

'தென்கிழக்கு ஆசிய நாடுகளில் மொழி - கற்றல் கற்பித்தல்' - பன்னாட்டு மாநாடு (சிறப்பு வெளியீடு)

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A STUDY OF ICT FOR MARGINALIZED COMMUNITIES: A CRITICAL PERSPECTIVE IN NILGIRIS DISTRICT நீலகிரி

மாவட்டத்தில் உள்ள விளிம்புநிலை மக்களின் மத்தியில் தகவல் தொழில்நுட்பத்தின் தாக்கத்தைப் பற்றிய ஆய்வு

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ஆய்வுச் சுருக்கம்

அறிவு சமூகம் அல்லது தகவல் சமூகம் என்பது தகவல் மற்றும் தகவல் தொடர்பு தொழில்நுட்பங்களின் (ஐசிடி) சாத்தியமான நன்மைகளை அங்கீகரிக்கும் மற்றும் தொழில்நுட்ப நிர்ணயத்தை வலியுறுத்தும் சொற்கள். உலகெங்கிலும் நடத்தப்பட்ட ஆராய்ச்சியாளர்கள் குறிப்பாக விளிம்புநிலை சமூகங்களுக்கு வளர்ச்சிக்கான தகவல் தொழில்நுட்பத்தின் முக்கியத்துவத்தை எடுத்துரைத்துள்ளனர். இந்த தாள் விளிம்புநிலை சமுதாயத்திற்கு இந்த (ஐசிடி) என்ன அர்த்தம் மற்றும் அவர்களின் சமூக கட்டமைப்பில் ஐசிடியின் பொருத்தத்தை புரிந்து கொள்ள ஒரு முக்கியமான கண்ணோட்டத்தை ஏற்றுக்கொள்கிறது. இந்த ஆய்வு இயற்கையில் விளக்கமான மற்றும் ஆய்வுக்குரியது. பதிலளிப்பவர்களிடமிருந்து தகவல்களின் இலவச ஓட்டத்தை உறுதி செய்ய இந்த ஆய்வு அவசரகால நேர்காணல்களைப் பயன்படுத்துகிறது. நேர்காணல்களிலிருந்து சேகரிக்கப்பட்ட தரவை பகுப்பாய்வு செய்ய ஒரு தூண்டல் அணுகுமுறை பயன்படுத்தப்படுகிறது. (ஐசிடி)மற்றும் ஓரங்கட்டப்பட்ட படிப்பில் அந்நியப்படுதல், உயிர்வாழ்தல் மற்றும் சேர்த்தல் போன்ற சமூக பிரச்சினைகளை கருத்தில் கொள்வதன் முக்கியத்துவத்தையும் இந்தக் கட்டுரை எடுத்துக்காட்டுகிறது.

Abstract

"ICTs for development" (ICT4D), knowledge society or information society are the terms which endorse the potential benefits of Information and Communication Technologies (ICT) and emphasize technological determinism. Researchers conducted worldwide have highlighted the importance of ICT for development particularly for the marginalized communities. This paper adopts a critical perspective to understand what these ICT mean to marginalized society and the appropriateness of ICT in their social structure. This study is descriptive and exploratory in nature. The study employs emergent interviews to ensure free flow of information from the respondents. An inductive approach is used to analyze the data collected from the interviews.

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The paper also highlights the importance of considering social issues like alienation, survival and inclusion in studying ICT and marginalized.

திறவுச் சொற்கள்/Keywords: ICT, alienation, marginalized, livelihood, (ஐசிடி), அந்நியப்படுதல், ஓரங்கட்டப்பட்ட, வாழ்வாதாரம்

Introduction

The on-going computing and communications revolution has numerous economic and social impacts on modern society and requires serious social science investigation in order to manage its risks and dangers. Such work would be valuable for both social policy and technology design. Decisions have to be taken carefully. Many choices being made now will be costly or difficult to modify in the future.

ROLE OF ICT IN THIS MODERN WORLD

The last few years (after the 1970s) there has been an unpreceded transformation in information and communications technology, and all signals are that technological development and usage of information technology will evolve and develop at an express stride. Associating and assisting the histrionic upsurges of the usage of modern information technologies has been the falling cost of communications as a consequence of technological enhancements and amplified market race.

In accordance with Moore's law the working capacity of processing chips are multiplying every 12 months. These developments pose several substantial chances but also contribute significant challenges and unanswered questions. Today, revolutions in the field of information technology and communications develops extensive effects across various territories of cultures and societies, and intellects, lawmakers and diplomats are working on questions connecting economic and social yields, intellectual property privileges, privacy fortification, and affordability and access to data, information and communication

EMERGENCE OF ICT IN INDIA

By the mid-1960s, India's ICT sector was trivial and inexperienced and the supplies for computers in the subcontinent nation was chiefly provided by overseas dealers like IBM and ICL. During his second term, then prime minister, Jawaharlal Nehru introduced computers and communications technology in the infrastructural policies for strategically significant sectors in nation building.

And in the year 1966, Dr.HomiBhaba Committee quantified in its technical commentary on information and communications technology that India should evolve into an autonomous nation in the subsequent 20 years. Nevertheless, contemplating the country's then technological competence was beyond the grasp of the nation's economic and technical advancement. But that situation didn't stay for long, the country's perilous condition went through serious technological reformation and transformation during the 1970s. Soon the government of India instituted The Department of information and communication technology in 1970 which will change the course of the country's role in the information technology and communication sector.

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Soon, the Commission for information and communication technology was created for monitoring and regulating the roles and activities of the private and public sector in the information and communications industries. Ensuing the counsel and recommendations of the Bhaba Committee, The Electronics Corporation of India commenced the manufacturing of small and medium-sized computers in early 1970s. In 1973, the government recognized the strategic importance of the information and communications technology industry and in its computer policy emphasis was laid on developing complete self-reliance in information and communications sector. Computer Mainframe Corporation was formed in 1976, was given the governing power to control and facilitate all overseas information and communication technologies instated in the nation. These phases vis-à-vis evolving into an autonomous nation in information and communications technology were further reinforced by governing bodies by creating strategies to control import and upsurge the tariff laws and regulations for the for imported electronic goods under the supervision of Department for information and communications.

Advanced computer manufactures developed software outside their hardware manufacturing unit in the late 1970s, as it became gradually arduous for hardware manufacturing firms to deliver the complete assortment of software prerequisites to make effective use of their hardware commodities. This was also expedited by the suitable improvement of educational courses regarded with the software development programs, sophistications of programming languages, and mass manufacturing of hardwares. Nevertheless, in early days such software development was largely limited to the effort of in-house developers writing programs for their own establishments

OBJECTIVE OF THE STUDY

- To find out the amount of penetration among the tribal population of Nilgiri district.
- To find the reasons that prevent digital divide from reaching the tribals.
- To find a solution how these could change and get the tribals to be part of the digital world.

RESEARCH QUESTIONS:

- What is the level of ICT knowledge the tribal people of Nilgiri have?
- How does digital divide influence tribal population in and around Nilgiri?
- Does digital divide have any negative significance on the information acquired by the tribal people of Nilgiri?
- Do the tribal people of Nilgiri feel that they lack knowledge of the current world?
- Does the tribal person of Nilgiri want to improve their knowledge over ICT?
- Do the people of Nilgiri feel that they are alienated due to the digital divide?
- Can digital divide in the tribal villages of Nilgiri be eliminated?

METHODOLOGY

'Survey Quantitative research method' is used for the research. A sample was collected from the people in and around the tribal population of the Nilgiri district and it was later made to be analyzed and used.

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Method of survey is one of the instructive research approaches. This technique is used principally in scholastic study. The amount of survey schemes is very enormous in western countries and it is very much needed in India to find out the length and width of this nation. Even though the technique of survey has a subordinate position in research, it is predominant in day-to-day life. This system is valuable for examining the present condition.

Literature Review

The digital divide is a societal concern denoting the divergent quantity of info amid those who have accessibility to the internet and those who do not have accessibility to the internet. The phrase "digital divide" became prevalent among political parties, lawmakers and social activists in the late 1990s. The digital divide is not certainly a well-defined specific divide.

Annan, K. (2015). Investigators studied that drawbacks can be in any form such as inferior functioning computers, costly connections, struggle to gain mechanical aid, and lesser access to basic contents. Digital Divide is a comparatively fresh idea and most of the literature on this subject is fashioned in the last decade mostly. Furthermore, the catch phrase increased its stance in American and European literature before becoming part of the Indian context. Its practise initially arose in those countries where the internet was already extensively used and the disparities in the usage among the masses are witnessed to be generating a new group of haves and have-nots. Social disparities have stretched the attentiveness of social scientists.

Social disparities are ascribed to numerous issues by diverse philosophers. One of the utmost leading investigations has been done by Karl Marx, for whom all social imbalances reproduced in society are the consequence of the imbalanced circulation of substantial assets of creation.

Nevertheless, his communistic ideologies based on the possession of the materials bombs to fully clarify the disparity and discrimination in conventional cultures like India where caste, beyond class, remains a determining standard for societal respect. Researchers do not say that his idea does not aid in understanding the communal debate and battles in Indian culture, reasonably it, in fact, offers a much desired perception into the subtleties of class problems obtaining a larger position with the mounting characters of the market forces. Nevertheless, it stops to reason out for the caste subtleties of the culture that functions on a completely unusual rationality than that of class.

Max Weber, customs the notion of class, status and party-to analyze societal struggles. For him the economy is not a communal collection of people but a collection of people sharing alike life odds. He clarifies social modification with the assistance of his notion of class, status and party, denoting a combination of people dividing identical or similar life odds, life styles and association with power correspondingly.

Therefore, Weber classifies the social hierarchy of the elites-economic, political and social. When the economy improves and vice versa, society starts displaying traumas. Nonetheless, both Marx and Weber discourse only about the subject of access to the communally cherished resources as a root cause of conflicts and strain in society.

The apprehension with disparities evolving out of alterations in technology and upsurge in information network is reproduced in numerous education systems that predict the conceivable prohibiting of many from this wave of technology uprising and side-lining them

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further in the society. Since it charges a lot to partake in this information, it is dreaded that many needier citizens will be omitted.

Daniel Bell was among the first to talk of the occurrence of an age categorized by intensified burden and consequence of info and knowledge. However it is still hard to contemplate of a post-industrial culture in situation of India, where 75% of populace still exists in villages and numerous people have yet to receive the might of by the information networks, one cannot reject the slow but momentous growth of such network Pew. (2014).

Herbert Schiller in his findings illustrates the way IT has progressed to provide the attention of large industrialists and how these technologies again used to reinforce capitalism. According to him, the class of info formed and dispersed is regulated by market dynamisms and is molded by the requirements of the capital world and governments, the key purchasers of the information.

The civic in common, with its associates retrieving info and data as individuals, form the lower end of the social ladder. What they get is hardly of any value and use to them and has been labeled by Schiller as "trash information". Huebler.F, & Lu, W. (2012).

Jurgen Habermas, meanwhile worries about the fading 'public sphere' in the civilization as the individual members of society barely are able to contribute evocatively in the relaxation of info and its banquet. He finds the lessening of the 'public sphere' corresponding with the growth in Privatization and departure of the state from the public accessibility. Both the theorist specifies flared of the prevailing disparities with the rise in information network that unvaryingly errands the elite. This viewpoint would be helpful in appreciating and analyzing the nature and content of the internet, especially about the unrestrained Privatization and globalization (Fank, 2006: 124-126,155, 161-164,167). Manuel Castells distributed his book entitled "The Information Age" between 1996 and 1998.

Manuel Castells' theory of web culture offers a superior sketch for the studies of a very diverse port entrancing from globalization of manufacture to reinforcing democracy at the indigenous level. Castells claims that the notions of post-industrial culture or information society are insufficient to border the current world.

STUDY AREA

During the last four month I was going through research about the people's ICT knowledge in Nilgiri district and conducted interviews and recorded audio clips for about 10 minutes to gather the information.

Analysis

Qualitative analysis was used to analyze the data collected from the interview. The inductive approach was used to examine the qualitative data.

FINDINGS

The term 'Digital Divide' was predominant in analysis and strategies throughout the 1990s and 2000s. As admission to and content in the ICTs have advanced over the years, so has the description of the digital divide.

Now it is regarded: as

deficiency of infrastructure;
deficiency of access;
deficiency of info, or
Inability to leverage information.

There are substantial alterations in the description of the digital exclusion by numerous scholars. For some, the term denotes the fissure between people who have the ability to access the internet and those who don't have the degree of physical access to ICTs and the Internet. It considers it the 'jagged supply of the welfare of ICTs' which can be reviewed at the focussed level (Internet access) and basic ICT access level (access to basic model phones, TV and radio).

Around the mid-2000s, an analysis on the digital divide refocused beyond physical obtain ability and gave a sharper attentiveness to notions that are concerned with questions around culture, gender, economic situations, empowerment, and social agility; and distinguished the uses of the Internet. Alongside a universal conception of 'digital inclusion' as access and obtain ability to computers and internet for all, irrespective of corporeal, cerebral or economic capability, widen the definition to include technological literateness and the capability to access germane online content and facilities.

It is also the procedure of democratizing the obtaining ability of ICTs, in order to allow the addition of the side-line in the information world. Digital inclusion must be seen as a carriage to social inclusion that safeguards individuals and deprived groups have accessibility to ICTs and the skills to use them and are consequently able to partake in and to profit from a progressively electronically arbitrated knowledge economy and communication society.

Aedapalli—a small village in the Nilgiri district at Tamil Nadu, India, has only one primary school, no hospital or other medical treatment center. While BSNL Internet network is obtainable in this village, connectivity and quality of the connection is very poor. A student who requires assistance to fill a form or apply online for admittance has to pay a minimum of INR 50. For a labor availing welfare from the Mahatma Gandhi National Rural Employment Guarantee Act making about INR 150 a day, the entire cost of receiving a photocopy of an Aadhar card comes to INR 225. Thus, students are powerless to exploit the benefits of higher education due to non-existence of access to the Internet.

Daily wage workers lose their day's wages just to get their identity card printed. For them, accessibility of digital media is not a luxury but an inevitability. It is significant for us to highlight that the digital medium has value not in and by itself but reasonably acts as a vehicle that enables access to basic public goods and services, particularly in 2nd world countries.

In India, accessibility to public entitlement is tough to obtain, especially for people existing in rural and remote areas; here the poor and illiterate get ill-advised easily and accessibility to essential necessities like pension, daily wage, food, basic health facilities and education is a challenge. 'Cubic goods' are hard to acquire for the people living in these areas.

Civic goods are described as goods, facilities, achievements, skills, operational and freedoms—separate and shared—that is vital for any being to live with self-respect.

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The subsequent case will intricate the above mentioned point. MGNREGA generates a reasonable 'right to work' by assuring up to 100 days of wage employment per year to all rural populations whose adults volunteer to do unskilled blue-collar jobs. Nonetheless, a fresh report has pointed out that there is very little civic cognizance about what requires to be done to find work along with an array of other matters contiguous to the MGNREGA programme. Therefore, notwithstanding the law ensuring work and livelihood, people are left jobless due to the lack of suitable channels of information.

The digital divide consists of lack of skills and lack of physical access to Information Technology (IT) and the two major problems frequently interconnected with each other. Without accessibility to technology, it is problematic to acquire technical talents and it is archaic to have access to technology without actually having the ability to exploit it.

ICTs have become an inimitable instrument in societal up gradation. Today, the Internet has become an integral part of many lives and it is tough to visualize day to day tasks without internet access. The number of people 'going online' to manage everyday actions, such as business and banking, education, seeking occupation, public engagement and starting and maintaining social relationships, is increasing every day. The World Development Report stated virtually 1.165 billion Indians are disconnected from the cyber world even though India ranks among the top five countries in terms of the total figure of Internet consumers, along with China, USA, Japan and Brazil. The account further specified that while India has come close to the US in numbers in terms of Internet penetration it remains far overdue at 18 per cent as against 87 per cent in the US. India still requires linking these 'disconnected people' to the Internet for insistent development, creating employment and accessing civic amenities.

ROLE OF ACADEMIC INSTITUTIONS

Academic institutes, particularly the Indian Institutes of Technology (IIT), have been making encouraging efforts to help rural and technologically disadvantaged people to access TO ICT.

IIT Kanpur introduced a mission and established a battery backed facility, the "Infothela", which is furnished with an arrangement of Internet and telecom services to communicate the advantage of IT to people in isolated parts. The distinctiveness of wireless "Infothela" comprises dispersion information about education, weather agriculture, and employment. The system is also secured with "Digital Mandi" ability, which is an electronic podium for agro based commerce. Under the umbrella of this scheme the farmer will be given a granary certificate facility. To embolden active contribution, educated and unemployed village youth have been empowered to operate the project.

Another mission has been started by IIT Kharagpur to "reduce the communication problem among the urban and the tribals." The plan has allowed the people to use the Internet even in isolated places using radio- waves mechanisms. These projects have made encouraging efforts to empower the tribal people by bridging the digital divide. Technology for the benefit of the common man is also introducing telemedicine in a big way in India.

The Indian Space Research Organization (ISRO) started a pilot project in 2002 with a "technology demonstration" and has been established in nearly 100 hospitals, with twenty of these at super-specialty hospitals and 80 of them in remote districts with large tribal communities. The consequence of the usage of this technology is tremendously hopeful. It is

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revealed that 16,000 patients have received consultation assistance from multi special hospitals without traveling to large cities. Lives have been saved in remote places through instructions obtained from experts with the help of this facility. In the 2004 tsunami tragedy which smacked the shore of India and the Andaman and Nicobar, the internet and phone-based medicine Network provided by ISRO was surge instantaneously into service.

Telemedicine is now becoming a reality. However, the system must be expanded and designed to be more user-friendly and economical. What is needed is to bring awareness among people about telemedicine and telehealth and their advantages. In this respect an International Telemedicine Conference happened in 2005 to share opinions and knowledge on the technological growth taking place all over the world. A expressive and economical incorporation of ICT and medical technology into what is called tele- medicine will bridge the gap between those fortunate to have health care amenities and the rural parts of the nation.

The National Institute of Agricultural Extension and Management based at Hyderabad in Andhra Pradesh state under the National Agriculture Technology Project (NATP) has set up Internet kiosks in 24 districts of seven states: Andhra Pradesh, Bihar, Tamil Nadu, Jharkhand, Maharashtra, Orissa and Punjab.

The state governments of Tamil Nadu, especially the Ministry of Information Technology, have taken several initiatives for rural development through community information centers (CIC). These may be considered as rural electronic libraries. The project has been started in Salem and Nilgiri district of the state to provide IT facility tribal villages Each CIC will have one server computer system and five client configuration computer systems linked in a local area network and connected to a V- SAT for Internet access. The facility will help government functionaries to use e-mail and the Internet for communicating with district and state officers. Efforts are being made to use the IT Infrastructure at the CICs to capture local information of the village and make them available worldwide through the Internet.

CONCLUSION

Tribal communities in this portion of the planet are trusted into this fissure without their knowledge, repeatedly finding themselves underprivileged in socio- economic- political and now digital. As a consequence of the country's growth in socioeconomic supremacy, many tribal societies are enormously underprivileged of ICTs' access and movement, whether living in established states or undeveloped states.

Furthermore, tribal populations are regularly poor in terms of literateness and other skills-based understanding vital for capable action of info and communications technology. And the dark truth is ICTs' accessibility is more and more associated with the social, political and economic expediency making the tribes in the country digitally handicapped.

Besides, fresh analyses approve this image, with only a minor portion of tribes using the internet, and even far less having access to broadband.

Even though grounded on the condition of tribes in the district of Nilgiri, this study linking digital, social, and economic weakness is binding to tribes throughout the country.

Mirroring the multiplicity of tribal population, however, digital dimness should be detected in the location of wider social and economic dissections, it is not always just an inquiry of

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obtaining ability or socioeconomic exclusion. Sympathetic of "Digital choice" is also essential to get a sharper understanding of ICT commitment by tribal population.

Genuine concern and disbelief concerning ICTs exists amongst tribal in India, For numerous tribal populations in India, ICTs indicate a vulnerability to endorse establishment of their lands, non-appearance of legal defenses for their lands, annihilation of traditions, modification of intellectual rational, and the hazard of risking community exercises.

Suspicious brashness and traditional hurdles regarding ICTs requires more than revolutionary and inventive tactics; it includes a level of faith attainable only with the thorough and active participation of the groups involved, and it must go hand in hand with the implementation and travelable defense of tribal population and land rights. Upended on this insight, attaching the socio- economic- political and digital gaps can be consistent with important rights such as freedom of expression and the right to accept info.

ICTs are an influential technology that offers chances to get linked to the tribal societies of the country, even in the most isolated regions. However, restrictions in linking with the tribes of our country still persist, including lack or badly maintained basic infrastructure, expensive financial strategy, inadequate bandwidth, or poor, undependable facility and inadequate economic plans for IT maintenance and lifecycle. And also other main problems that stop ICT from reaching out to the tribal population include the lack of Information and Communication Technology specialists amongst legislators and lawmakers, lack of teachers with IT skills, the supremacy of English on the Internet, the non-appearance of family and local society's involvement. As problematic as this list of problems may seem, they are not the only significant hardships on the skyline. Unquestionably, as the digital transformation is also acknowledged as a vital feature of globalization, some investigators advise that ICT accessibility among tribal peoples could prompt and hurry the reign of Western idea of believes, ethos, and educational approaches, impending threat about the devastation of the cultural variety for example television, radio, movies, and even video games have triggered massive and interminable acquaintance of many tribal youth to non- tribal cultural standards and information with diminutive opportunity to relearn, understand and emphasize their own cultural legacy.

Television is linked to many socio- psychological changes challenged by tribal populace, including cultural loss, absence of community contribution, rising contempt toward land, forest and the wild life around it.

In spite of the problems and barriers, the dormant notion of fairly contributing in the digital world is recognised and often encompassed by tribal populations themselves. During the whole research the tribal population hold the forecasts to use information and communication technology, for example, to protect their human rights, their forest, their wildlife and their land, to revitalize their traditional values, have more educational options, upsurge job chances particularly white collar jobs, admittance to the internet, and facilitate tribal and non- tribal message.

But it is also essential that the tribal communities require being a part of the ICT world on their own terms and on the basis of their traditional backgrounds, to be able to figure their future without jeopardizing their philosophies and identities.

LIMITATION OF THE STUDY

- The study was geographically limited.
- The survey was done with a limited population.
- The study was done with a small private investment.
- The research was specifically about ICT.

SCOPE FOR FUTURE STUDIES

- The study could be done with the tribal population around Tamil Nadu or even India.
- The study could focus on technological reach too.
- The study could be pan- India government funded research.
- The study can extent to the rural villages and not just tribals

Reference

- Annan, K. (2015). *Digital development: Report of the secretary-general*. Retrieved from http://unctad.org/meetings/en/SessionalDocuments/ecn162015d2_en.pdf
- Pew. (2014). *Mobile technology fact sheet*. Pew Research Center. Retrieved from <http://www.pewInternet.org/fact-sheets/mobile-technology-fact-sheet>
- Huebler, F., & Lu, W. (2012). *Adult and youth literacy: National, regional and global trends, 1990–2015*. Montreal, Canada: UNESCO Institute for Statistics. Retrieved from <http://unesdoc.unesco.org/images/0021/002174/217409e.pdf>
- S. Baller, S. Dutta, & B. Lanvin (Eds.). (2016). *The global information technology report*. Retrieved from http://www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf
- <http://unpan1.un.org/intradoc/groups/public/documents/un-dpadm/unpan042671.pdf>
- <https://economictimes.indiatimes.com/industry/telecom/telecom-news/jio-user-base-likely-to-touch-400-million-by-march-2020-analysts/articleshow/65776894.cms>
- https://digitalindia.gov.in/writereaddata/files/3.CEO%20NEGD%20Digital%20India_12022018_5.pdf
- <https://economictimes.indiatimes.com/news/politics-and-nation/15-18-lakh-tamil-nadu-students-to-get-free-laptops/articleshow/68190548.cms>
- <https://www.thehindubusinessline.com/specials/india-file/a-story-of-poor-data-inadequate-finance/article25290215.ece>
- <https://www.thehindu.com/opinion/op-ed/Bridging-the-digital-divide/article14511451.ece>
- <https://www.news18.com/news/india/indias-digital-divide-low-internet-penetration-web-attacks-make-a-weak-case-for-digital-india-1801721.html>
- <https://www.dw.com/en/world-bank-points-to-indias-digital-divide/a-19246910>
