

NEW READERS RESEARCH

Highlights from Nigeria & India



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by Reboot & the Wikimedia Foundation



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Project Context

The Wikimedia Foundation's (WMF) New Readers project seeks to understand potential Wikimedia readers in countries where access to the internet is quickly growing. It is a collaboration between the WMF's Design Research, Reading, Global Reach, Communications, and Community Engagement teams. More information on the project can be found at https://meta.wikimedia.org/wiki/New_Readers.

This presentation summarizes key findings from New Readers research conducted in Nigeria and India, from May to June 2016. It also outlines opportunities identified through research that can help Wikipedia grow its global readership.

This presentation was prepared by Reboot (<http://reboot.org>), a social impact firm dedicated to inclusive development. Reboot led the research in Nigeria and India, in collaboration with WMF. Full field data from those studies has been shared with WMF.

Acknowledgments

Reboot is grateful to the Wikimedia Foundation team for their passion and partnership throughout this project. Special thanks to Toby Negrin, Abbey Ripstra, Anne Gomez, Zachary McCune, Jack Rabah, and Smriti Gupta for their close collaboration. Throughout our 150+ research activities, over 19 weeks, across 4 time zones, in 3 continents, and over too many sleep-deprived field days, we were thankful for your energy and good humor.

We're deeply appreciative of the guidance and support of many other Wikimedia colleagues including Katherine Maher, Adele Vrana, Dan Foy, Joe Sutherland, Jorge Vargas, Jon Katz, and Asaf Bartov. It was a true pleasure learning with and from you all.

Thank you to all our research participants in Nigeria and India, for letting us into your lives and sharing so openly with us. We are excited to see your contributions help advance a world where every human can freely share in the sum of all knowledge.

Finally, hats off to the Reboot team and partners who contributed to this work: Nicole Anand, Panthea Lee, Adam Talsma, Nonso Jidefor, Patrick Ainslie, Adam Parker, Tahir Sherriff, Adeola Ojebiyi, Angela Ogbu, Satyarupa Shekar, Madonna Thomas, Pavithra Sriram, Annie Vincent, Nina Kiernan, Georgette Stewart, Lauren Gardner, and Emily Herrick. Thank you for your dedication to helping all people share their stories and shape their worlds.

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Research Objectives & Key Themes



Objectives & Priorities

In the priority countries (Nigeria and India), this project sought to understand...

- Potential (as well as current) users':
 - Needs for info seeking, especially online
 - Habits for info seeking online, and for interacting with Wikipedia
 - Existing sources of information and why they are used and trusted
- Existing perceptions and knowledge of Wikipedia
- How current Wikipedia functionalities support or inhibit online learning

In order to identify...

- Products and features that can attract and engage new readers
- Effective distribution channels, messaging, and partnerships to increase readership

Full set of project objectives can be found at https://meta.wikimedia.org/wiki/New_Readers/Priorities



Key Research Themes

The project pursued five key research themes:

1. General information seeking and learning
2. Internet usage (web and mobile)
3. Online information behaviors
4. Awareness of Wikipedia
5. Use of Wikipedia

Under each theme were specific lines of inquiry defined at project inception, as well as those added during country research, as findings emerged. Across all themes, the role of language was a cross-cutting line of inquiry. Due to Wikipedia's global reach, and the diversity of populations and languages within national markets, research sought to understand how people's language abilities impact how they seek information and use Wikipedia.





Theme 1:

General Information Seeking & Learning

How do people look for information & learn?

- How do people find the information that they need for their i) day-to-day life, ii) education, and iii) work? What information is hardest to find?
- How do people come to trust information? Why do they trust some information and not others?
- How do people develop new behaviours around information—seeking and learning?





Theme 2:

Internet Usage, Web & Mobile

How do people use the internet?

- Why do people connect to the internet? How do they connect, and how frequently?
- What are barriers to using the internet?
- What are people's technology ecosystems like? How do they access and find the tools they need?
- What are perceptions and usage of the internet compared to other sources of information?
- What apps are people using most frequently? Why? How do they learn about these apps?





Theme 3:

Online Information Behaviors

How do people access, evaluate, and use information online?

- What are motivators and barriers to accessing information online?
- What activities do people prioritize on the internet? What information is most valued? What do people search for but cannot find or have difficulty finding?
- How do people look for what they need online? What are their most used online information sources?
- How do people come to trust information online?
- How do people move between online and offline information seeking and consumption behaviors?





Theme 4:

Awareness of Wikipedia

What is general awareness and perceptions of Wikipedia?

- Are people aware of Wikipedia? If so:
 - What do they associate with the brand? Why?
 - What do they understand about what Wikipedia is and how it operates?
 - How do they think about how (and by whom) articles are created?
 - What do they believe Wikipedia is valuable or suited for? What is it not suited for?
 - What questions do they have about Wikipedia?
- What do people think of other popular online information sources? Why?
- What are sources of positive or negative information about Wikipedia?



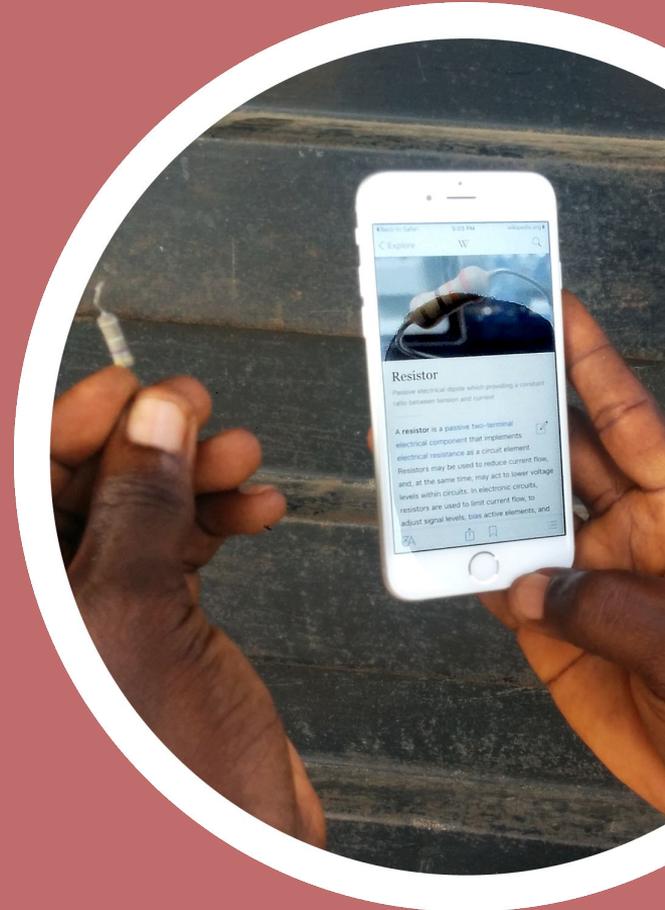


Theme 5:

Use of Wikipedia

How does Wikipedia currently support or inhibit online learning?

- Do people use Wikipedia, either on the web or via the app? If so:
 - In what context do people use Wikipedia, and for what needs or reasons?
 - What do they like or dislike about Wikipedia's design, features, and/or content? Why?
- If people don't use Wikipedia, why not?





Where We Went & Who We Talked To



Where We Went & Who We Talked To

Who We Talked To: Overall

138 Total Users
Interviewed

GENDER:

46% (57)
Female

54% (66)
Male



OCCUPATION:

27% **Employed**
Education Sector (33)

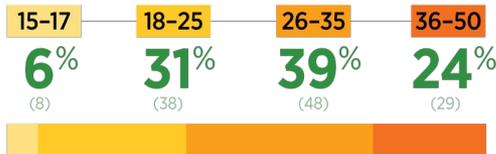
57% **Employed**
Other (70)

16% **Unemployed/
Underemployed** (20)

30% Teachers
(10)

70% Students
(23)

AGE:



INTERNET
ACCESS:

39% **Unlimited** (48) **28%** **Limited** (35)
33% **Moderate** (40)





Sampling

Criteria & Definitions

Considerations for Target Respondents:

- Age
- Internet access *(see definitions)*
- Employment
- Location
- Language ability
- Wikipedia awareness *(see definitions)*

Exclusion Criteria:

- Illiterate
- Have no experience using the internet
- Have no way (not even on public or shared devices) to connect to internet

Internet Access

Wikipedia Awareness

+

-

<p>UNLIMITED Money or device presents no barriers to usage. Self-imposed barriers may still exist.</p>	<p>HIGH Knows what Wikipedia is and can articulate many concrete use-cases. Knowledge, however, may not run deep (e.g. into accurate understanding of editing).</p>
<p>MODERATE Has access but financial or other considerations limit usage.</p>	<p>HIGH TO MODERATE Knows what Wikipedia is and can articulate one concrete use-case. Knowledge may still contain inaccuracies.</p>
<p>LIMITED Usage is occasional. Reasons may include low digital confidence, or access is dependent on other people's devices.</p>	<p>MODERATE Knows broadly what Wikipedia is. Definition is not nuanced and may include inaccuracies.</p>
	<p>MODERATE TO LOW Expresses some idea of what Wikipedia is but cannot articulate more than an ill-defined use-case.</p>
	<p>LOW Has a vague definition for Wikipedia without any supporting use-case, or has no knowledge of Wikipedia at all.</p>



Where We Went & Who We Talked To





Where We Went

We Talked To





Nigeria

11 Key Informants
Interviewed

66 Users
Interviewed

USER INTERVIEWS

May 15–28, 2016
(2 weeks)

30% Urban
(20) Lagos City

30% Peri-urban
(20) Benin City & Ajegunle

39% Rural
(26) Epe

AGE:

Age Group	Percentage	Count
15-17	5%	(3)
18-25	29%	(19)
26-35	44%	(29)
36-50	23%	(15)

OCCUPATION:

21% Employed Education Sector (14) **4** Teachers
10 Students

.....

59% Employed Other (39) **9** Entrepreneurs/
small business owners

.....

20% Unemployed/ Underemployed (13)

ENGLISH FLUENCY

73% High (48) **27% Moderate to Low** (18)

GENDER:

39% (26)
Female

61% (40)
Male

INTERNET ACCESS:

32% Unlimited (21)

27% Moderate (27)

18% Limited (18)





Where We Went & Who We Talked To





India

4 Key Informants Interviewed

57 Users Interviewed

June 14-24, 2016
(2 weeks)

70% Tier 1
(40) Cities

42% Delhi (24)

42% Chennai (24)

30% Tier 2
(17) Cities & Peri-Urban

16% Jaipur (9)

Noida & Gurgaon 14% of Delhi interviews (3)
Thiruvallore 40% of Chennai interviews (10)

0% Rural

USER INTERVIEWS

AGE:



OCCUPATION

33% Employed
Education Sector (19) 6 Teachers
13 Students

54% Employed
Other (31)

12% Unemployed/
Underemployed (7)

INTERVIEW LANGUAGE

46% English (26) 40% Hindi (23) 14% Tamil (9)

GENDER:

54% (31)
Female

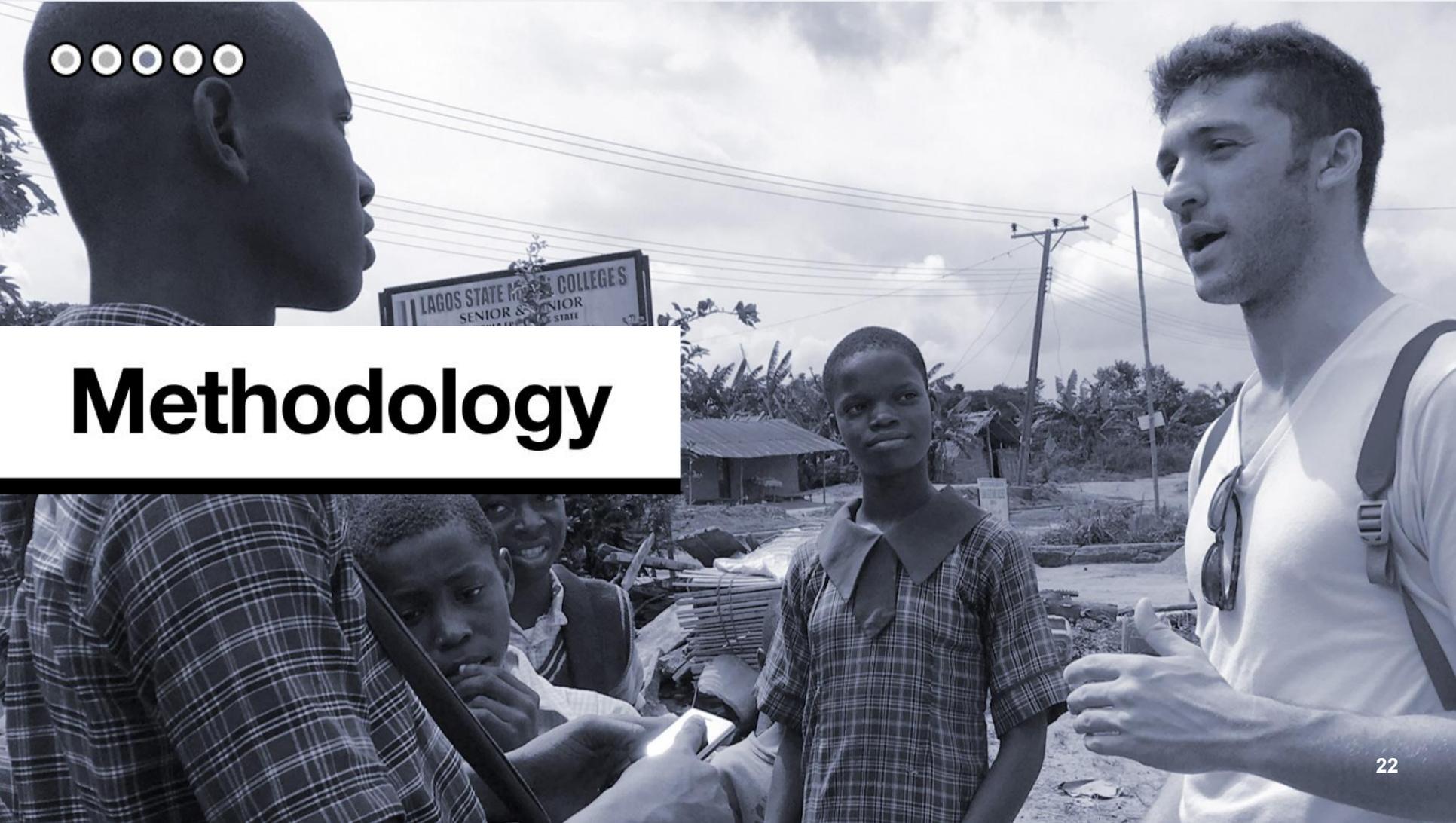
46% (26)
Male

INTERNET ACCESS:

47% Unlimited (27)

23% Moderate (13)

30% Limited (17)



Methodology



Methodology

Field research in Nigeria and India was conducted using design research methods—that is, contextual inquiry using primarily ethnographic research methods.

Design research emphasizes immersive observation and in-depth, semi-structured interviews with target respondents to understand the behaviors and rituals of people interacting with each other, with products and services, and with their larger environments.

It stresses interacting with respondents in their natural settings and observing respondents in their day-to-day lives to understand their deeper needs, motivations, and constraints.

To understand underlying motivations and drivers, researchers probe for the why's and how's behind stated and observed behaviours.



Design Research

- Foundational to user-centered design
- Has its roots in ethnography (“a portrait of people”), the art and science of describing a people or culture
- Helps learn about and interpret people’s needs, motivations, and constraints—and how they impact thoughts and actions
- Over time, reveals the complex ecosystems in which people operate



Market Research

Design Research

Primary Goal

To generate value (often financial) for the organization

To generate value (often utility) for the end user

Process

Systematic gathering of theoretical data that is then analytically processed

Cumulative gathering of human experiences and artifacts that is then synthetically processed

Primary Processing Tool

Logic

Empathy

Common Communications Approaches

Reports and presentations that use words, charts, and graphics to present linear market analyses and projections. Data reigns.

Multimedia presentations that use words, photos, drawings, and stories to present complex human archetypes, needs, and patterns. Data becomes narrative.

Enables Practitioners To

Make a sound decision based on identified options

Develop a sound solution that meets identified needs

Primary Methods

Ethnographic Interviews

Semi-structured individual interviews lasting up to 1.5 hours. Conducted in context and in private—e.g., in respondents’ homes, workplaces, or other natural locations—allowing researchers to observe and ask about artifacts in the environment that may give greater insight into respondents’ experiences.

User Observations & Technology Demos

Guided observations of respondents as they live, work, and use different products or services to identify otherwise unarticulated needs, motivations, habits, and challenges that may be otherwise subconscious. Respondents “think out loud” (articulate their thoughts as they perform different tasks) to provide insight into their thought process and how they react to different environmental stimuli and/or design features.

Key Informant Interviews

Interviews with experts in various fields who have insights into market dynamics, user behavior, and other relevant topics for Wikimedia. Experts were largely drawn from the fields of technology, education, media, and telecommunications.



Key Findings



The following section summarizes key findings from New Readers field research in Nigeria and India.

There are organized by category:

Guide to Key Findings

- Information Seeking
- Accessing the Internet
- Understanding the Internet
- Using the Internet
- Getting Information Online
- Using Wikipedia

Top-line findings derive from patterns and insights surfaced across both countries. Supporting, specific observations from one or both of the research countries appear below.

Country-specific observations are denoted by



for Nigeria



for India



● ● ● ● ● Key Findings

Key Findings: Information Seeking



FINDING 1:

People seek news and actionable information first, and context second.

In their day-to-day lives, people actively seek information to stay abreast of current affairs or to help them with immediate tasks. By and large, searching for reference information—including the type Wikipedia excels at—is a byproduct of news- or task-oriented information-seeking. That is, people look for reference information to help them contextualize current affairs or work on immediate tasks, and not as ends in themselves. Reasons include:

Event-based reporting travels better, both through i) analog, human networks, and ii) the digital social networks through which more and more people are now getting information.

People are task-oriented, rather than exploration-oriented, when seeking information. Most of the time, they want information to help them determine how to act, rather than context to help them evolve how they think.

Descriptive, contextual information requires further processing to become useful for decisionmaking. Doing so requires additional resources, both mental and potentially financial—the latter in environments where internet access is expensive and/or pay-for-bandwidth.



FINDING 2:

There is no one-stop shop for news and information.

Non-local (state, national, international) sources for reporting on macro issues (e.g. political or economic developments). International sources in particular are often seen as higher quality due to historical connotations around Western media, and/or because it is harder for them to be captured by local political or commercial interests.

Local (community or municipal) sources for timely, granular reporting on hyperlocal issues (e.g. weekly crime hotspots). These sources are seen as more useful for people's day-to-day lives.

Wikipedia's comparative advantage may come from both leveraging the perceived quality conferred to international sources, and increasing the local relevance and utility of its content. In specific markets, for example, Wikipedia could expand its content on national, historical drivers of crime to help readers interpret hyperlocal, weekly updates on crime hotspots.



*“[For news sources,] I have my pecking order.
For international, it is the BBC, the Guardian, Reuters.
For India, it is the News Minute, The Mint, The Hindu.”*

—Woman, Journalist, 36-50, Chennai



FINDING 3:

Only in specific scenarios do people scrutinize the credibility of an international information source.

For international information sources, people seem to only assess their credibility when the information will be used to complete tasks (e.g. for school, work) that will be assessed by an external authority.

In these cases, most people attribute trustworthiness based on affiliation with widely recognized, ‘household-name’ institutions that are perceived to be reputable. These are typically those from media (e.g. Al Jazeera), academia (e.g. MIT), or non-governmental organizations (e.g. UNICEF).

* Note: The trustworthiness of local information sources are assessed quite differently, and differ based on multiple factors related to the characteristics of the specific individual and the information ecosystem.



FINDING 4:

People don't need to trust an information source to find it useful.

People mostly seek information that is useful for some immediate purpose; ideally, it is from a credible source, but the source doesn't have to be trusted for the information to be useful.

People are sophisticated in addressing gaps in the perceived utility or credibility of information.

- If they find information that doesn't meet their exact needs, they canvass and blend multiple sources—from personal human networks, offline sources (e.g. textbooks, newspapers), and digital channels—to answer their specific query.
- If they find information of dubious credibility, they either discard it—especially in settings where search costs are relatively low (e.g. online)—or they try to validate it by comparing multiple sources.



FINDING 5:

Successful information systems meet users where they are today, while also evolving with their changing information habits.

As people experiment with new, digital information sources, human and analog sources remain reliable standbys.

In People (including those with unlimited internet access) continue to consume old media at predictable intervals—many read the newspaper in the mornings or during work breaks, and watch TV news at night. The familiarity of these sources, and established habits around them, make them attractive. (For context, in 2015, India’s internet penetration increased by 49%¹ and its newspaper industry grew by 8%².)

Ng Information ecosystems are all sociotechnical to some degree, but an end-user’s preferred ratio of human vs technological sources differs widely. Preferences are informed by one’s economic status, geographic location, personal networks, and individual characteristics.

¹ <http://www.newindianexpress.com/business/news/Even-in-This-Digital-Age-Newspaper-Industry-Is-Booming-in-India/2015/03/21/article2723938.ece>

² <http://www.economist.com/blogs/economist-explains/2016/02/economist-explains-13>



FINDING 5:

Successful information systems meet users where they are today, while also evolving with their changing information habits. *(cont'd)*

Many popular information systems succeed because they let users choose how they would like to receive information, and accommodate changing information habits.

Nigeria's lotto system, for example, provides many options for users to play and to get updates, including going to streetside kiosks, calling a trusted vendor, and getting updates on Facebook. This allows users to "grow with" the lotto as their own comfort level with new technologies expands, but doesn't force them to learn new channels for the sake of that specific product.



FINDING 6:

Visual content and design helps attract and win over users.

Despite the rapid growth of text-dominant mediums such as SMS and the internet, engaging visual content is being increasingly recognized as critical to attracting and retaining users.



The value of visual content to support learning (in educational environments) and strengthen communications (in professional settings) is well-recognized. Proponents appreciate the ability of visuals to simplify complex concepts and to appeal to all sorts of learning and content-processing styles. The current growth of digital, self-directed learning further underscores the importance of visual content—and video in particular—in engaging and winning audiences.



FINDING 6:

Visual content and design helps attract and win over users. *(cont'd)*



YouTube is widely popular, and usage—especially for self-directed learning—continues to soar. It has over 60 million unique users in India, with users spending more than 48 hours a month viewing content. In 2015 alone, the amount of content uploaded to YouTube in India grew by 90% while watch-time rose by 80%.³ For many, YouTube is their primary search engine for online content; how-to videos are hugely popular, followed by songs and movies.

Platforms are winning new and loyal users by incorporating and producing strong visual content. While a few respondents found Wikipedia articles easy to navigate based on its simple user interface, there may be greater opportunities to improve interest in and engagement with articles with more robust visual content.

³ <http://www.forbes.com/sites/dongroves/2016/01/06/new-additions-to-the-ranks-of-indias-youtube-millionaires/#6a5b7f8e7a97>



Key Findings:
Accessing the Internet



FINDING 7:

Constant, individual internet access is not the norm for all.

Sharing devices with family members and friends is common among two key demographics: i) youth, and ii) people with low internet access.

Those borrowing devices do not see shared access as an inconvenience, but simply as a way to get what they need right when they need it.



FINDING 8:

Mobile dominates for getting online, and Android is the platform of choice.

Feature phones and lower-grade Android smartphones are the primary devices for connecting to the internet, widely popular across all user groups. Series 40, Symbian, and others are used, but to a lesser degree. Only the wealthy use high-end (e.g. Samsung) Androids, iOS, or BlackBerry, and, even then, most prefer their Androids as the primary browsing/tethering devices due to their cost and battery life.

Mobiles are preferred for light, day-to-day communication, whereas laptops and desktops are preferred for bandwidth-heavy communication (or memory-intensive applications) such as streaming or downloading video content.



FINDING 9:

In Nigeria, internet access has been prohibitively expensive. Consumers are savvy, price-sensitive shoppers with low brand loyalty.

46% of Nigerians are online.⁴ Historically, the cost of mobile data has been extremely high and a pain point felt by users across economic strata. In October 2015, the government deregulated data prices; since then, mobile data prices have been dropping sharply.

There is still, however, a long way to go before internet access is affordable for most. A 2016 PwC report estimates that data costs in Nigeria would need to drop by 97% to reach widespread* affordability**.

⁴ <http://www.internetlivestats.com/internet-users/nigeria/>

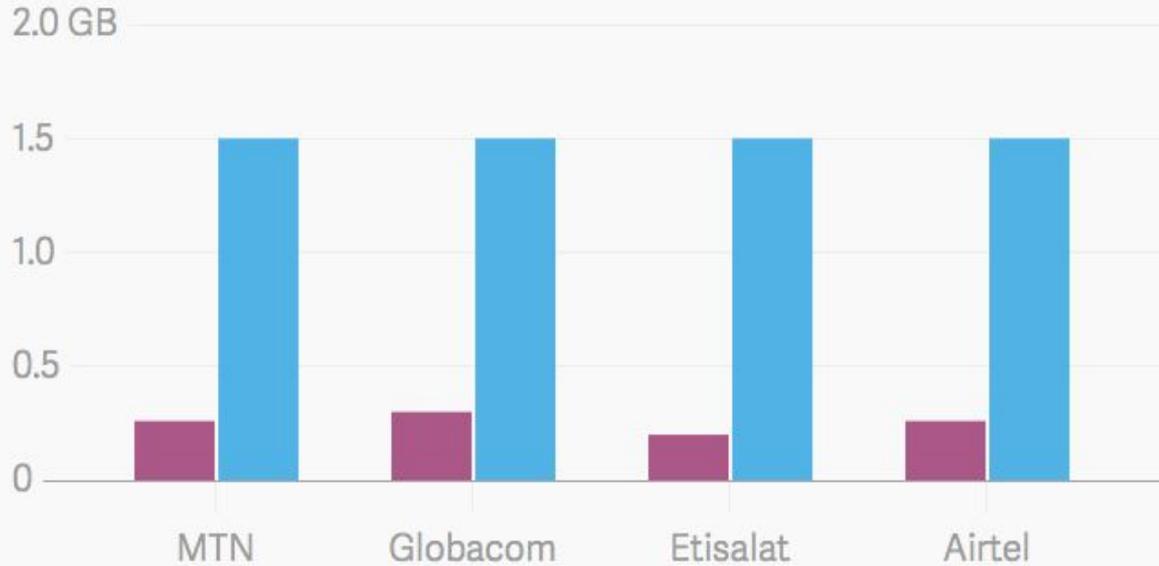
* Widespread is defined as reaching 80% of citizens.

** Affordability is defined as a 500MB data plan that costs 5% or less of the average monthly income for 80% of citizens.



N1,000 (\$5) can buy more data in 2016 than it could in 2015 in Nigeria

■ 2015 ■ 2016

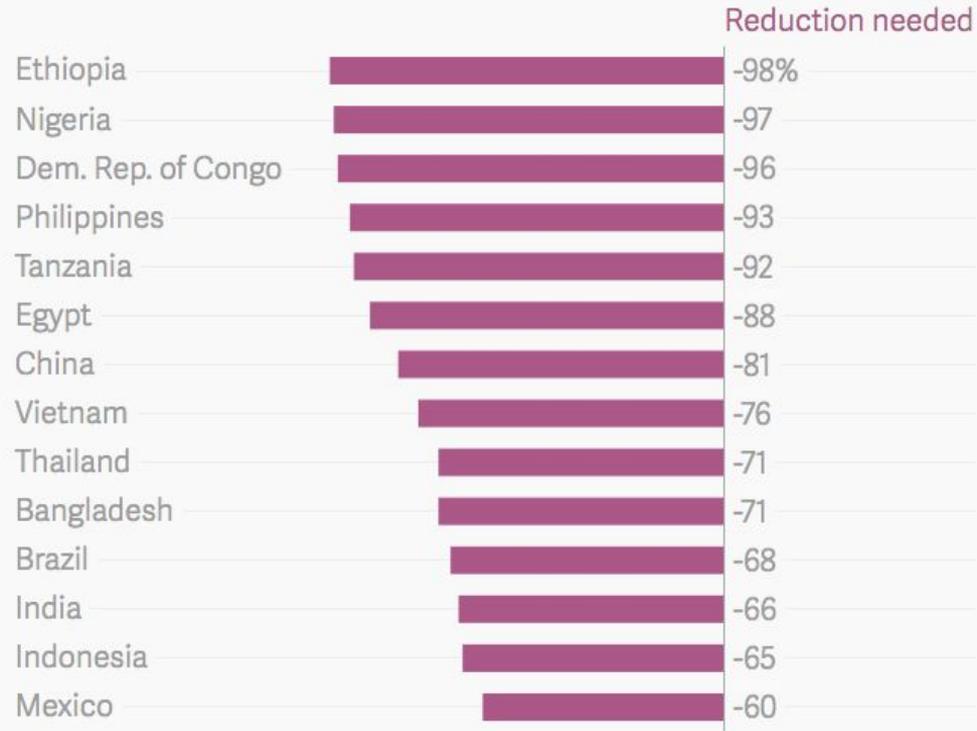


ATLAS | Data: Reviewcious, Techsuplex

Share



Mobile data has to get much cheaper to be generally affordable



ATLAS

FINDING 9:

In Nigeria, internet access has been prohibitively expensive. Consumers are savvy, price-sensitive shoppers with low brand loyalty. *(cont'd)*

In this environment, users are highly price-sensitive and are opportunistic consumers of mobile data. Many have multiple SIMs and monitor service changes, special promotions, and bonus offers across mobile network operators (MNOs)—and frequently adjust their service plans to maximize their data use at minimal cost. MNOs, in turn, are constantly offering new promotions.

As a result of frustration with MNO price-gouging, mobile hotspots (e.g. MyFi devices) and cheaper data plans from new internet service providers (ISPs) are growing in popularity. Adoption remains contained to relatively wealthy, urban users since they require high upfront payments for hardware and subscription plans.



Key Findings: Accessing the Internet



tolu ogunlesi ✓
@toluogunlesi

Follow

It's like the 10k I paid for @etisalat_9ja data yesterday, which should normally get me 10GB, got me 22GB instead. Or am I hallucinating?

12:44 AM - 31 May 2016

↩️ ↻️ 10 ❤️ 14



tolu ogunlesi ✓
@toluogunlesi

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Wait. I'm praising u for giving me 22GB where I used to get 10GB, & you wanna 'check this out'. Please no, leave it twitter.com/0809ja_support...

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tolu ogunlesi @toluogunlesi · 1h
Ehen. Now you're talking...

etisalat_9ja support @0809ja_support

@toluogunlesi Hi Tolu. Our data plans were reviewed recently and 22GB Data Plan now costs N10000. You can also follow...



FINDING 10:

In India, internet access is more affordable, but cost remains a barrier to widespread internet penetration.

35% of Indians are online.⁵ Among study respondents in India—which did not include those in rural or remote locations—the cost of internet access was not cited as a barrier to accessing and using the internet.

Government and private-sector efforts are underway to increase internet connectivity. Many efforts target transport infrastructure—e.g. Google Access is offering free WiFi through 10 major railway stations, Ola and Uber are offering free WiFi to customers in taxis.

A 2016 PwC report estimates that data costs in India would need to drop by nearly 70% to reach widespread* affordability**.

⁵ <http://www.internetlivestats.com/internet-users/india/>

* Widespread is defined as reaching 80% of citizens.

** Affordability is defined as a 500MB data plan that costs 5% or less of the average monthly income for 80% of citizens.

Key Findings:

Understanding the Internet



FINDING 11:

The term “internet” is not universally understood, even among those that are frequently using it.

Mental models around the internet

Ng People don’t always know if and when they are on “the internet”. For example, across all respondent segments, there was spotty understanding of how mobile apps work, and how they relate to the internet.

While people may not be able to describe “the internet”, they describe their practices of “browsing” and “using apps” based on how it impacts them economically. (This is unsurprising, given findings on the cost-burden of internet access.) The term “using data”, therefore, is a commonly used, universally understood substitute for “using the internet”.



FINDING 12:

People are learning how to use the internet from others, both loved ones and professional intermediaries.

Most people do not have a formal or knowledgeable source from which they can learn new technologies or the internet. Rather, such learning is typically social experience, happening through friends and families, and sometimes through niche retailers. Some examples:



Digital immigrants are learning technology from digital natives. In particular, children are i) buying devices for their parents (mainly smartphones and tablets), ii) installing apps (mostly Skype, Whatsapp, and Facebook), and iii) teaching them how to use digital tools. This is especially common among young adults who are moving out, whose parents are especially motivated to learn new technologies in keep touch with them.



FINDING 12:

People are learning how to use the internet from others, both loved ones and professional intermediaries. *(cont'd)*



Sharing and passing down of devices between cohabitating family members spurs digital learning within households.



Men heavily influence women's technology behaviors. Women of all age groups are influenced by their male family members or colleagues in their access to, choice of, and use of technology.



Small and micro “app shops” are a key source of apps for many, especially the price-conscious. They provide easy (and lower-cost) access to the most popular apps. Customers often just ask shop owners to install “whatever you think I’ll need”.



Key Findings: Using the Internet



FINDING 13:

People are using the internet in English, without expecting otherwise.

While most people prefer speaking in local languages, these preferences do not seem to translate to reading or writing online. English is widely accepted as the lingua franca of the internet, even among those for whom English is not their mother tongue or a language of comfort. This is not perceived positively or negatively; rather, it is an unquestioned expectation of being online.



School instruction is in English or a mix of English and a local language. Literate people thus learn to read English first and have limited experience reading in their local language, which, when written, is typically transliterated in the Roman alphabet. As a result, there is no expectation of written content—online or otherwise—to be in local languages. The only popular media in local languages is oral (radio).

English is therefore the default language of online activity, and Pidgin English is for interpersonal communications. When online, users may switch into local languages when casually communicating with close ones (e.g. via instant messenger), but the practice remains uncommon.



FINDING 13:

People are using the internet in English, without expecting otherwise. *(cont'd)*



A person's language of instruction in school influences his or her general level of comfort with online search and reading. English-language instruction leads to higher levels of comfort in navigating the internet; instruction in Hindi or another language creates potential needs for workarounds, e.g. specialized apps, use of Google Translate.

The limited availability or use of local language keyboards or other textual input mechanisms also makes English the accepted, default language for internet usage.



FINDING 14:

People are precious about data usage, and low-bandwidth browsers dominate.

Browsers designed for users with limited data bandwidth and/or inconsistent internet connections rule in both Nigeria and India.

In Nigeria, Opera Mini is popular because it helps “save on data”. Some users have a basic understanding of its built-in data compression features, allowing them to browse with less data, but do not understand its various data-savings modes. The ‘Opera Mini mode’ is advertised to extend a user’s data by up to 90%, something users do monitor via their data savings in-app dashboard.

In India, UC Browser has grown through word-of-mouth and is widely believed to be a faster browser. Interestingly, it does load web content faster through data compression (as with Opera Mini); but as data cost is less of a concern in India (compared to Nigeria), it was UC Browser’s gains in speed, and not its savings in data, that was cited as its unique selling point.



FINDING 15:

Mobile apps have exploded in popularity, with instant messaging and social media at the top.

WhatsApp and Facebook are widely recognized and used. Most mobile data users (even those with limited internet access) use at least one. A 2014 poll found approximately half of surveyed mobile users in both India and Nigeria used WhatsApp.⁶ India is Facebook's largest market globally, where it counts 16% of Indians (or 195 million people) as users. Nigeria is its largest market in Africa, where nearly 10% of the population uses it.⁷

These trends are reshaping not just how people socialize online, but how they seek and share information in all aspects of their lives. WhatsApp is used to chat or joke with friends, but also increasingly as a key information stream. Some university students in Nigeria have a WhatsApp study group for every class. Facebook is used to reconnect with friends and play games, but also increasingly as a key source of news.

MNOs' packaging of these apps in reduced- or fixed-fee bundles—where users pay an upfront fee for a suite of popular apps, after which data usage is free—will only help their ballooning popularity.



FINDING 15:

Mobile apps have exploded in popularity, with instant messaging and social media at the top. *(cont'd)*

Beyond messaging and social media, other popular apps include utilities and games. In 2015, the most popular apps included (in descending order of popularity)*:



WhatsApp, Facebook, Facebook Messenger, Instagram, BBM, imo, Candy Crush Saga, Candy Crush Soda Saga, and 360 Security Lite.⁸



WhatsApp, UC Browser, Facebook, Facebook Messenger, MX Player, Instagram, Vidmate, SHARE it, Flipkart, and Candy Crush Saga.⁹

⁸ <https://techpoint.ng/2015/11/06/popular-apps-in-nigeria-smartphone/>

⁹ <http://trak.in/tags/business/2016/01/07/indian-mobile-app-industry-interesting-highlights-2015/>

* Note: It was difficult to get specific figures for the most popular apps, and doing so was not a focus in this research. The ranked lists are provided as context only, based on analysis conducted by national media in Nigeria and India.



FINDING 16:

Students and educators often have conflicting views on if and how the internet can support formal education.

Students are uninspired to learn from traditional academic materials, as they see the content as outdated and unengaging. As a result, they copy peer notes and memorize information to get through assignments with as little investment as possible. The internet motivates students to learn, but many educators restrict their ability to use it.



Educators' own limitations and self-interest constrain students' ability to experiment within, expand, and enrich their information ecosystems. Primary- and secondary-level teachers typically have limited internet literacy themselves, and tertiary-level teachers are incentivized to restrict online learning. Some university lecturers demand students buy their authored textbooks, so they can benefit from sales proceeds, and emphasize that all the information students need for their class is in that one textbook. This discourages online learning.

Despite this, students' desire to use the internet is trumping institutional restrictions. Workarounds include accessing the internet off-campus (e.g. in cyber cafes, through smartphones outside class) and using online information sources, including Wikipedia, but citing other, acceptable sources as references.



FINDING 16:

Students and educators often have conflicting views on if and how the internet can support formal education. *(cont'd)*



At the secondary level, schools restrict students' access to and use of the internet—and students don't mind. Secondary students feel that teachers and textbooks have complete and correct information. They feel endorsed, offline content is “simple” and easy-to-use, and don't feel the need to supplement it with online information that require further effort to evaluate quality and utility. At the tertiary level, both institutional restrictions and student preferences evolve, and conflicts between them around the utility of the internet for learning become more common.

A close-up photograph of a person's hand pointing at a laptop screen. The screen shows a Google search results page for the query 'basic of web design'. The search results include links to 'Digify Africa - digifyafrica.com', 'Lesson 1: Basic web concepts - Part 1 - How to Build Websites', 'Web Design Basics - How to Build Websites', and 'Web Designing Basics (HTML, CSS and CSS3)'. The person's hand is wearing a gold watch. The laptop keyboard is visible in the foreground.

Key Findings

Key Findings: Getting Information Online



FINDING 17:

People trust online search (and Google in particular) to get them what they need.

People rely on Google for all of their online search needs. It is perceived as capable of answering any query.

Instances of Google's personification—as illustrated on the next slide—indicate just how popular and beloved it is...



*“Google is the
shortcut”*

“Uncle Google”

“My big boss Google”

*“Google is
the solution to
the world”*

“Google Maharaj”



FINDING 18:

Search habits are largely basic. Users surface what they need through trial-and-error queries, or by looking for quality indicators in the results.

Appearing in the first page of results in a Google search is key to winning traffic. Although specific search and result-selection behaviors differed between Nigeria and India, users in both countries typically did not venture beyond the first page of search results for most queries.



Search queries are mostly rudimentary and broad. Research did not observe use of search operators or advanced search tactics, even among internet power users. This places the onus on users to scour through many search results to cobble together what they need from diverse sources. Pulling up all the pages on first-page results, then sifting through them, is the norm.



FINDING 18:

Search habits are largely basic. Users surface what they need through trial-and-error queries, or by looking for quality indicators in the results. *(cont'd)*

In

Users conduct online search with the intent of finding the best-fit answer to a query within top results. They test and subsequently refine their search query if desired outputs do not appear in the first page of results. Additionally, users also rely heavily on Google auto-complete to support their searches, and scroll through various suggestions to find the best match for their query.

Ng

People judge the relevance or quality of a search result based on unique indicators that are individual- and case-specific—but that often denote or tie to an offline/institutional marker of quality. Students may look for signs in webpage titles that suggest content is from a textbook (e.g. “Chapter 2: Maslow’s Hierarchy of Needs”) or meta descriptions that track to something a trusted source has said on the topic (e.g. when searching “causes of Russian revolution”, a student believed a result with World War I in the meta description was a strong source because she remembered from a class lecture that the revolution had something to do with WWI).



FINDING 19:

In an era of search-led, task-oriented browsing, there is little loyalty to specific web properties—unless they relate to personal passions.

People trust Google to curate the right content for them on case-by-case basis. Unless it is a well-known local media brand or personality, people typically do not pay attention to the domain or source of the content.

A webpage's perceived relevance or quality comes more from being on the first page of Google results, than from the name or reputation of its source. For some users, the only exceptions to this norm are the most well-known international universities (e.g. Harvard, MIT). People only memorize the names of websites—and go directly to them, instead of via search—that relate to their personal interests (e.g. Goal.com for football fans, Cricbuzz.com for cricket fans, IEEE.org for electronics enthusiasts, and TED.com for those who enjoy TED talks).

In these environments, it is difficult for international content brands to build brand awareness, let alone brand affinity or loyalty.



FINDING 20:

People are increasingly getting information online, then consuming or sharing it offline.

Users are frequently moving what's online to offline for repeated viewing, printing, or sharing. These behaviors are growing along with the tools that make them possible.

In

Offline modes of retaining and exchanging information are gaining popularity. Most commonly cited exchange apps are Xender, SHAREit, and ShareApp. Downloading to print information is another form of offline transfer.

Downloading online content, including videos and songs to watch or listen to later, and school assignment materials to print for use or submission, is a widespread behavior. However, saving Wikipedia articles for later was not observed beyond one instance.

Ng

“Sideloaded” and music/video sharing are common practices among the digitally savvy, helping users save on data costs (especially when sharing large files) and making technology and media discovery more social. As a result, file-sharing apps (e.g. Xender) are very popular.



Key Findings: Using Wikipedia



FINDING 21:

As a brand, Wikipedia is not widely recognized or understood. People are Wikipedia readers without realizing it.

There is limited understanding of what Wikipedia is or how it works.
Lack of understanding occurs at a few levels:

Brand

Few respondents recognized the Wikipedia visual brand (the name was more widely known), or could accurately describe what Wikipedia was.

Mission

Other than expert respondents, virtually no one seemed aware of Wikipedia's mission or that the larger Wikimedia movement.

Content

Only a few respondents understood how content creation and editing worked. Most either had never considered the topic, or thought that editing was done by those paid or otherwise assigned to do so (e.g. Wikipedia staff or foreign students working on assignments).



FINDING 21:

As a brand, Wikipedia is not widely recognized or understood. People are Wikipedia readers without realizing it. *(cont'd)*

Many casual Wikipedia readers had no knowledge that they had ever used the platform. As Wikipedia articles often feature in first-page search results, many people have used it without realizing it.

Students are the exception to the above. Even students with limited to moderate internet access generally knew what Wikipedia was and how it could be useful for them.



“Wikipedia is something you can get over the phone.”

—Man, Driver, 26-35, Delhi



*“I am searching in Wikipedia.”
[This user was searching on Google.]*

—Man, Tech Startup Employee, 36-50, Delhi



“Wikipedia is run by a non-profit and donations.”

—Man, Professor, 26-35, Chennai



FINDING 22:

People confuse Wikipedia with a search engine or social media platform. This can create unrealistic expectations of its functionality.

As the most widely known internet brands (e.g. Facebook, Twitter) are social media platforms or search engines (e.g. Google), many other international internet brands are also lumped in these two categories. Mislabeled brands include Skype, YouTube, and Wikipedia.

At times, this can lead to unrealistic expectations around Wikipedia's features—for example, those that think it is a search engine believe it should have more robust search functionality. False expectations, in turn, lead to poor assessments of Wikipedia's design or performance.



*“Wikipedia is a 'poor cousin' of Google.
It is the lesser model.”*

—Woman, Journalist, 36-50, Chennai



*“Google and Wikipedia are similar.
Google is more distributed;
Wikipedia is more analytical and
comprehensive.”*

—Man, DJ, 18-25, Lagos



*“Wikipedia is a social network.
You’d use it if a friend in the US was on it
and you wanted to connect with them.”*

—Man, Construction Worker, 25-36, Lagos



FINDING 23:

Wikipedia readers are generally task-oriented, not exploration-oriented. Wikipedia is seen as a utilitarian starting point that sometimes surfaces through search, and not a destination in itself.

Readers believe Wikipedia's greatest value is providing strong overviews of any topic, particularly of people, places, or events. They land on Wikipedia articles when they are among top search results, and use them as a starting point for further learning.



Readers go to Wikipedia to understand the meaning or definition of unfamiliar terms. At times, this leads to perceptions of Wikipedia as a dictionary.



A common use-case is to settle “bar bets” – arguments with friends that require an immediate answer (e.g. the height of a famous footballer). Students use Wikipedia to complete school assignments. Professionals didn't seem to use it for work.



FINDING 23:

Wikipedia readers are generally task-oriented, not exploration-oriented. Wikipedia is seen as a utilitarian starting point that is surfaced through online search, and not a destination in itself. (cont'd)

Ng

Readers appreciate how Wikipedia is organized and how it is optimized for scannability. Most like the topic overviews and the ability to jump to specific subsections. No observed reader looked at article references.

In

Several users (typically those with unlimited internet access) accurately referred to Wikipedia as an “encyclopedia” or a “database of knowledge” because they see it as a platform to learn from.

In

Readers use Wikipedia for work tasks and related learning. Professional researchers (e.g. journalists, graduate students) find article references valuable, and use them as a jumping-off point for further research.



“When I do research, I go to Wikipedia first to get a general overview. It simplifies what I am looking for.”

—Woman, Doctor, 36-50, Yaba



“Wikipedia is a good starting point with useful information all in one place.”

—Woman, Journalist, 26-35, Delhi



“Wikipedia tells you all the information about a person. I used it to read about Steve Jobs after he died.”

—Man, IT Expert, 18-25, Jaipur



“When I was struggling to find information on Anna Hazare [an Indian social activist] for my school assignment, my cousin suggested I go to Wikipedia.”

—Woman, Coordinator, 18-25, Delhi



FINDING 24:

Wikipedia's content model can arouse suspicion. Despite this, there was no observed relationship between trust in and reading of Wikipedia.

Trust in Wikipedia is shaken when people find out anyone can edit pages.* Especially in Nigeria, where the media is captured by political and commercial interests, there is skepticism that contributors could be neutral, and that the content they produce could be unbiased.

Interestingly, however, trust in and reading of Wikipedia are not highly correlated. Even when trust is low—e.g., when a person has been specifically told that Wikipedia is not credible—reading continues when people perceive the utility of content to be high.

* Note: In the select instances where researchers described how Wikipedia worked to respondents, they did so at the end of research activities. Explanations were brief, and focused on how Wikipedia worked; they did not elaborate on why its model has been successful. A carefully designed communications campaign may yield different reactions and assessments of Wikipedia's trustworthiness.



“There must be a company behind Wikipedia that first puts the data up but then anyone can edit it.”

—Man, Tech Startup Employee, 36-50, Delhi



Opportunities

Introduction to Opportunities

This section summarizes key opportunities for growing Wikipedia readership, as identified through field research in Nigeria and India, and workshopped with the WMF project team in July 2016.

These opportunities are intended as jumping-off points for WMF. We hope they also stimulate interesting and constructive dialogue within the larger Wikimedia community.

Additional opportunities can be found in field data captured by the project, and others are captured in documentation for the New Readers' project.

Summary of Opportunities

Key opportunities to grow Wikipedia readership include:

1. Clarify what Wikipedia is. Reinforce what Wikipedia does best and how.
2. Meet readers where they are.
3. Optimize Wikipedia for environments where data is a precious resource.
4. Improve awareness and understanding of Wikipedia Zero.
5. Become a destination for otherwise hard-to-get national history and culture.
6. Appeal to early adopters and influencers.
7. Increase Wikipedia's utility as a language learning tool.
8. Partner with educators to showcase how Wikipedia can support academic learning.

OPPORTUNITY 1:

Clarify what Wikipedia is. Reinforce what Wikipedia does best and how.

There is limited understanding of what Wikipedia is and widespread confusion about how it works.

The current definition of Wikipedia (“multilingual, web-based, free-content encyclopedia project supported by the Wikimedia Foundation and based on a model of openly editable content”) may be difficult for new readers to understand. It assumes that the audience knows certain actors (the Wikimedia Foundation) and concepts (encyclopedia, openly editable), and values certain characteristics (multilingual). These assumptions may not hold true for many new readers in the Global South. So while these descriptors relate to central tenets of the Wikimedia movement, they may not be the best way to explain Wikipedia to the uninitiated.

Wikipedia needs a shorter, simpler description of its product to help new readers understand what it is. It needs to clarify how its content model works and what its strengths are to win the confidence of new readers.

Ideas

COMMUNICATIONS: Redefine the Wikipedia product (and larger movement) with new messaging that is more accessible and relatable for new readers.

COMMUNICATIONS: Communicate broadly what users believe Wikipedia does best (overviews, context, “starting point for research”) and show how Wikipedia can be used in common, everyday use-cases.

COMMUNICATIONS: Preempt concerns about Wikipedia’s trustworthiness by clearly explaining how content contributions work, and emphasizing the technological and human checks and balances that are in place to increase accuracy and minimize bias.

Ideas

Ng PARTNERSHIPS: Radio shows are very popular, particularly in urban centers as people spend a lot of time in traffic. Consider building radio partnerships to help explain what Wikipedia is, and programming formats that encourage people to engage with the content—e.g. call-in shows, which are popular, could demonstrate the breadth of available content by inviting listeners to ask questions on a particular topic/article, and the host answers using Wikipedia content. Possible partners include university stations (e.g. at UNILAG, UNIBEN) and the AIM Media Group.

PRODUCT: Add an indicator of quality icon (akin to the signal strength icon for mobile networks) on each article, based on research and analysis on article contributions and edits.

PRODUCT: Implement UI fixes to illuminate the missing “who” behind articles, including making References and Talk pages more easily discoverable.

OPPORTUNITY 2:

Meet readers where they are.

People are increasingly getting content through messaging services such as WhatsApp, Facebook Messenger, BBM, and 2Go (Nigeria), and social media platforms such as Facebook, Twitter, and Instagram.

This is because, globally, information-seeking is becoming more and more social. But specifically, in countries where data costs can be expensive, consumers are buying app and data bundles that make the most popular apps like WhatsApp and Facebook very cheap to use. These trends suggest that their user base will continue to grow.

Wikipedia needs to be where people are. It needs to be present in the places where they are finding and sharing information and optimize for distribution through those channels—not just through its own platform.

Ideas

PRODUCT: Create an easy article-sharing feature for WhatsApp chats, Facebook Messenger, and/or the Facebook status update. A sharing feature with an option to preview an article's overview or key facts can i) help assuage concerns about data costs once users leave a preferred or cheap-to-use app, and ii) stimulate more conversation inspired by the article, which people seek.

OPPORTUNITY 3:

Optimize Wikipedia for environments where data is a precious resource.

Users in many Global South countries face difficulties in accessing the internet, including high bandwidth costs, inconsistent internet connections (which disrupt downloads), and limited storage on their phones (often less than 16GB). For many, data is a precious commodity that must be carefully rationed.

Wikipedia should consider how to optimize its product for these environments.

- For the web, there are lessons to be gleaned from the popularity of browsers such as Opera Mini and UC Browser.
- For the app, the current size of 11MB on Android and 19MB on iOS is a good starting point, but Wikipedia should consider making the app smaller. For reference, an Indian technology investment firm believes that the ideal size for apps is below 5MB for “tier 2 and 3” countries (such as India and Nigeria), compared to “global ideals” of 15MB. According to the firm’s analysis, in these markets, conversion rates dip by 50% for apps above 15MB.¹⁰

For reference, Facebook Lite—available for Android in select countries—is less than 1MB and is designed to work on 2G networks and in areas with poor connectivity.

¹⁰ <https://lightspeedindia.wordpress.com/2014/06/12/unbundling-mobile-apps-for-the-emerging-markets/>

Ideas

PRODUCT: Implement engineering solutions to help save data usage or provide different options or modes to customize data usage and compression (as with Opera Mini and UC Browser).

PRODUCT: Reduce the size of the Wikipedia app.

PRODUCT: Produce flash drives with an offline version of Wikipedia that can be updated when a user chooses (e.g. when they are on WiFi) and which helps minimize the storage required on their phone.

COMMUNICATIONS: Emphasize the low-bandwidth nature of Wikipedia through a communications campaign, or through interface design, to illustrate how Wikipedia saves speed, bandwidth, and data, compared to most other sites.

OPPORTUNITY 4:

Improve awareness and understanding of Wikipedia Zero.

In Nigeria, research identified almost no awareness of Wikipedia Zero, despite it having launched 2 years ago. Even select interviewed frontline service staff for Airtel, the MNO partner in Nigeria, did not know what the product was.

Although the banner for Wikipedia Zero Nigeria is bright red, some users seem to have banner blindness and simply scrolled past the banner without reading it. Airtel's banner language is itself confusing: "Come ALIVE with Wikipedia for FREE on the Airtel Network". Clicking on the banner takes the user to the Airtel homepage, with no mention of Wikipedia Zero.

OPPORTUNITY 4:

Improve awareness and understanding of Wikipedia Zero. *(cont'd)*

Improving awareness and usage of Zero requires the support of MNO partners, since many design decisions (e.g. banner placement and language) are their decisions. WMF may consider testing different ways to draw attention to Zero's existence and explain how it works, and then presenting test data to MNO partners to inform their future decisions.

Finally, not using the word “free” in branding and communications seems like a missed opportunity, and should be reconsidered. “Zero-rating” is a technical term that is not widely understood by the general public; as a result, for many potential users, the name Wikipedia Zero has no connection to the biggest selling point of the product: That it is free to use.

Ideas

PRODUCT / PARTNERSHIPS: Create a welcome or landing page for first-time readers that explains Zero. Airtel customers will more clearly understand what Zero is and how it works, and non-Airtel subscribers may consider switching networks for browsing (if they already use Airtel via another SIM) or may be convinced to become an Airtel subscriber. By strengthening the value of the Zero partnership for MNOs, they may be encouraged to invest further in communications or internal training campaigns around it.

GLOBAL REACH: Consider renaming Zero in select markets where other descriptors (e.g. Lite or Free) may speak more to directly to user needs.

OPPORTUNITY 5:

Become a destination for otherwise hard-to-get national history and culture.

Compared to counterparts in the Global North, citizens in many Global South countries struggle to get the same quality and volume of information about their history and culture, whether in print or online. This leads to frustrations both small (the inability to find information online for a school project) and large (disappointment that one's national identity is not represented on the worldwide web).

Wikipedia has a unique opportunity to distinguish itself as an inclusive resource that represents all the world's knowledge, even that which is currently hard to find online. It can become a destination for information that is significant to readers in the Global South. Wikimedia's content development model and passionate, global community positions it well to source and capture such information.

More broadly relevant content could grow readers, and potentially attract new editors, as Wikimedia's mission and its outcomes resonate with a wider, global community.

Ideas

PARTNERSHIPS: Partner with like-minded communities (e.g. various issue-based student groups, civic innovation communities, and arts organizations such as Terra Kulture in Nigeria) and coworking spaces (e.g. the Co-Creation Hub (ccHub) in Lagos) to grow the quality and volume of locally relevant content. Hold edit-a-thons to grow local content and engage new people in the Wikipedia community.

COMMUNITY ENGAGEMENT / COMMUNICATIONS: Consider targeted national content drives to grow editors and attract readers by appealing to national pride and the satisfaction of seeing one's national culture represented on an international media platform. Consider partnering with local media to promote awareness of local content on Wikipedia, e.g. radio programs that discuss the newest or most popular articles about national culture added each week.

OPPORTUNITY 6:

Appeal to early adopters and influencers.

New technologies and apps spread largely through word-of-mouth—and there are some users whose words are more influential than others.

To drive awareness and usage, Wikipedia should target early adopters or influencers with tailored appeals to demonstrate Wikipedia’s utility. Once they understand its value, they can help spread this knowledge to others.

Such demographics include:

Diaspora populations, since those with family or friends abroad are influenced by their digital preferences, including choice of devices, websites, and apps. Those living abroad are often perceived to “know the latest”.



The economic elite, whose purchasing power and digital savvy makes them good testers of new apps, and their social status makes their embraced apps more widely appealing.



Digital immigrants that have unlimited internet access but low Wikipedia awareness—these tend to be people above 50 who have moved upward in economic status.



Parents that introduce younger family members to new digital tools and **children** for introducing older family members to social media platforms.

Ideas

COMMUNICATIONS: Engage prominent bloggers (e.g. Japheth Omojuwa or Linda Ikeji in Nigeria) or personalities (e.g. Bollywood stars) on Twitter with Wikipedia articles or content. Use Share-a-Fact to tweet specifically from articles that relate to their interests, or to share fun content, such as wishing them a happy birthday. [May be a tactic that local community members are particularly well-suited to lead or support.]

PARTNERSHIPS: Partner with NGOs (e.g. Etasha Society and Digital Empowerment Foundation in India) that provide computer training programs to youth and marginalized populations to include Wikipedia as part of their curriculum for online search.

OPPORTUNITY 7:

Increase Wikipedia's utility as a language learning tool.

In India, users primarily use English in their online activities. Those that are learning English also enjoy searching and reading English because it improves their language skills. Both types of users switch between English and local languages to input specific search terms that they don't know in English, or to translate unfamiliar English terms. Currently, they navigate between languages by (in descending order of frequency):

- Searching in English “[search term] in local language”
- Entering search queries in a local language, with the terms transliterated in Roman alphabet
- Using Google Translate or a translation app to interpret results

All of these methods add burden to the search process, and require switching between webpages and/or apps. Further, most users did not need all of their search results or content in their local language, just specific components. For the most part, language switching occurs at exact moments of need, when users want the meaning of a specific word.

Wikipedia should consider ways to help people meet their language translation needs just-in-time. In doing so, it can increase its utility as a tool to support language learning, and appeal to the vast numbers of users that seek to learn or improve their English around the world.

Ideas

PRODUCT: Provide the ability for users to easily translate or define specific words within articles, for example, through right-click, highlight, or other mechanisms that enable just-in-time translations.

COMMUNICATIONS: [Once Wikipedia has implemented features to support language-learning,] Work with vernacular newspapers that have launched English-language editions (e.g. Dina Thanthi new DT Next) to identify English-language learners and promote usage of Wikipedia's new features.

OPPORTUNITY 8:

Partner with educators to showcase how Wikipedia can support academic learning.

In many markets, educators are wrestling with whether to condone Wikipedia for academic use. Many school administrators believe that its use should be restricted for assignments, but recognize its utility for students and teachers alike for “previewing” a topic.

Wikipedia should work with public education authorities to clarify what Wikipedia is and when and how it can be useful for education. Doing so may be challenging, and WMF should look for opportunities where there is high-level political interest in (or existing commitments to) modernizing education. It may also consider partnering with innovative education content or service providers to incorporate Wikipedia content into materials and programming.

Education, naturally, can be a sensitive topic to navigate for a foreign non-profit. WMF may consider working with partners such as UNICEF, who are deeply familiar with the complexities of public education in the Global South and have relationships with many host-country governments.

Ideas

PARTNERSHIPS: Educate public education authorities and school boards on what Wikipedia is and the use-cases it is suited for. Encourage them to sanction student use as starting point for research and analysis.

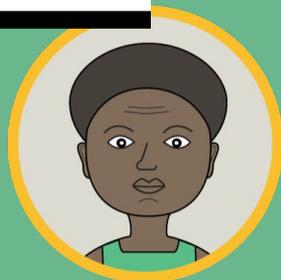
 **PARTNERSHIPS:** Work with digital educational content companies to integrate Wikipedia content into their products. One example is EduComp—a prominent and growing Indian company, with reported reach of 32,000 schools and 20.9 learners and educators globally—through its flagship smartclass product.

 **PARTNERSHIPS:** Work with NetLibrary Nigeria to incorporate an introduction to Wikipedia and how to use it into its curriculum for university e-librarians and faculty. Its training-of-trainers model can support widespread dissemination in libraries around the country.

User personas



Tolu, 23



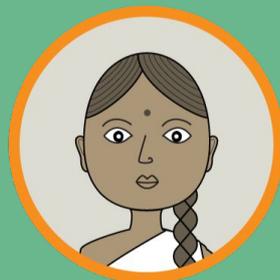
Helen, 35



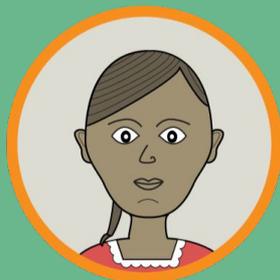
Chris, 22



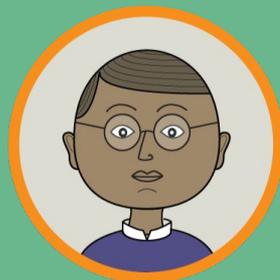
Femi, 35



Shilpa, 48



Kumari, 19



Sandeep, 28



NAME:

Tolu

AGE:

23

FROM

Epe, Nigeria

LIVES:

Lagos, Nigeria

OCCUPATION:

Student (Geology)



BIOGRAPHY

Tolu is a third-year geology student at UNILAG and lives in the campus dorm. She is very social and is always connected to the Internet via her mobile phone and instant messaging with friends. She usually has her tablet with her as well and uses it to take photos, do research for school, and watch South Korean romance shows and TED talks.

Tolu is looking forward to graduating and getting a job. For school, she uses WhatsApp group chats to trade notes on assignments with classmates—each course has its own group, which come alive with conversation around exam periods.

She uses Google as the starting point for any assignment. She recently wrote a paper on the causes of land erosion. To start, she opened Opera Mini—her preferred browser because it uses less data—and typed the topic as her search term into Google. She then opened all the links on the first page of search results, including Wikipedia, and started to compile information from each of them. She doesn't pay attention to the links' domains; but once she opens them, she spends more time on pages from well-known academic sources. An eager student, Tolu likes to supplement her education by searching for things her lecturers may mention in passing, finding interesting content on MIT Open Coursework, and using Quizlet (an online community for exam-prep flashcards).

Tolu believes that Wikipedia is a good source of information "for people, places, and things." Her professors have told her that Wikipedia is not "referenceable," but she still uses it to get topic overviews. She likes how pages have summaries and are "broken down by section" so she can jump to what she needs. She believes that Wikipedia is unreliable since anyone can put information on it.

DEVICE USE



Tecno L8 Android Smartphone

PRIMARY USE: Instant messaging, social media, and web browsing.

NETWORK: Airtel: Spends ₦1,500 (-\$5.30) on a 3GB monthly plan for her smartphone and to tether her tablet.

APPS USED: *In order of preference:* Instagram, WhatsApp, Twitter, Facebook.



Nokia N100

PRIMARY USE: Voice calling, and SMS.

NETWORK: Etisalat: Spends between ₦500 and ₦1000 (\$1.75 to \$3.50) each month via prepaid top-up cards. Tops up 2 to 4 times a month.



LG Tablet

PRIMARY USE: Research for school assignments. Watching videos and movies.

DETAILS: Not data-enabled, only accesses Internet through WiFi and tethering. LG brand was a spurge but was worth it because it's a status symbol.

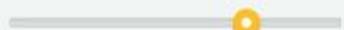


Acer desktop computer at UNILAG computer lab

PRIMARY USE: Typing school assignments.

DETAILS: Limited use, only for typing and printing school assignments. When not busy, may also watch movies with a group, but generally prefers the privacy of her own mobile device.

Low Digital Confidence



High Digital Confidence

Low Economic Status



High Economic Status



NAME:

Helen

AGE:

35

FROM

Anambra, Nigeria

LIVES:

Epe, Nigeria

OCCUPATION:

Tailoring



BIOGRAPHY

Helen lives in a small town, Epe, with her husband, a laborer at the nearby noodle factory, and their three young children. Although her family struggles to make ends meet, Helen is very economically resourceful. After giving birth to her first child 10 years ago, she became a seamstress to supplement her family's income.

Helen keeps track of local happenings by chatting with neighbors or listening to her husband and his friends when they come to chat in the evenings. She's most interested in news that impacts her and her family: gossip about teachers at her children's school, rumors of possible protests or strikes, and other community news.

Helen uses a low-grade smartphone mostly for calls and some web browsing. Her internet access is limited by the frequent power cuts—her family doesn't own a generator—and her ability to pay for data. To get online she relies almost exclusively on the free data that comes as a bonus with airtime purchases. Helen switches on her data only when necessary. She's frustrated that the connection is often unreliable—even the rain seems to affect it. When she is online, her top priority is staying connected with family and friends. Facebook is her favorite app, which she joined at the urging of a cousin who studies abroad. This was also the beginning of her internet usage.

Since then, she has found many other uses for the internet: she looks up confusing phrases from the Bible, searches for ideas to grow her business, and gets outfit inspiration before big social events. She is amazed at the seemingly never-ending amount of information "Mr. Google," her favorite search engine, can provide.

Helen recognizes the Wikipedia icon on her mobile phone but doesn't know what it is—she thinks it may have come with her phone. She has opened the app before out of curiosity but was uncertain of what she should do and quickly closed it.

DEVICE USE



Infinix Android Race Eagle X50 Smartphone

PRIMARY USE: Voice calling, Facebook, and internet browsing.

NETWORK: Airtel: Tops up N100 to N200 (\$0.35 to \$0.70) every week or two, which gets her data bonus of 10 to 20 MB. This is her primary line.

APPS USED: In order of preference: Facebook, WhatsApp.

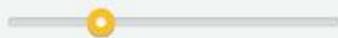


Tecno T410 (dual sim)

PRIMARY USE: Voice calling.

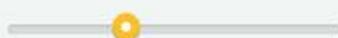
NETWORK: Glo & Etisalat, as it is difficult to depend on one network given patchy connectivity. Uses both as backups when the Airtel network is down, so doesn't always have credit on them. Tops up N50 (\$0.18) at a time, as needed.

Low Digital Confidence



High Digital Confidence

Low Economic Status



High Economic Status



NAME:

Chris

AGE:

22

FROM

Epe, Nigeria

LIVES:

Rural Epe, Nigeria

OCCUPATION:

Student (Final Year)



BIOGRAPHY

Chris has lived in rural Epe his entire life and now attends the local satellite campus of Lagos State University, where the entrance requirements were less rigorous. He is studying mathematics but would like to one day teach history. Chris enjoys discussing politics and history with friends and would like to share this interest with others.

Heated debates about politics are a key reason Chris goes online—he wants to be informed in order to show off his knowledge and win arguments. His other main motivation is sports. He loves chatting with his Epe Arsenal supporters group on WhatsApp and uses Live-scores to get updates whenever he misses a live match due to school or church commitments. The only websites he knows by name are sports sites: Goal.com, ESPN.com, and the like.

Chris uses Facebook to connect with secondary school friends who have left Epe and WhatsApp to chat with them—doing so saves him a great deal on airtime costs. He is also in a WhatsApp school study group but doesn't spend much time on it.

Although Chris likes going online, he is annoyed by frequent internet service disruptions. He uses Etisalat, one of the better networks in rural Epe, but its service quality really depends on location. Around his own home, Chris knows exactly where to stand and how to hold his phone for the best reception.

Chris struggles to articulate what Wikipedia is ("an app?") but appreciates how it organizes information. "I like Wikipedia because it gives me all the background I need, especially for profiles of people." Wikipedia is his go-to source for resolving arguments with friends, e.g., the height of a famous footballer. For schoolwork, Wikipedia is not a default source; Chris only uses it when it appears on the first page of a set of search results. Once he clicks through to the Wikipedia page, he will scan headings and selectively read (or copy) content for assignments; he doesn't look at the references.

DEVICE USE



XOLO Q700s Android Smartphone

PRIMARY USE: Sports news and updates, voice calling, instant messaging, and social media.

NETWORK: Etisalat: N500 (\$1.80) for airtime and N200 (\$0.70) for 200MB of data each week.



Tecno T345 (single sim)

PRIMARY USE: Voice calling.

NETWORK: Glo: N100 (\$0.35) every two weeks.



Hewlett Packard

PRIMARY USE: Web surfing. Research and writing for thesis. Downloading and watching movies.

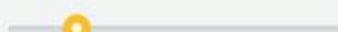
DETAILS: Takes laptop to the campus WiFi Zone or nearby cybercafes to access the Internet.

Low Digital Confidence



High Digital Confidence

Low Economic Status



High Economic Status



NAME:

Femi

AGE:

35

FROM

Lagos, Nigeria

LIVES:

Lagos, Nigeria

OCCUPATION:

Entrepreneur



BIOGRAPHY

Femi is the founder of EduChap, a children's education app. Coming from a long line of educators, he believes deeply in the role of education to empower the next generation and transform his country.

After getting his MBA from the prestigious University of Lagos, Femi worked at a computer business owned by a family friend. Though his salary was modest, Femi worked hard and spent little. After six years, he left and, with his savings and some support from family, started EduChap.

Today, most of Femi's internet use is for work. Running a startup, he is working seemingly 24/7. Checking and sending email on his phone is often the last thing he does every night before falling asleep and the first thing he does when he wakes up in the morning.

Given how much he is on the move (or sitting in Lagos traffic), his internet usage largely happens via his mobile phone. His iPhone 6 is his primary gateway online—he uses it for email, browsing, LinkedIn, and constantly checking on EduChap. His Blackberry is mostly for social media—he likes Twitter and Facebook for news—and for managing contacts. His MacBook Air is kept at the office for word processing, presentations, and some light browsing. He spends ₦5,000 to ₦10,000 (\$17.70 to \$35.40) on monthly data plans and can use up to 1 GB in a day. Last month, his friend told him about a great new MyFi service in Lagos. Femi needs ₦18,000 to get set-up on the plan and is willing to give it a shot after his current plan expires. He had tried a couple of these types of plans in the past and had left them because the service deteriorates after a while.

Femi knows that for EduChap to be successful he must invest in his own professional growth. He is currently trying to improve his coding skills (via international sites such as Lynda.com, w3schools.com, etc.) and knowledge about primary school curricula and pedagogy (via basic online research to find relevant articles and events).

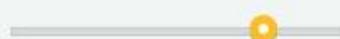
Femi developed a fondness for Wikipedia at UNILAG. His professors would tell him not to use, but Femi couldn't understand why, beyond the fact that they wanted to profit from their own textbook sales. He also noticed his professors using Wikipedia material for their lectures and thought this double standard was unfair. He eventually figured out a loophole: he would use Wikipedia content, but just to cite other sources. Today, a modified version of his practice continues: he uses Wikipedia content for EduChap modules and supplements it with information from other sources.

Low Digital Confidence



High Digital Confidence

Low Economic Status



High Economic Status

DEVICE USE



iPhone 6

PRIMARY USE: Voice calling, emailing, LinkedIn, and EduChap.

NETWORK: Etsisalat: Spends ₦5,000 (\$17.70) on a 5GB monthly plan for his smartphone and to tether his other devices. Spends another ₦1,500 (\$5.30) weekly for calls.

APPS USED: In order of preference: Twitter, Facebook, WhatsApp, Instagram, Wikipedia.



Blackberry Z10

PRIMARY USE: Social media, and voice calling.

NETWORK: Etsisalat: Spends ₦2,000 (\$7.10) for data on his BlackBerry and ₦500 (\$1.77) on airtime top-up each month. Tops up 2 to 4 times a month.



iPad

PRIMARY USE: Reading, taking and looking at photos.

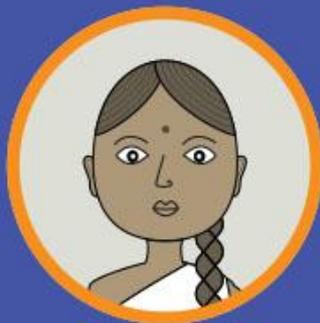
DETAILS: Not data-enabled, only accesses internet through WiFi and tethering. iPad was a status symbol—frequently carried, but with limited usage.



Macbook Air

PRIMARY USE: Primary desktop device for word processing, presentations, etc.

DETAILS: Kept at the office, primarily for typing, preparing presentations, and light browsing while at his desk.



NAME:

Shilpa Bothra

AGE:

48

FROM

Bhilwara, India

LIVES:

Jaipur, India

OCCUPATION:

Homemaker/Tutor/Artist

Awareness of Wikipedia



Access to Internet

BIOGRAPHY

Shilpa is an artist who taught herself how to paint in the traditional style of the Bhilwara region, where she grew up. She moved to the state capital, Jaipur, after marrying a clothing salesman. She supplements the family income by working as an art tutor for the neighborhood children. Her husband owns a desktop computer and has an Airtel WiFi modem at home.

Shilpa is very social, and it was her friends who first convinced her to go online. They installed Facebook and WhatsApp on her phone so that they could all stay in touch. She has also found the internet useful for her art. Her husband installed the YouTube app on her phone and showed her how to search for video tutorials on new painting techniques. A few loyal customers successfully encouraged her to sell her paintings on Facebook.

Shilpa speaks Hindi and Marwari, a regional language spoken by her family; but her main sources of news are in Hindi, which was her medium of education. She watches Hindi news on TV and reads the *Rajasthan Patrika*, a Hindi newspaper. Her husband can read English newspapers but subscribes to the Hindi versions for her and her mother-in-law, who lives with them.

Shilpa is very proud of her two children: Gagan, who is studying commerce in 12th grade to become a businessman like his father, and Savita, who is completing her Bachelor's in History at JNU in Delhi. She stays in touch with Savita usually via WhatsApp chat and voice calls. Her children don't have the patience to teach her how to make better use of her phone, so she sticks to familiar apps.

Last year, Shilpa's husband installed UC Browser Mini on her phone and told her that it is the fastest search engine, but she rarely uses it. She found the UC Browser notifications annoying, so he did something to minimize their appearances. Her husband used to help the children with school projects on the desktop computer at home; and by watching them, Shilpa learned how to search on Google. But today, if she needs to find information online, she still asks her husband for help because his English is much more advanced than hers, and he knows which links to click.

She has never heard of Wikipedia and cannot recall ever using it.

DEVICE USE



Xolo Era smartphone

PRIMARY USE: Social networking via WhatsApp and Facebook. Selling artwork via Facebook. Learning painting techniques on YouTube.

NETWORK: Only uses her phone to go online while at home, when she can connect via the Airtel modem. Rarely leaves her home, so she does not have data on her phone.

DETAILS: Her husband bought her a phone with a large screen to make it easier for her to type and view images.



Desktop computer

PRIMARY USE: Husband used it to help their children with school projects.

DETAILS: Husband uses it to search for information for her when asked.

Low Digital Confidence



High Digital Confidence

Low Economic Status



High Economic Status

Original Status

Current Status



NAME:

Kumari

AGE:

19

FROM

Nearby Village

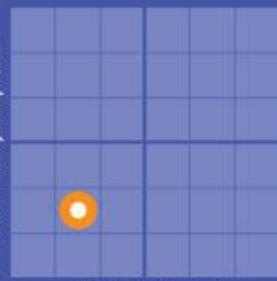
LIVES:

Madanpur Khader, India

OCCUPATION:

**Recently enrolled at
Computer Center**

Awareness of Wikipedia



Access to Internet

BIOGRAPHY

Kumari is a new student at an NGO-run computer center in a re-settlement colony on the outskirts of New Delhi. Her family was relocated to the colony seven years ago from their home on banks of the Yamuna River. When they first arrived, there was no water or electricity, and the school was nothing to write home about. Now, there is electricity most of the time, but Kumari or her mom still have to wait in long lines to buy water from water tankers. One day, while waiting in line, a neighbor told them about a community organization starting a three-month computer training program for only Rs 200 (\$3.00). Kumari was interested in the program and had free time now that she was out of school. She mentioned this to her grandmother, who in turn encouraged her parents to enroll her, citing the low cost and increased job potential.

Kumari is shy and seeks information from her family and close friends. She lives with her parents, two grandparents, and two younger brothers, who are 5 and 10 years old. She gossips about neighbors with her mother and gets life advice from her grandmother.

Kumari's father gave her his old smartphone, which she shares with her 10-year-old brother. Her brother and his friends play games on their phones all the time; once in a while, he will teach her a few games. Her favorite is a farm simulation game. If she asks, her mother will usually buy her a small data plan to chat with friends on WhatsApp and Facebook—it's the primary way they update each other on what is new. She also browses clothing stores online, but does not buy anything because no one in her family owns a credit card—her grandmother and parents are wary of getting scammed. She enjoys shopping for clothes at the mall and in the market.

Kumari is excited to learn how to use computers because she knows such skills can help her get a good job. She hopes the NGO will employ her at the end of her training, like they did her neighbor. The computers in the center are WiFi-enabled, so she hopes to learn more about the internet and what else it can do. After a few classes, she has already learned how to use Google and search for any English word. Her English is very limited, but her classmate showed her how to type "in Hindi" at the end of every search to get information in Hindi. She's now been doing this to find information on Shahrukh Khan, her favorite movie star, and read about his new movie *Pan*.

Low Digital
Confidence



High Digital
Confidence

Low
Economic
Status



High
Economic
Status

DEVICE USE



Forme Discovery P9

PRIMARY USE: WhatsApp, Facebook, and occasionally browsing clothing stores. She can text, but prefers voice calls.

DETAILS: Shares her phone with her 10-year-old brother. Mother will buy her Rs 28 (\$ 0.30) of data every few weeks to a month so that she can use social networking sites.



Computer in her classroom

PRIMARY USE: Learning basic computer and internet skills.

DETAILS: WiFi-enabled and free to use when she is in class, since the cost is included in her tuition.

She does not know what Wikipedia is but has seen the name come up in her recent searches. She would need significant guidance in navigating any of Wikipedia's features.



NAME:

Sandeep

AGE:

28

FROM

Maharashtra, India

LIVES:

Delhi, India

OCCUPATION:

Research Scholar



BIOGRAPHY

Sandeep is a PhD student at Jawaharlal Nehru University (JNU), a leading liberal arts university located in Delhi. He has always been dedicated to his studies because he believes in the value of a good education. He enjoys spending time with his professors and even thinks of them as friends.

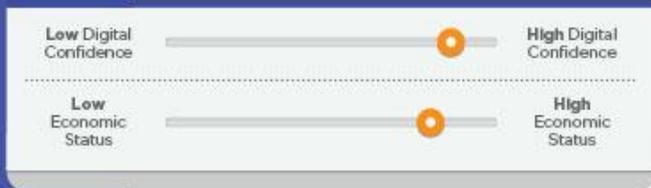
Sandeep was introduced to computers in secondary school. He attended one of the most reputable English-medium private schools in his state, one for the children of military parents. There, he learned to type, conduct online research, and create high-quality reports and presentations.

His parents gave Sandeep a feature phone when he moved to Delhi to pursue a Bachelor's in History, because his mother wanted a means to stay in touch with him. After graduation, he enrolled in a Master's at JNU, and his friends convinced him to buy a smartphone so they could communicate on WhatsApp. Sandeep was initially hesitant to spend his meager JNU research stipend (Rs 3,000 or \$45 a month), but agreed to buy it after one of his professors hired him for a research project. His friends recommended he buy an LeEco Le 1s Android phone (Rs 12,000 or \$180) because it was a good value.

When on campus, Sandeep uses JNU's WiFi—he even has a private WiFi connection in his hostel room. When he's off campus, he has a data plan to access the internet on his phone. He uses a Dell laptop for research, writing, and studying for exams. He relies on his professors for academic information, but also supplements what they provide through Google searches and reliable sources (including JSTOR.org and EPW.in, Economic and Political Weekly) recommended by his professors and peers.

For any research project, Sandeep begins by searching on Google. He typically starts with relatively broad search terms and, based on the results they yield, will make his queries more targeted over time. During his Master's program, he learned what types of sources can be trusted. As a result, he will only use Wikipedia for topic overviews and as a source for references.

Sandeep's English is at near-native proficiency; as a result, he usually has no problem finding what he needs online. He uses a translation app for esoteric and unfamiliar English words, but those are few and far between. The only time he remembers searching in a language other than English was when he was doing a project on a local political movement in rural Maharashtra.



DEVICE USE



LeEco Le 1s Android smartphone

PRIMARY USE: Voice calls, WhatsApp, following conversations between friends but rarely participates himself.

NETWORK: Internet usage is mostly via WiFi on university campus because it is free. Maintains data on his phone in case WiFi on campus is too slow or goes out. He pays Rs 288 a month for his plan.



Personal Dell laptop

PRIMARY USE: Uses it for research, writing papers, etc.

DETAILS: Goes online in his hostel, and carries it to campus where he accesses the university's internet.

For More Information

For more information on this project, please contact:

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Thank you!