking and financial services (e.g. sending and receiving money) 9. Expressing and voicing opinions on issues you care about 10. Creating and sharing / publishing content that you have produced yourself (e.g. photos, blogs, videos, games, apps, social media content, online articles, news stories) 11. Looking for a job or career advice 12. Supporting your own business (e.g. advertising, contacting customers, buying and selling goods and/or services online, researching prices of goods) 13. Other (please specify) 14. Unsure / do not know <i>[exclusive]</i> 	<ul style="list-style-type: none"> • Do you ever create or produce content and share / publish it online yourself? Can you tell me more about this? <i>[Explore what types of content they create, in what languages, the tools they use, how they started doing this and their overall experience. Also explore any barriers to creating (more) local content, and any differences between male and female respondents.]</i>



Supplementary research topics: example questions

The following questions are examples of how data on the supplementary topics can be collected, providing more in-depth understanding of women's internet use versus men's. These questions are not exhaustive and will need to be adapted depending on the country and context.

 RESEARCH TOPIC 5: Use of specific internet products and services		
Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
All current internet users (have used the internet in the past three months)	<p>MULTIPLE RESPONSE</p> <p><i>[This is an example for social media services. This question format can be replicated and adapted for other areas (for example, news), and should be tailored to the country or context. It is recommended that the list of different services is limited to a maximum of eight, including an 'other' option.]</i></p> <p>Which of the following social media sites or services do you currently use at least once a month?³²</p> <p>Please select all that apply:</p> <ol style="list-style-type: none"> 1. Facebook 2. Twitter 3. Instagram 4. Snapchat 5. LinkedIn 6. Google+ 7. Pinterest 8. Other (please specify) 9. I do not use any of these <i>[exclusive]</i> 	<p><i>[This is an example for social media services. These sample guiding questions can be replicated and adapted for other areas (for example, news), and tailored to the country or context.]</i></p> <ul style="list-style-type: none"> • Which social media sites or services do you currently use? Tell me about when you first used them and how this happened. • Why do you use these ones? <i>[Explore any restrictions female respondents may face (e.g. lack of email address to open accounts, or male gatekeepers' concerns about online privacy or harassment on Facebook).]</i> • We've already been talking about how you think and feel about the internet. Can you tell me the sorts of things you do on the sites you mentioned, and the main reasons you use them? <i>[Explore use for social, business, information, etc.]</i> • Do you do the same things on all of them? Do you use them for the same reasons? Why? <i>[Explore both positive and negative experiences of different social platforms and how this might encourage or discourage continued use.]</i>

32. This question is designed to understand men's and women's regular use of specific internet services. Including the time period of 'at least once a month' means the question should be asked to current internet users only (i.e. those who have used the internet in the last three months). However, to capture data on regular use of internet services at a more granular level, this time frame can be adapted to other options, such as 'at least once a day' or 'at least once a week'. This may involve changing the respondent type accordingly. Please note that attempting to capture the number of hours of usage through surveys can result in unreliable data as it can be difficult for people to remember. You may want to use a different methodology to capture real usage rather than relying on recall, such as asking them to complete a diary as a pre-task to qualitative research.



RESEARCH TOPIC 6: Type of internet connection

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
All internet users	<p>MULTIPLE RESPONSE</p> <p>Which types of connection have you ever used to access the internet?</p> <p>Please select all that apply:</p> <p><i>[Interviewer may need to be prepared to expand / explain the different networks in more detail.]</i></p> <ol style="list-style-type: none"> 1. Mobile network using SIM card 2. Public Wi-Fi (e.g. train station, coffee shop) 3. Wi-Fi at home 4. Wi-Fi at place of work or education 5. USB dongle or modem 6. Fixed line telephone 7. Internet via ethernet (i.e. a cable that you connect directly to your computer or laptop. This is how most internet cafés connect their terminals to the internet.) 8. Other (please specify) 9. Unsure / do not know <i>[exclusive]</i> 	<ul style="list-style-type: none"> • Please tell me about what types of connection you have used to access the internet. <i>[Moderator could have show cards with locally relevant examples on them and use them to prompt discussion.]</i> • Are these your own personal types of connection? For example, your own mobile data on your SIM, or a Wi-Fi connection at home? <i>[Explore whether respondents have their own private connections on their mobile phone or at home, or if they are public connections (e.g. Wi-Fi in public places). Explore whether respondents use mobile data on someone else's mobile phone, and any power or gender dynamics in sharing.]</i> • How frequently do you use the internet on these connections you've mentioned? <i>[Explore any restrictions on the choice of connection (e.g. cost of mobile data, lack of network availability, lack of internet-enabled mobile phone).]</i>
All internet users	<p>SINGLE RESPONSE</p> <p>Of these types of connection you've just mentioned that you have used to access the internet, which one do you use most often to connect to the internet?</p> <p><i>[If needed, remind the respondent what they said in answer to the previous questions.]</i></p>	<ul style="list-style-type: none"> • Which type(s) of connection do you prefer using? Why? • Which ones(s) do you use most regularly? Why? <i>[Explore any differences between preferred connection and connection used regularly, and any control women may have around using / not using their preferred connection.]</i>





RESEARCH TOPIC 7: Digital skills

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
All internet users	<p>SINGLE RESPONSE PER STATEMENT</p> <p><i>[Explain to respondents that they need to choose one of the four options for each statement.]</i></p> <p>Which of the following activities have you ever done using the internet? For each one, please tell me whether you have done it by yourself or with someone's help.³³</p> <ol style="list-style-type: none"> a. Yes, by myself b. Yes, with help from someone else c. No / not aware this was possible <ol style="list-style-type: none"> 1. Search for information 2. Watch videos 3. Use instant messaging (e.g. Facebook Messenger, WhatsApp, Viber) 4. Make a video call 5. Download apps from an app store (an app is a programme you can download to your smartphone or tablet from an online store like Google Play store, Apple App Store or Windows Marketplace. It looks like a small, square icon on your screen that you can tap with your finger to open a specific function on your smartphone or tablet, for example, internet browser or email) 6. Create login details (user) and a password to use a particular service or website (e.g. Facebook, Instagram, government citizen gateway) 7. Post any information on the internet / online. This can include commenting on something that you see, or posting or sharing a status update, photo or link. 	<ul style="list-style-type: none"> • Let's talk about the things you have ever done on your mobile and/or the internet online. Have you ever done any of these: <ul style="list-style-type: none"> - Searched for information or other content on the internet / online - Installed an application - Created login details (user) and a password to use a particular service or website. Some examples are Facebook, Instagram and government citizen gateway. - Located and adjusted settings on an application or service (e.g. privacy settings) - Posted any information on the internet / online. This can include commenting on something <p><i>[Moderator has sort cards to elucidate the types of activities someone can do online. Options can be added in as needed / depending on the context and research objectives.]</i></p> <ul style="list-style-type: none"> • <i>[If the respondent mentions any of the above activities]</i> How did you find out about these activities? How did you learn how to use them? Did anyone help you or show you? How easy or difficult do you find it to do them? Which are easiest and which are hardest? Why? • Does anyone help you now? Who? Why? <i>[Explore why they don't do it themselves and whether lack of skills / knowledge, or fear of getting it wrong is a barrier, or something else, and any differences between men and women.]</i> • <i>[If any of the activities listed above are not mentioned]</i> Why don't you use these? <i>[Explore whether lack of skills is a barrier or if it is something else, like lack of awareness.]</i> • What would make you do these things in the future? <i>[Explore in particular a perceived need for more advanced skills or for training, or for help from someone else, and any differences between men and women.]</i>

33. The questions / options listed here can be expanded or adapted. This question can also be adapted to a more practical demonstration of skills, where respondents perform these tasks while the interviewer observes. For further reading on digital literacy, see GSMA Connected Women's 2015 Digital Inclusion Report, which outlines five stages of digital literacy: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/06/DigitalLiteracy_v6_WEB_Singles.pdf.



RESEARCH TOPIC 8: Barriers to increased internet use

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
All internet users	<p>SINGLE RESPONSE</p> <p>Are you able to use the internet as much as you would like?</p> <ol style="list-style-type: none"> 1. Yes 2. No 3. Unsure / do not know 	<ul style="list-style-type: none"> • Are you able to use the internet as much as you would like? What stops you from using it as much as you would like to? <i>[Explore in particular if social and cultural gender norms are affecting women's internet use more than men's. If they are, explore how. For example investigate: their current levels of internet use, enablers / barriers to further use, do they use as much as they would like to. See suggested prompts on barriers to increased internet use in the next question.]</i> • Is there anything you'd like to do more of? What? Why?
All internet users who would like to use the internet more than they do currently ³⁴	<p>SINGLE RESPONSE PER STATEMENT</p> <p><i>[The order of this list should ideally be varied between respondents to avoid order effects, but it is best to keep the cost options together.]</i></p> <p><i>Explain to respondents that they need to choose one of the four options for each statement.]</i></p> <p>Please listen to the following statements about why someone might not use the internet as much as they would like. For each statement, please tell me how much it is true for you.³⁵</p> <ol style="list-style-type: none"> a. This is one of the main reasons stopping me b. This is a consideration, but not one of the main reasons c. This is not a reason or consideration for me d. Unsure / do not know <ol style="list-style-type: none"> 1. The cost of a device that can access the internet is too high for me 2. The cost of using the internet is too high for me (e.g. data top-up, app charges, monthly bills, travel to internet cafés) 3. I do not have access to a device that can use the internet 4. I do not have time to use the internet 5. Using the internet on my device uses too much battery 6. There is limited or no coverage to access the internet in my area 7. Using the internet on my device is too slow (e.g. connection speed) 8. There is not enough information written in my own language on the internet 9. I do not have time to learn how to use the internet on a device 10. I do not find the internet relevant enough for me (not useful or not interesting) 11. I have difficulties reading and writing <i>cont...</i> 	<p><i>[Moderator draws a circle on paper and writes "I do not use the internet as much as I would like because..." Explain to respondents that we're interested in all the reasons, however big or small, that might stop them from using the internet more than they currently do. It could be things that they know or do not know, people, things about their life in general, worries or concerns.]</i></p> <p><i>Moderator to populate barriers (in respondent's language) as 'legs' of a spider, (with the circle as the body, as respondents tell them the reasons. For illiterate respondents, use pictures too, but you may need to adapt the approach and wording.]</i></p> <p><i>Probe to make sure all possible reasons that respondents can think of are covered.]</i></p> <ul style="list-style-type: none"> • Let's talk more about each reason you've mentioned: what do you mean by that? What is the main obstacle? Why? How much of a factor are things like...³⁶ <ul style="list-style-type: none"> - Not having the right device? <i>[Explore the reasons for not getting the right device and any specific restrictions for female respondents.]</i> - Not knowing how to use the internet on your device, and/or not knowing how to use internet-enabled devices in general? <i>[Explore respondents' confidence and technical literacy, particularly women.]</i> - Family members / community / society not approving of the internet / internet-enabled devices? <i>[Explore social and cultural norms / perceptions of women using the internet versus men.]</i> - Other people restricting / controlling use of the internet? <i>[Explore gatekeepers, control and permission, particularly for women.]</i> - Other social and cultural norms and gender norms? <i>[Explore restricted mobility for women to travel to places to use the internet, internet cafés being seen as 'male spaces', etc.] cont...</i>

34. These questions are designed to capture the extent to which respondents face each of these barriers to increased internet use, and to understand which are greater barriers for women compared to men. The survey options and qualitative prompts have been suggested based on the most commonly identified barriers to increased internet use for women; however, the researcher may need to adapt these to the country being studied. For example, disapproval of family members may be a major barrier for women in Bangladesh, whereas in Zambia a more common barrier may be cost. Consequently, options and prompts can be amended as needed to suit the particular research context.

35. There are many potential responses to this question. The aim of this example is to provide an extensive list of options, but it may not be exhaustive. For example, access to ID documents is not listed here as a potential barrier. Some may be more or less relevant depending on the context, and piloting any questionnaire will help refine questions before full roll-out. It is important with questions like this the answer options are single-minded i.e. they don't cover two different points in one option, that is, they are mutually exclusive with no overlap, otherwise analysis will be difficult. This question can be simplified to have respondents just answer yes or no to each of the statements, but this will lose some of the nuance.

36. These prompts can be adapted to create additional qualitative probes if needed, depending on the country or context and the particular barriers women may face in that context.



RESEARCH TOPIC 8: Barriers to increased internet use

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
	12. I find it difficult to use a mobile phone / laptop / computer in general 13. I do not feel confident using the internet 14. I do not have the right skills 15. There is nobody to teach me or to help me to use the internet 16. My family doesn't approve of me using the internet 17. I am concerned that I would be contacted by strangers 18. I am concerned that using the internet might expose myself or my family to harmful content 19. I am concerned that my identity or other private information will be stolen or misused 20. Other (please specify)	<ul style="list-style-type: none"> - Cost, both for devices and accessing the internet? <i>[Explore gender differences in control of finances and financial decision making.]</i> - Understanding the different things that you can do on the internet? <i>[Explore perceptions about relevance or usefulness of the internet for women's lives versus men's lives.]</i> - Reading and writing ability? - The language of the content on the internet? - Security / safety / harassment? <i>[Explore in particular any perceptions of women's online safety versus men's, and what restrictions women may have because of this compared to men.]</i> - Privacy? <i>[Explore any concerns about this, and the cost barriers to mobile data for private browsing versus having free public Wi-Fi, but less privacy.]</i> • Is there anyone in your life who might encourage you to use the internet more or discourage you from using the internet? Who are they? <i>[Explore gatekeepers and social norms around women's use of the internet. Consider also exploring the impact of organisations and institutions like schools, government or local NGOs.]</i> • Do you think you do not use the internet more because you do not want to, or because you aren't able to? Why? <i>[Explore how female respondents perceive the internet and whether they are influenced by social and cultural norms for how and when women should (and should not) use the internet.]</i>



RESEARCH TOPIC 9: Aspirations for internet access and use

All aware	<p>MULTIPLE RESPONSE</p> <p>If you could use any device to access the internet that you do not currently use, which one would you most like to use?³⁷</p> <p>Please select all that apply:</p> <ol style="list-style-type: none"> 1. My own personal mobile phone 2. Someone else's mobile phone 3. Computer at home 4. Laptop at home 5. Tablet at home 6. Computer at work or place of education 7. Laptop at work or place of education 8. Tablet at work or place of education 9. Computer at family member / friend's house 10. Laptop at family member / friend's house 11. Tablet at family member / friend's house 12. Computer at internet café 13. Laptop at internet café 14. Tablet at internet café <p>cont...</p>	<ul style="list-style-type: none"> • If you could use any device to access the internet, which one would you most like to use? Why? • If you could use the internet anywhere, where would you most like to use it? Why? <i>[Explore location (home, school, etc.) and whether they would prefer to be alone or with others.]</i> • What do you think would need to change in your life so that you could use the internet how, when and where you wanted? <i>[Explore in particular any restrictions that female respondents may experience more than men, for example, cost, literacy and technical literacy, or social and cultural norms around women's internet access and use.]</i>
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37. Some respondents may not be aware of the difference between a computer, laptop or tablet, in which case the interviewer should be provided with a clear explanation as well as pictures of each type of device that can be shown to the respondent.



RESEARCH TOPIC 9: Aspirations for internet access and use

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
	15. Computer in public place (e.g. library, community centre) 16. Laptop in public place (e.g. library, community centre) 17. Tablet in public place (e.g. library, community centre) 18. Other (please specify) 19. Unsure / do not know <i>[exclusive]</i>	
All aware	<p>MULTIPLE RESPONSE</p> <p>If you could use the internet using any type of connection, which one would you most like to use?</p> <p>Please select all that apply:</p> <p><i>[Interviewer may need to be prepared to expand / explain the different connections/networks in more detail.]</i></p> <ol style="list-style-type: none"> 1. Mobile network using SIM card 2. Public Wi-Fi 3. Wi-Fi at home 4. Wi-Fi at place of work or education 5. USB dongle or modem 6. Fixed line telephone 7. Internet via an ethernet cable (i.e. a cable that you connect directly to your computer or laptop) 8. Other (please specify) 9. Unsure / do not know <i>[exclusive]</i> 	<ul style="list-style-type: none"> • If you could use any type of connection, for example public Wi-Fi or Wi-Fi at home to use the internet, which one would you most like to use? Why? <i>[Moderator could have show cards with examples of different types of internet connection and use them to prompt discussion.]</i> • What do you think would need to change in your life so that you could use any connection you like? <i>[Explore in particular any restrictions that female respondents may experience more than men, for example, costs, technical literacy, or social and cultural norms around women's internet access and use.]</i>
All aware	<p>MULTIPLE RESPONSE</p> <p><i>[This is a list of broad categories that can be adapted depending on areas of interest. If a more detailed list of activities is required, researchers can break the categories into individual questions to keep the list shorter.³⁸]</i></p> <p>If you could do anything online that you do not currently, what sorts of things would you like to do?</p> <p>Please select all that apply:</p> <ol style="list-style-type: none"> 1. Communication that is mainly 'one to one' (using instant messaging / chatting, sending / receiving emails, making video/voice calls) 2. Social / communicating with lots of people at once (sharing photos / videos / music on the internet, accessing social networks like Facebook) 3. Entertainment (e.g. playing games online, listening to radio or watching videos / TV / movies / music, reading about celebrities and gossip) 4. For medical / health and information 5. Information seeking (browsing the internet, reading the news or weather, reading sports updates and articles, researching and finding information for personal use) <p><i>cont...</i></p>	<ul style="list-style-type: none"> • What things would you like to do online that you currently do not? Why? • Why are you currently not doing these things? • What do you think would need to change in your life so that you could do all the things online that you want? <i>[Explore in particular any restrictions that female respondents may experience more than men, for example, literacy and technical literacy, or social and cultural norms around women's internet access and use.]</i>

38. For example, 'Communication', where options could include 'Using instant messaging / chatting (e.g. WhatsApp, Facebook Messenger, Gmail chat, Google Hangouts) / Sending and receiving emails / Making video or voice calls over the internet (using Skype, Viber, etc.)'. Another broad category is Social, where options could include 'Uploading photos, video or music to the internet / Writing my own blog / Visiting blogs or forums / Accessing social networks (e.g. Facebook, Twitter)'.

 RESEARCH TOPIC 9: Aspirations for internet access and use		
Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
	6. Education (e.g. online training courses, support with schoolwork) 7. Shopping (e.g. researching goods or ordering and purchasing goods online) 8. Banking and financial services (e.g. sending and receiving money) 9. Expressing and voicing opinions on issues you care about 10. Creating and sharing / publishing content that you have produced yourself (e.g. photos, blogs, videos, games, apps, social media content, online articles, news stories) 11. Looking for a job or career advice 12. Supporting your own business (e.g. advertising, contacting customers, buying and selling goods and services online, researching prices of goods) 13. Other (please specify) 14. Unsure / do not know <i>[exclusive]</i>	

 RESEARCH TOPIC 10: Perceptions of the internet		
All internet users	<p>SINGLE RESPONSE PER STATEMENT</p> <p><i>[The order of this list should ideally be varied between respondents to avoid order effects.]</i></p> <p>Let's talk about how using the internet has affected your life. How much do you agree or disagree with the following statements?³⁹</p> <ol style="list-style-type: none"> a. Completely agree b. Slightly agree c. Neither agree nor disagree d. Slightly disagree e. Strongly disagree <p>1. Social</p> <ol style="list-style-type: none"> 1.1 I find it easier to stay in touch with people 1.2 I have better access to entertainment (games, music, radio, etc.) 1.3 I feel that I pay less attention to my close family and friends <p>2. Income and finances</p> <ol style="list-style-type: none"> 2.1 I have more work / business opportunities 2.2 I am able to manage my money better 2.3 My income has increased 2.4 Using the internet makes me spend too much money <p><i>cont...</i></p>	<p><i>[Moderator asks respondents to complete a sentence (as many times as they like): "With the internet, YOU CAN... and I like that because..."</i></p> <p><i>Moderator hands out or shows paper copies with speech bubbles. Allow respondent to write their answer in the speech bubble(s). If there are any literacy issues, they may do it in their head and say their answer aloud, or the moderator can ask the respondent to only finish the sentence with things that are true for them personally – the best parts about using the internet that they really value.]</i></p> <ul style="list-style-type: none"> • Which of these is the most important for you? • Let's imagine that tomorrow I said you cannot ever connect to the internet again. Which of these things that you can do now would you miss the most? Why? • What wouldn't you miss about the internet? Why? <i>[Be mindful of factors that may affect female respondents more, such as online harassment, high costs of internet access and use, disapproval from gatekeepers, and specific internet sites and services.]</i>

39. This question is designed to capture the extent to which respondents perceive using the internet as having a positive or negative effect on their lives, and which effects are more positive or negative for women compared to men. Some respondents may find a three-point Likert scale easier to understand, rather than a five-point Likert scale. It is therefore possible to simplify this question to have three options for each of the statements (agree / neither agree nor disagree / disagree), but this will lose some of the nuance.



RESEARCH TOPIC 10: Perceptions of the internet

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
	<p>3. Access to services</p> <p>3.1 I can stay up to date with the latest news</p> <p>3.2 I have better access to health information and services</p> <p>3.3 I have better access to educational services and learning opportunities</p> <p>3.4 I have better access to government services</p> <p>4. Sense of well-being</p> <p>4.1 I have gained more respect in my community</p> <p>4.2 I have more confidence in myself</p> <p>4.3 I feel more independent</p> <p>4.4 I feel more able to express my opinion</p> <p>4.5 I feel more controlled by others</p> <p>4.6 I feel more stressed</p>	
Non-internet users who are aware of it	<p>SINGLE RESPONSE PER STATEMENT</p> <p><i>[The order of this list should ideally be varied between respondents to avoid order effects.]</i></p> <p>Let's talk about how you think using the internet might affect your life. How much do you agree or disagree with the following statements?⁴⁰</p> <ol style="list-style-type: none"> Completely agree Slightly agree Neither agree nor disagree Slightly disagree Strongly disagree <p>1. Social</p> <p>1.1 I would find it easier to stay in touch with people</p> <p>1.2 I would have better access to entertainment (games, music, radio, etc.)</p> <p>1.3 I would feel that I pay less attention to my close family and friends</p> <p>2. Income and finances</p> <p>2.1 I would have more work / business opportunities</p> <p>2.2 I would be able to manage my money better</p> <p>2.3 My income would increase</p> <p>2.4 Using the internet would make me spend too much money</p> <p>3. Access to services</p> <p>3.1 I would be able to stay up to date with the latest news</p> <p>3.2 I would have better access to health information and services</p> <p>3.3 I would have better access to educational services and learning opportunities</p> <p>3.4 I would have better access to governmental services</p> <p><i>cont...</i></p>	<ul style="list-style-type: none"> • What benefits do you think using the internet could bring you? • What negative effects do you think using the internet could have on your life? <i>[Explore factors that may affect female respondents more, e.g. increased online harassment, higher costs of internet access and use, disapproval from gatekeepers, suspicions of adultery.]</i>

40. This question is designed to capture the extent to which non-user respondents perceive the internet as having a potentially positive or negative effect on their lives if they were to start using it, and which effects are perceived as more positive or negative for women than men. Some respondents may find a three-point Likert scale easier to understand rather than a five-point Likert scale. It is therefore possible to simplify this question to have three options for each of the statements (agree / neither agree nor disagree / disagree), but this will lose some of the nuance.

 RESEARCH TOPIC 10: Perceptions of the internet		
Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
	<p>4. Sense of well-being</p> <p>4.1 I would gain more respect in my community</p> <p>4.2 I would have more confidence in myself</p> <p>4.3 I would feel more independent</p> <p>4.4 I would feel more able to express my opinion</p> <p>4.5 I would feel more controlled by others</p> <p>4.6 I would feel more stressed</p>	
All internet users	<p>SINGLE RESPONSE PER STATEMENT</p> <p><i>[The order of this list should ideally be varied between respondents to avoid order effects.]</i></p> <p>How much do you agree with each of these statements about how you feel about the internet in general?⁴¹</p> <ol style="list-style-type: none"> Completely agree Slightly agree Neither agree nor disagree Slightly disagree Strongly disagree <ol style="list-style-type: none"> I would feel lost without the internet I'd like to use the internet more, but I find it confusing I feel safe using the internet I trust the information I read on the internet The internet improves my life The internet sometimes feels like a waste of time Only certain types of people should use the internet Wives have a right to know what content their husbands look at on the internet Husbands have a right to know what content their wives look at on the internet It is not safe for women and girls to use the internet 	<ul style="list-style-type: none"> What do you think is good about the internet? <i>[Explore attitudes about things that are good for female users versus things that are good for male users.]</i> What do you think is bad about the internet? <i>[Explore the effect on relationships, sense of security and harassment, higher costs, etc. Also explore attitudes about the negative effects of the internet on female users versus male users.]</i> How does the internet compare as a source of information to other sources you might use (such as TV or radio or other people in your community)? <i>[Explore in particular trust and perceived reliability of information.]</i> Is there a particular 'type' of person / certain people who use the internet? Who? Why do you say this? <i>[Explore attitudes about women using the internet versus men.]</i> Do you think people should use it in different ways depending on who they are? <i>[Explore perceptions of what women should and should not use the internet for, and attitudes about men controlling women's access (and what content they access).]</i> Are there any issues or challenges that either you or others in your community might face because of using the internet? <i>[Explore any concerns about suspected adultery, addiction, spending too much time online, etc. Specifically explore attitudes about challenges for female users versus challenges for male users.]</i>

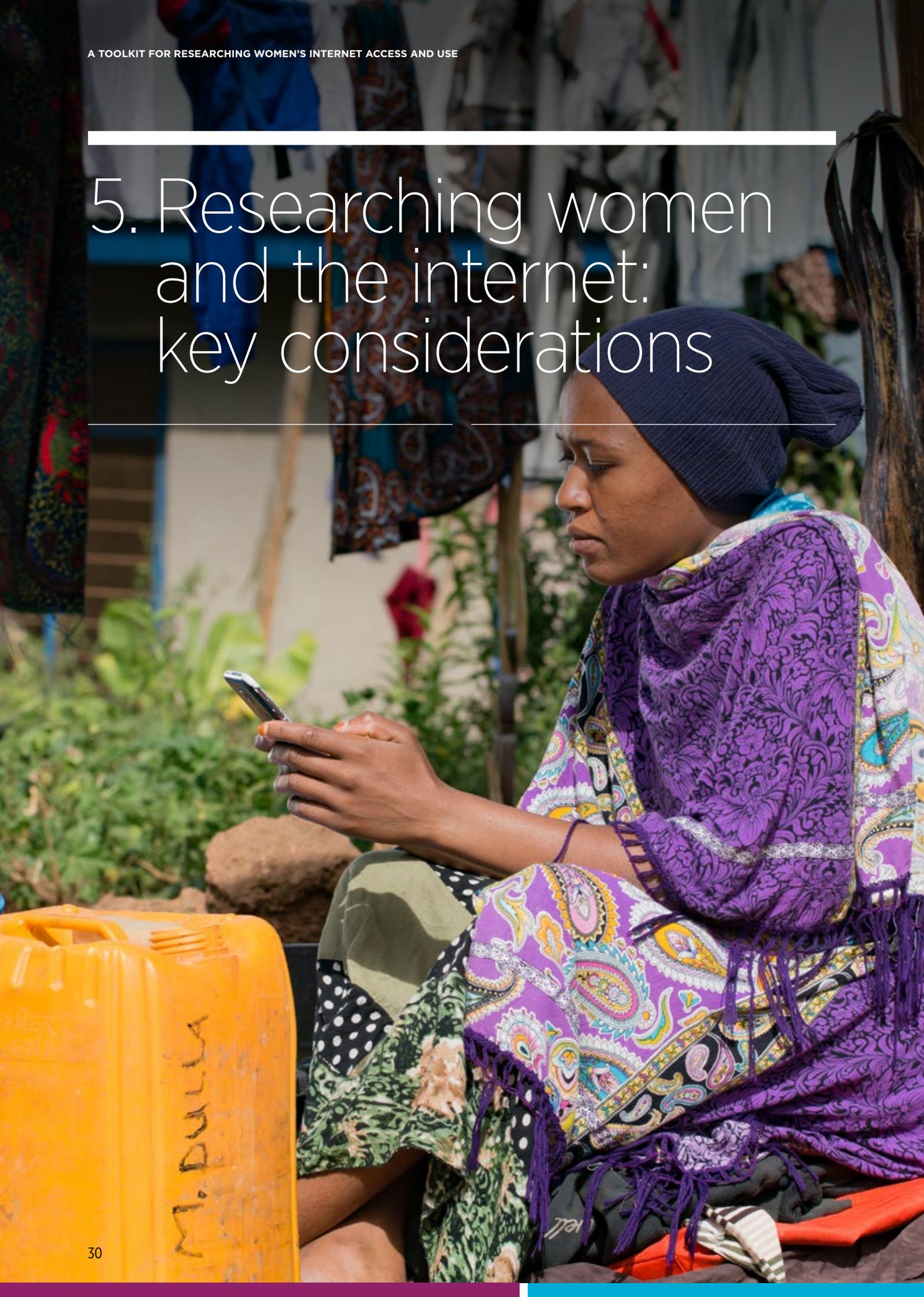
41. A perception for some, especially in low- and middle-income countries, is that the internet is not as safe for women as it is for men, with perceived higher levels of online harassment for women than men, and gatekeepers worrying about male strangers contacting their daughters/wives online or that their daughters/wives are having secret online relationships. These perceptions can sometimes lead to male gatekeepers controlling women's internet access (and which content they access), but often this view is shared by female respondents, too. These quantitative survey questions and qualitative prompt questions are designed to explore these themes and attitudes in more detail, including whether there are any differences in attitudes between male and female respondents.



RESEARCH TOPIC 11: **Online safety and harassment experiences or concerns**

Respondent type	Example questions <i>[Considerations for interviewer / moderator are in purple italics]</i>	
	Quantitative	Qualitative
All internet users	<p>SINGLE RESPONSE PER STATEMENT</p> <p>I'd now like you to think about experiences that you have had when using the internet. In your use of the internet, have you ever experienced any of the following?</p> <ol style="list-style-type: none"> Always Often Sometimes Never Unsure / do not know <ol style="list-style-type: none"> Harassment, offensive language or other kinds of violent messages, threats or comments Direct attacks or threats of violence in response to any of your online activities Your website, email or social networking account being hacked or manipulated Exposure to content that you feel is explicit or offensive or inappropriate (e.g. nude images or racist comments) Someone revealed some kind of personal information without your consent 	<ul style="list-style-type: none"> How do you feel when using the internet? Do you have any concerns? <i>[Explore safety concerns about online / social media harassment or bullying; online stalking or use of spyware; misuse of personal data or images; identity theft; fraud; scams / viruses; or exposure to explicit or inappropriate content.]</i> Have you ever experienced any of these things personally? Do you know anyone else who has? Does it change what you do online? Why? Does it change how other people think about you using the internet? <i>[Explore whether gatekeepers are controlling women's access or if there is general community disapproval.]</i> Do you think that when it comes to concerns about safety, women are more affected than men? Why? What do you think that you can do to protect yourself from these kinds of threats? <i>[Explore understanding of privacy settings, etc.]</i>
Non-internet users who are aware of it	<p>SINGLE RESPONSE PER STATEMENT</p> <p>How much do you agree or disagree with the following statement?</p> <ol style="list-style-type: none"> Completely agree Slightly agree Neither agree nor disagree Slightly disagree Strongly disagree <ol style="list-style-type: none"> I would be concerned about my privacy online I am concerned that I would be exposed to content that is explicit, offensive or inappropriate (e.g. nude images or racist comments) I am concerned that I would receive unwanted messages from strangers My family is unhappy with me using the internet 	<ul style="list-style-type: none"> Do you have any concerns that prevent you from using the internet? <i>[Explore safety concerns about online / social media harassment or bullying; online stalking or use of spyware; misuse of personal data or images; identity theft; fraud; scams / viruses; or exposure to explicit or inappropriate content.]</i> Do you know anyone who has experienced any safety or harassment problems when using the internet? What happened? What did they do about it? Does it change how other people think about you using the internet? <i>[Explore whether gatekeepers are controlling women's access or whether there is general community disapproval.]</i> Do you think that when it comes to concerns about safety, women are more affected than men? Why? What do you think that you can do to protect yourself from these kinds of threats? <i>[Explore understanding of privacy settings, etc.]</i>

5. Researching women and the internet: key considerations



When conducting research with women, especially studies that focus on collecting gender disaggregated data, particularly in low- and middle-income countries, there are additional considerations that should be taken into account to ensure the project produces robust results.

This toolkit does not provide detailed methodological guidelines for undertaking research. However, it is vital to ensure that research studies are robust and representative of the population being investigated. This can be done through key aspects of the study design. For example, all research projects, whether they have a focus on gender or not, need to have clear objectives, appropriate methodology to meet these objectives and appropriate sampling design. They must also have quality assurance mechanisms in place and adhere to ethical guidelines. The appendix includes a checklist of important considerations when planning a research study, as well as a list of resources that researchers can draw on for more advice.

Planning research involving women, particularly in low- and middle-income countries, requires paying attention to the following:

Considerations when selecting respondents

- **Keep in mind that women are a heterogeneous group.** Women's attitudes and internet use will vary depending on socio-demographic and cultural factors. To explore a topic in depth, you will need to gather data on women from different ages, religions and backgrounds. For example, if researching internet access and use among rural women in India, ensure that rural women from different states, with different local languages, religions, castes and education levels, are included in the sample design. If using focus groups be aware of potential power dynamics between these groups (and it can be preferable to keep them separate).
- **Ensure that your sample is representative, even of harder to access groups of women.** A sample should be representative of the population relevant to the research question, not just those that are easiest to find to interview. Low-income and/or less educated women can be difficult groups to access for research but are also highly important to include (if relevant to a study) as they are the most likely
- not to use the internet. For quantitative research, when trying to guarantee inclusion of certain groups, consider doing some initial data collection (a 'soft launch') and then check how representative your data is compared to respected third-party sources before a 'full launch'. For example, checking the percentage of less educated rural women in the soft launch sample. Ensuring an adequate sample can be complex and require more time than anticipated.
- **Collaborate with local organisations to reach female respondents.** Depending on the social norms of a community, it can be harder to recruit some female respondents than others. For example, doing research with unmarried women in areas with strong social norms can be more challenging, as you may need permission from fathers or other gatekeepers. Collaborating with local organisations like NGOs that have built strong relationships and trust within communities can help you reach these respondents.
- **Consider recruiting female friendship pairs for qualitative research.** Recruiting female respondents who are friends for in-depth qualitative interviews (rather than recruiting women to do individual in-depth interviews) can make it easier for women to attend, for example, for safety and security reasons when walking to the research venue or back home.
- **Cater to both literate and illiterate respondents.** Women often have lower levels of education and literacy than men, so research tools should be designed to be inclusive and cater to both literate and illiterate respondents. For example, use pictures and visuals if your research requires respondents to complete anything themselves.⁴²
- **Do not forget the men.** Always collect data from men as well as women, to understand gender differences, social norms and to triangulate data.⁴³

42. See, for example, GSMA mHealth and Frog Design, 2017, "mHealth Design Toolkit", <https://www.gsma.com/mobilefordevelopment/programmes/mhealth/mhealth-design-toolkit>.

43. To triangulate data means to look at data from different points of view and in different ways to understand it and increase confidence in the results. This often means using multiple methods (e.g. quantitative and qualitative) and different sources (e.g. talking to men as well as women).

Considerations when selecting research locations

- **Conduct research close to women's homes.** Women may be more restricted in their ability to travel to research venues than men. They may also have less free time, greater responsibility for children, less spare money for transport or it may not be acceptable for them to travel without a male chaperone, so try to conduct research close to women's homes. Consider the appropriateness of interviewing women in their own homes; it may be easier to recruit them for in-home interviews, but they may also not be able to speak as freely at home where other household members could be listening in.
- **Make sure there are appropriate facilities for women at the research venue.** For example, separate (and decent) male and female toilets. There should also be separate waiting areas for those accompanying the female respondents (e.g. husbands or parents). Be prepared for female respondents to bring babies or young children with them to the research venue, and consider providing childcare facilities so that respondents are not distracted during research sessions.
- **Make sure the research location is safe and secure.** The research location (if not their home) should be widely viewed, both by the community and respondents, as not only a safe place for women and a place where female respondents will feel at ease, but also a venue that will meet with approval from gatekeepers (e.g. husbands or parents). You may need the permission of community leaders to carry out research in some locations.

Considerations for a successful interview

- **Conduct research at a time that is convenient for women.** Women often have more constraints on their time than men, and may have more household responsibilities at certain times of day. Try to conduct research at a time and for a duration that is convenient for the female respondents, so that they are not distracted and their routines are not disrupted.

- **Use the local language / dialect.** Moderators and/or interviewers should use the local dialect, as women tend to have lower education levels and may not speak the 'official' business language. Avoid jargon they might not understand or that might not translate well. For example, in some languages there is no direct translation for 'technology'. Build in some time before the interviews to ensure careful translation and testing of the questions with local experts and communities.
- **Bring devices to the research location — do not assume female respondents will have them.** If your research with women requires any use of devices, bring everything you need with you (e.g. tablets, smartphones or dongles). As women have lower levels of internet access and use than men (and are more price sensitive and sometimes have restricted purchasing power), anticipate that they will not have their own devices and will be more concerned about using their own airtime / data. Offer to pay for any mobile broadband data they may need to use. If you want women to try out internet products, services or devices, ensure that any device you bring is a model that female respondents are likely to be familiar with.
- **Be aware of social and cultural norms.** Consider who else might need to be in the room and how this will affect your results. If asking questions about gendered roles or power dynamics, it is often better to have separate male and female surveys, interviews or focus groups.⁴⁴ However, in areas with strong patriarchal social norms, be prepared to have male gatekeepers present (or parents, if talking to younger or unmarried women) and be aware of how this may affect what respondents say. It may be necessary to ask a gatekeeper's permission to interview a female respondent.

- **Be sensitive about personal topics.** Moderators/ interviewers need to advise the respondent that there is no obligation for them to answer every question and that they can stop the interview at any time. This should be included in the consent form that respondents sign when they are recruited and subsequently agree to participate in the research.

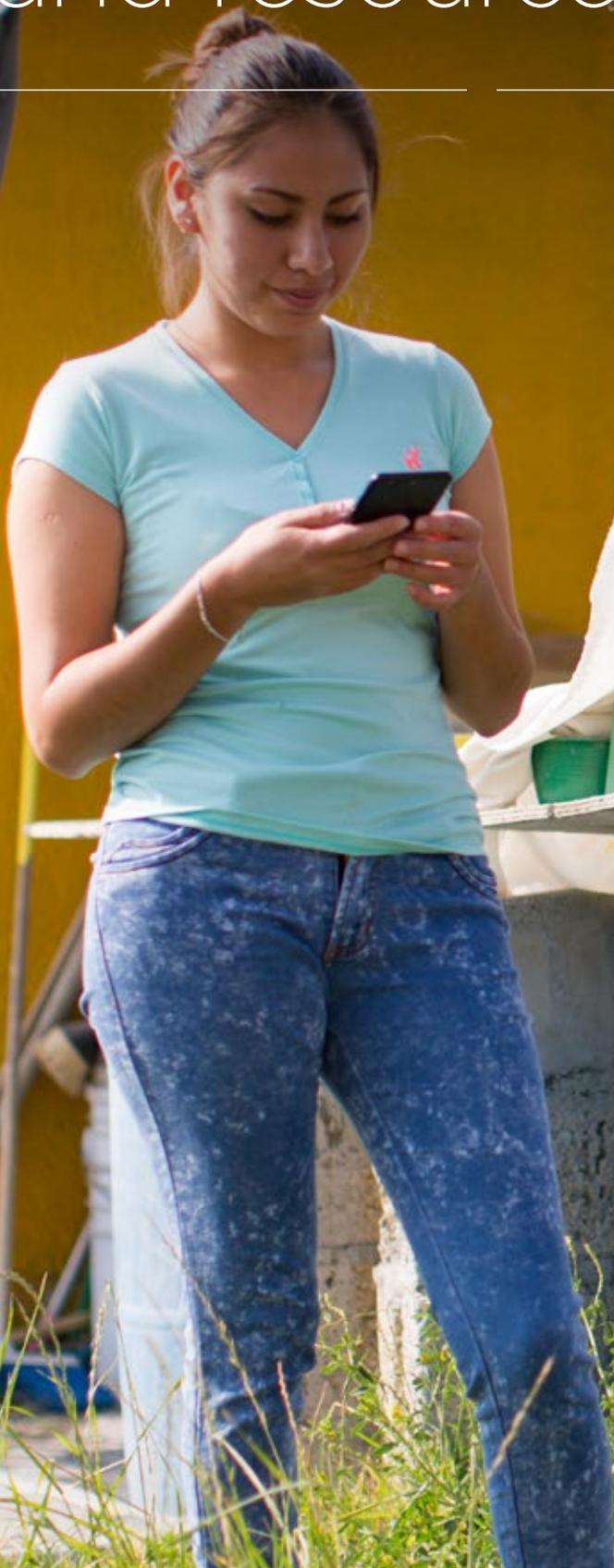
44. A focus group is a qualitative research method that brings together a group of people (often six to eight) to ask questions and discuss as a group. Interaction between group members is part of the process and should be encouraged.

- **Use female moderators and/or interviewers to talk to female respondents.** Think carefully about age and cultural dynamics. For example, if you are doing qualitative research with adolescent girls, it may be best to have a moderator who is only slightly older than the respondents (like an 'older sister' figure). If you are doing research with older women, you may consider having a more mature female moderator.⁴⁵
- **Ensure everyone attending the research fieldwork dresses appropriately.** Moderators and/or interviewers, recruiters, translators and observers should wear appropriate clothes so that they do not make the respondents uncomfortable (or attract unwanted attention from others in the community).



45. This is a suggested best practice where possible, but for some communities it may be harder to apply since researchers may need to interview a broad spectrum of respondents, for example, those who are younger and older or men and women. However, using female moderators or interviewers is critical when conducting research with 'hidden' or hard-to-reach female populations, such as women in migrant communities, homeless women, or members of the LGBTIQ (Lesbian, Gay, Bisexual, Transgender, Intersex and Questioning) community.

6. Additional reading and resources



The toolkit builds on previous efforts by other organisations to develop research approaches and ICT indicators to better understand women's internet access and use. More information, example research tools and advice can be found in the sources below as well as others not listed here.

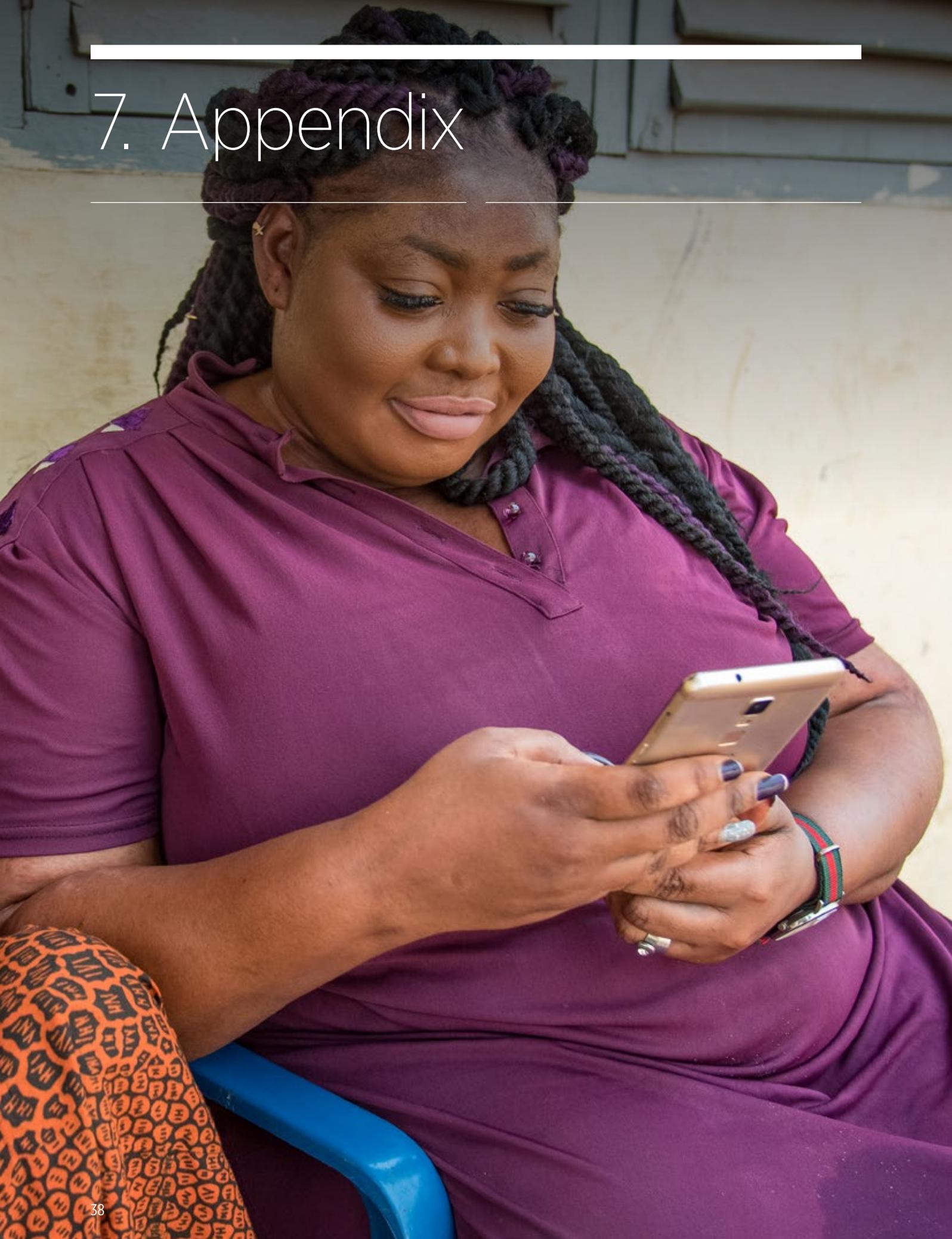
Reports on women's internet access and use				
Organisation	Title	Link	Description	Particularly useful for...
APC	Mapping Research in Gender and Digital Technology (2017)	www.apc.org/en/pubs/mapping-research-gender-and-digital-technology	Study mapping current knowledge in the field of gender and digital technology	<ul style="list-style-type: none"> ✓ Summary of trends, priority issues and changing contexts in gender and ICT access
GSMA	Bridging the Gender Gap: Mobile Access and Use in Low- And Middle-Income Countries (2015)	https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/Connected-Women-Gender-Gap.pdf	Large-scale research report that examines how many women in low- and middle-income countries own and use mobile phones	<ul style="list-style-type: none"> ✓ Data for women's mobile phone access and use in 11 countries ✓ Deeper understanding of the barriers to mobile access and use
IGF Best Practice Forum On Gender	Gender And Access: Overcoming Barriers To Enable Women's Meaningful Internet Access (2016)	http://www.intgovforum.org/multilingual/index.php?q=filedepot_download/3406/437	Report that maps initiatives to address the different gender digital divides around the world, and help stakeholders better understand women's and girls' diverse needs in accessing and using the internet	<ul style="list-style-type: none"> ✓ In-depth understanding of barriers to women having meaningful access to, and use of, the internet
Research ICT Africa	Internet Use Barriers and User Strategies: Perspectives from Kenya, Nigeria, South Africa and Rwanda (2017)	www.researchictafrica.net/docs/RIA_2016_Comparative_FGD_study_Final_Web_version.pdf	Report focused on both users and non-users of the internet in Kenya, Nigeria, South Africa and Rwanda. It investigates both drivers and barriers to usage, as well as a focus on affordability and the impact of strategies to entice usage, including subsidised data	<ul style="list-style-type: none"> ✓ An African perspective ✓ In-depth examination of drivers and barriers to usage, especially affordability ✓ Understanding users' data-saving strategies
The Web Foundation	Women's Rights Online: Digital Gender Gap Audit (2016)	https://webfoundation.org/research/digital-gender-gap-audit/	Report that assesses the policy efforts and progress made in 10 countries around women's access and use of internet using 14 indicators	<ul style="list-style-type: none"> ✓ Baseline data for women's internet access and use in 10 countries ✓ Scorecard tool that can be adapted and used in other countries to measure women's internet access and use
USAID	Connecting the Next Four Billion: Strengthening the Global Response for Universal Internet Access (2017)	https://www.usaid.gov/sites/default/files/documents/15396/Connecting_the_Next_Four_Billion-20170221_FINAL.pdf	Report that examines primary barriers to internet access by reviewing the landscape of existing efforts and actors	<ul style="list-style-type: none"> ✓ Literature review of barriers to internet use in recent years ✓ Deeper understanding of the activities of a range of key actors and initiatives in the access space

ICT indicators				
Organisation	Title	Link	Description	Particularly useful for...
Partnership on Measuring ICT for Development	Core List of ICT Indicators (2016)	https://www.itu.int/en/ITU-D/Statistics/Documents/coreindicators/Core-List-of-Indicators_March2016.pdf	Core list of 60 indicators that can be used to form the basis of ICT data collection in countries	<ul style="list-style-type: none"> ✓ Thorough compilation of ICT indicators to measure internet access and use
UNCTAD	Measuring ICT and Gender: An Assessment (2014)	http://unctad.org/en/PublicationsLibrary/webdtlstict2014d1_en.pdf	Report that builds on the 2013 core list of ICT indicators, identifying which existing ICT indicators are currently gender disaggregated	<ul style="list-style-type: none"> ✓ Compilation of gender-disaggregated ICT indicators to measure internet access and use ✓ Deeper understanding of specific needs for each gender and ICT indicator
UNESCO	UNESCO's Internet Universality Indicators (<i>in progress</i>)	https://en.unesco.org/sites/default/files/iu_indicators_phase_2.pdf https://en.unesco.org/internetuniversality	At time of publication, these indicators were in development. UNESCO plans to pay particular attention to indicators concerned with gender inclusion and the inclusion of children and young people.	
Survey tools				
CIGI-Ipsos	Global Survey on Internet Security and Trust (2017)	https://www.cigionline.org/internet-survey	Annual survey that reaches over 20,000 users in 24 countries.	<ul style="list-style-type: none"> ✓ Data from 24 countries on perceptions of internet trust, security and privacy over the last three years
GSMA	Bridging the Gender Gap: Mobile Access and Use in Low- And Middle-Income Countries: Survey tools (2015)	https://www.gsma.com/mobilefordevelopment/programme/connected-women/survey-tools/ https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/03/GSMA_Bridging-the-gender-gap_Methodology3.2015.pdf	Methodology and research tools (focus group discussion guides and questionnaires) for the 2015 GSMA Connected Women research study available in a variety of languages	<ul style="list-style-type: none"> ✓ Survey outlines and methodology for women's mobile access and use ✓ Qualitative focus group discussion guides and key informant interview scripts ✓ Extrapolation methodology for estimating the gender gap
IPA	Poverty Probability Index (updated 2016)	https://www.povertyindex.org/	Standardised poverty measurement tool with specific survey templates for 60 low- and middle-income countries	<ul style="list-style-type: none"> ✓ Succinct survey templates and methodologies for demographic data ✓ Country-specific survey template and methodologies ✓ Data interpretation guides

Survey tools				
Organisation	Title	Link	Description	Particularly useful for...
Research ICT Africa	After Access Household, Individual and Business Surveys 2017/18 (2017)	https://researchictafrica.net/2017/08/04/beyond-access-surveys-questionnaires-methodology-and-timeframe/	Survey templates designed to collect comparable data in seven African countries	<ul style="list-style-type: none"> ✓ In-depth survey template for households, individuals and informal businesses to collect data on internet access and use
USAID	Gender and ICT Survey Toolkit (2017)	https://www.usaid.gov/sites/default/files/documents/15396/Gender_and_ICT_Toolkit.pdf	Toolkit for collecting gender-disaggregated data at a community/sub-national level, that primarily focuses on mobile	<ul style="list-style-type: none"> ✓ Succinct survey templates for women's mobile internet access and use ✓ Qualitative focus group discussion guides to understand women's mobile internet access and use ✓ Data interpretation guides



7. Appendix



Planning your research: generic considerations for robust and reliable results

Below is a checklist of important considerations for the design of any research project.

Set-up

-
- ✓ **Set clear research objectives.** These should be clearly defined, specific and unambiguous. Your research objectives are the foundation of your study and any flaws will affect the validity and reliability of the results. The purpose of your research, whether it is to describe (e.g. understanding the characteristics of women who use the internet), make an association (e.g. is there a link between barriers to the internet and perception of the internet), compare (e.g. are there differences in internet use between men and women) or predict (e.g. does internet access contribute to women's empowerment), will help you to identify the right study design, research methods and tools.
-
- ✓ **Choose research method(s) to meet the research objective(s).** Different methodologies collect different kinds of information, so be clear about what your chosen methodology can and cannot measure. For example, quantitative methods would be appropriate if the research objective is to measure indicators on internet use, while qualitative research would be more appropriate when the research objectives are to understand the 'why' and 'how' of internet behaviour. Depending on the research objectives, a mixed methods approach may be the best approach, for example, to both quantify the barriers to internet access and understand the interplay between the barriers and the influences on them.
-
- ✓ **Define your sample.** Who is the target population from which the sample will be drawn and what sub-segments will need to be confidently analysed (e.g. young rural women versus young urban women)? The sample needs to be of an appropriate size to produce results that can be applied to a larger group (the population) to create generalisable learnings.⁴⁶ For quantitative research, sample sizes must be large enough for results to be statistically significant. How respondents are sampled directly influences both the extent to which results can be generalised and the validity of a study's findings.⁴⁷ For example, to conduct quantitative research which has the objective of being truly representative of a wider population, stratified random sampling would be the appropriate sampling technique.
-
- ✓ **Adhere to ethical guidelines.** All research studies should adhere to ethical and quality standards to ensure the privacy and confidentiality of data and participants, and to protect the dignity and integrity of all involved. Compliance with national laws on research, such as age and ability-appropriate consent processes, should be closely observed. Prior to undertaking research activities, ensure that participants have the information they need to make an informed decision to participate in the research and their willingness to be recorded or have their picture taken. Pseudonyms or codes should be used during data collection and during data analysis, and any interview recordings should be stored separately from records and the profile information of the participants. Mechanisms should also be put in place to hear complaints at any level of the research process related to privacy, appropriation and inappropriate conduct. When researching gender and related topics (e.g. the impact of social norms on permission to use the internet), any data collected may be sensitive and particular care should be taken to ensure the research is conducted ethically.
-
- ✓ **When interviewing minors, check what permissions are needed.** Depending on the country and local context, you will need to obtain informed consent from parents or guardians when conducting research with adolescents or children.

46. For sampling approach guidance, see, for example, <https://researchforevidence.fhi360.org/pathway-sampling-success> or <http://www.betterevaluation.org/en/plan/describe/sample>. For quantitative sample size calculators, see, for example, <https://surveysystem.com/sscalc.htm>. For qualitative sample size guidance, see, for example, <https://researchforevidence.fhi360.org/riddle-me-this-how-many-interviews-or-focus-groups-are-enough>

47. This is called the sampling procedure. In quantitative research, the aim is to have a sample that will be representative of the population. For more details on sampling techniques, see for example: <https://blog.socialcops.com/academy/resources/6-sampling-techniques-choose-representative-subset/>

Data collection

- ✓ **Ensure quality assurance mechanisms are in place.** Successful results will depend on the quality of the project implementation. It is critical to have quality assurance mechanisms in place for all activities for the duration of the research. These include, but are not limited to: establishing protocols for field work; introducing quality control through, for example, spot checks, accompanied interviews or telephone back checks; and reviewing incoming data.
-

Also consider:

- **Briefing and training moderators and/or interviewers.** Practise any surveys or discussion guides with them and ensure they are clear on the overall study objectives, design and research tools to minimise flaws in data collection.
- **Piloting your research tools.** Try out any research tools with a small group of both women and men (who are similar to the actual women and men to be researched) to test that they are suitable (e.g. wording, translations, overall question flow, length)

Data analysis and reporting

- ✓ **Clean and edit data prior to analysis.** To ensure data quality and to prepare data for analysis, the raw datasets and/or transcripts need to be checked for duplicates, errors, inconsistencies and missing data.
 - ✓ **Organise the data.** Code and analyse the data to summarise trends and look for patterns.⁴⁸
 - ✓ **Interpret the data.** It is important to be cautious about claims made from the results and what can be extrapolated. Much of this depends on a robust methodology. It is also important to interpret the data in light of external factors (e.g. political unrest, governmental decree on internet services).
 - ✓ **Consider dissemination of the results.** If possible, disseminate the findings of the study (whether internally or publicly). Sharing gender-disaggregated data will help to highlight the issue of the gender gap in internet access and use.
-

More information and advice can be found in the sources opposite as well as others not listed here

48. A useful starting point when deciding on data analysis options: http://www.betterevaluation.org/en/plan/describe/look_for_patterns

Guidelines for conducting research				
Organisation	Title	Link	Description	Particularly useful for...
Access Alliance Multicultural Health and Community Services	Everyone Can Do Research. A Plain Language Guide on How to Do Research (2013)	http://accessalliance.ca/wp-content/uploads/2016/12/Everyone-can-do-research-toolkit-May-2013.pdf	Toolkit for understanding what research is and an introduction to the different phases and components of research	✓ Advice on how to design a research project for people new to research
Graham, A., Powell, M., Taylor, N., Anderson, D. & Fitzgerald, R	Ethical Research Involving Children (2013)	https://childethics.com/ethicalguidance/	Guidance on specific considerations, challenges and questions that arise across unique and diverse research contexts involving children	✓ Understanding, planning and conducting ethical research involving children and young people in any geographical, social, cultural or methodological context
Kumar, R.	Research Methodology: A Step-By-Step Guide for Beginners (2011)	http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit_Kumar-Research_Methodology_A_Step-by-Step_G.pdf	Research methodology guide	<ul style="list-style-type: none"> ✓ Detailed guidelines on how to conduct research ✓ Understanding best practices in research approaches and methodologies to get robust, high-quality data
Research ICT Africa	Survey Methodology (2017)	https://www.researchictafrica.net/publications/Other_publications/2017_RIA_Survey%20Methodology.pdf	Rigorous, cost-effective household and individual survey methodology applied in Nigeria	✓ Providing an example of the steps involved for random selection of individuals, households and informal businesses
Responsible Data	The Hand-book of the Modern Development Specialists. Chapter 2c 'Sharing data: What To Do with Your Processed Data' (2016)	https://the-engine-room.github.io/responsible-data-handbook/chapters/chapter-02c-sharing-data.html	Guidelines for sharing and publishing data	✓ Examples of tools and case studies relevant for researchers interested in sharing data
WHO	Ethical and Safety Recommendations for Intervention Research on Violence against Women (2016)	http://www.who.int/reproductivehealth/publications/violence/intervention-research-vaw/en/	Guidance on how best to address questions of ethics and safety for researchers working on violence against women	<ul style="list-style-type: none"> ✓ Understanding how researchers can safely approach selection, recruitment and follow-up of participants in a study to evaluate an intervention to prevent violence ✓ Understanding how researchers maintain the confidentiality and safety of women while including men in the research



Demographic and social data collection⁴⁹

This section outlines examples of quantitative questions to capture respondents' socio-demographic details. These can then be used for analysis with other answers and to create profiles of sub-groups.

The suggested list of answers to the questions for each topic below are generic and should be adapted to the local context. It is good practice, where possible, to align them with brackets used

by respected third party sources, for example, the national statistics office or World Bank data on the country where research is being conducted. Alignment with third-party sources will also help to confirm whether the data is representative and provide points of comparison.

For inspiration on additional country-appropriate socio-demographic questions, the Poverty Probability Index (PPI) has standardised questions for 60 countries.⁵⁰

Topic area	Example questions <i>[Considerations for interviewer are in blue italics]</i>
GENDER 	<p>SINGLE RESPONSE</p> <p>What is your gender?</p> <ol style="list-style-type: none"> Female Male Transgender Other Prefer not to say
AGE 	<p>SINGLE RESPONSE</p> <p>What is your age?</p> <ol style="list-style-type: none"> <18 years 18-24 years 25-34 years 35-44 years 45-54 years 55-64 years 65 years and above Prefer not to say Unsure / do not know
EDUCATION 	<p>SINGLE RESPONSE</p> <p><i>[Add specific definitions for each level of education for your country or context]</i></p> <p>What is the highest level of education you have ever attended (but not necessarily completed)?</p> <ol style="list-style-type: none"> Primary school Secondary school Higher education Non-standard curriculum No education Other (please specify) Prefer not to say Unsure / do not know

49. Affordability is a key barrier to internet access and use for women, therefore, it is very important to understand the socio-economic status of the respondent. While asking direct questions on income and expenditures can be difficult and unreliable, several variables such as occupational status, main source of income and household assets from the PPI, can serve as indicators of socio-economic status.

50. A note on the PPI: using standardised methodologies alongside standardised demographic questions can give a good idea of poverty outreach (that is, the proportion of people living below the poverty line). The PPI can also help to measure the likelihood of individual households living below or above the poverty line (i.e. poverty likelihood), but it cannot measure whether an individual or their household is actually living below or above the poverty line.

Topic area	Example questions <i>[Considerations for interviewer are in blue italics]</i>
<p>LITERACY</p> 	<p>SINGLE RESPONSE</p> <p>Which of the following best describes your reading and writing skills?</p> <ol style="list-style-type: none"> 1. I have no difficulties reading and writing 2. I have some difficulties reading and writing 3. I have great difficulties reading and writing 4. I am unable to read or write 5. Prefer not to say 6. Unsure / do not know
<p>MARITAL STATUS</p>  	<p>SINGLE RESPONSE</p> <p>What is your marital status?</p> <ol style="list-style-type: none"> 1. Single / never married 2. Married 3. Living with partner 4. Divorced or separated 5. Widowed 6. Other (please specify) 7. Prefer not to say 8. Unsure / do not know
<p>OCCUPATION</p> 	<p>SINGLE RESPONSE</p> <p>Which one best describes your current occupation status?</p> <ol style="list-style-type: none"> 1. Employed with a salary (full time / part time) 2. Self-employed / business owner 3. Student (full time / part time) 4. Housewife / househusband 5. Not currently working because of illness or disability 6. Unemployed / not currently working (in between jobs / looking for a job) 7. Military 8. Retired 9. Other (please specify) 10. Prefer not to say 11. Unsure / do not know <p>SINGLE RESPONSE</p> <p><i>[For those who answer 'yes' to code 1 or 2 (employed or self-employed)]</i></p> <p>Are you the primary / main income earner in your household?</p> <ol style="list-style-type: none"> 1. Yes 2. No 3. Prefer not to say 4. Don't know

You may also want to consider collecting additional demographic data depending on the objectives of the research, the types of analysis you want to conduct and the sort of information you are interested in, including:

- Number and age of children in the household
- Gender ratio of household (number of men versus women) and sex of the head of the household
- Ethnicity
- Religion
- Class
- Caste
- Community
- Main source of income of the respondent (e.g. sale of crops, full-time salary, remittances)
- Household income
- Household assets (e.g. TV, radio, car)
- Main source of fuel / whether the household has electricity



For more information on the GSMA
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