



## Netnography as a Research Method in the age of AI and IoT - Trends in India.

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### KEYWORDS

Netnography, virtual culture, digital space, AI & IoT

### ABSTRACT

*Netnography has been there in the social science stream since 1995 but is mostly used only for market and consumer research. Kozinets (2007) defined Netnography as 'doing ethnographic research online or on digital networks and also as a combination of internet and ethnography'. The objectives of this study is to understand the current trends & future of digital space of India and an extensive analysis of existing Netnographic studies in India. The study reflects that the digital space and digital users are growing with high penetration rate along with the popularity of 4Gs and Smartphones in India. Research findings further reveal that there exists a substantial gap between the scope of Netnographic studies and the size of the overall Indian digital space, virtual networks/SNSs and number of digital users. Also, there are only a few disciplines currently promoting Netnography as a serious research method in India.*

## Introduction

Netnography was first developed in the field of marketing and consumer research with an interdisciplinary approach (Kozinets 2010). Later further developed into different fields and multi themed research other than focusing on market/brand/consumer studies. Netnography method indicates 'doing ethnographic research online'. It is a method which integrates internet/digital networks and the concept of ethnographic research. Netnography focuses majorly on reflections and data generated by digital/online communities. However, it also expresses parts of offline human feelings, ideologies, opinions and behaviours etc. It is simply a faster, easier and less expensive version of ethnographic research that is practically better suited for studying internet culture and communities. According to Kozinets (2006) netnography ensures better ethnographic studies with better standards than traditional ethnography methods. Hall (2011) listed popular terms related to netnography which are used in major academic research as being under two categories. The first is 'Ethnographic term', that includes Virtual ethnography, Online ethnography, Internet ethnography and Cyber ethnography. The second is 'Fieldwork term', that includes Virtual fieldwork, Online fieldwork, Internet fieldwork, Cyber fieldwork and Netnographic fieldwork. Netnography research methods have a number of advantages such as a better understanding of subcultures, easy data collection activities, trustworthiness of virtual respondents/communicators, unelicited & naturalistic responses, democratic conversations (Dholakia & Zhang 2004; Kozinets 2006; De Valck et al.,

Please cite this article as: Divya N. V., Manzoor K., Junaid K. C., *Netnography as a Research Method in the age of AI and IoT - Trends in India. Antrocom J. of Anthropology* 16-2 (2020) pp. 389-395.

2009). Likewise, the major limitations of using netnography as a research method are the studying only virtual communities, mass/huge databases (information), lack of visual cues, researcher acuity and authority (Kozinets 2002, 2006; Sade-Beck 2004; Dholakia & Zhang 2004; De Valck *et al.*, 2009). This paper tries to understand the current trends & future of digital space in India and an extensive analysis of existing Netnographic studies in India. Various statistical reports are used to develop ideas on the number of current and future users of overall Digital/Online products and services. The authors also extensively analysed research articles published in indexed journals which used the Netnographic method in an Indian context. By both of these stages, the study reveals existing gaps and scope of Netnography as a research method which understands the complex virtual communities and online behaviors.

## Methodology

The authors did an extensive analysis on published articles collected from different journal search engine services. Particularly for the purpose of content analysis, different filters have used to focus on the subject area. The preliminary results have filtered as articles published only in India or related to India, published between 2009 to 2019, articles which used methods like Netnography, Online ethnography, Virtual fieldwork, Online fieldwork, Internet fieldwork, Cyber fieldwork and Netnographic fieldwork etc. Further the results were analyzed in the context of theme of the article, category, and digital platform used for the research. There exists a future scope for application of deep content analysis and a post Covid-19 studies in the same subject stream.

## Discussion

To understand and predict the scope of research methods like Netnography we have to analyze the size of Digital/Online world as of right now and in the future. It includes all electronic devices which connect humans and interact with humans. To express the actual size of the digital world, we have to find out the number of users connected with internet, smartphones and other digital networking services/devices. According to Table 1, more than half of the world's population uses internet services and they are digitally connected to each other. Similarly, in the case of India, 1/3rd of the population have access to internet service. The popularity of Mobile internet users, Social Media users and Smartphone users reflects how big the digital/online networks are and the transformation of offline human interactions to online. These online interactions are developing as complex communities on the web with almost the same features of a traditional community culture; along with the technological advancements humans started adapting the technologies which simplify and increase the performance of the works.

*Table 1: Number of Users in 2019 (millions). Population- World: 7800 million, India: 1373 million*

	World	India		World	India
Internet.	4480	451	Mobile phone.	5150	813
Mobile Connections.	9320	1204	Mobile internet.	4000	420
Smartphone.	3300	299	Social Media.	3700	351

*Source: GSMA; IAMAI; TRAI; Statista.com; worldometers.info, 2019.*

Unlike the last decade, it is not only the PC/Internet but also different devices which are connected to the internet. In the era of Artificial Intelligence and the Internet of Things, the number of services, users and devices in the digital/online world is booming. Social Networking Sites (SNSs), Ecommerce portals, Digital services, Online Entertainment/Knowledge streaming services, Online banking are the basic digital networks developed after the evolution of Web 2.0. Later on these services and

products integrated into smaller and smarter versions with the arrival of Smartphones & 4G networks. As digital human connectivity became popular, different categories of smart devices like smart watches, smart TVs, voice assistants etc. captured the young market. Right now the automation of human activities is advancing with the help of AI and IoT which exactly act like human bots with the power of self-learning. Table 2 shows the number of users in 2019 and 2024 (forecasted) who consume digital world services like E-Commerce, Mobile POS Payments, Video Streaming (SVoD), Music Streaming services, E-publishing and Online Food Delivery, and major SNSs like Facebook, WhatsApp, YouTube, Instagram and Tik Tok.

Table 2: Number of Users in Virtual/Digital Space.

	2019 (million)		2024* (million)	
	World	India	World	India
E-Commerce.	3897.1	654.3	5060.3	963.4
Mobile POS Payments.	1133.3	403.2	1657.2	697.8
Video Streaming (SVoD).	1072	53	1306.8	78.2
Music Streaming services.	1021.1	92.8	1273.9	109.5
E-publishing.	1442.4	105.0	2378	2024
Online Food Delivery.	971.6	182	1731	280
Facebook^	2450	313.6	-	444.2
Whatsapp^	1600	400	-	-
Youtube^	2000	265	-	-
Instagram^	1000	73	-	-
Tik Tok^	300	120	-	-

\*' forecasted, '-' data not published, '^' Active monthly users. Source: *livemint.com; mediakix.com; Statista.com, 2019.*

According to Tables 1 and 2, we can determine the actual size of the current digital/online world and the future of these. All data showing the online services and networks are growing with a large penetration rate. This indicates the future scope of research methods like Netnography, which further acts as a future interdisciplinary research method with better, easier and multi-dimensional access.

There exists only a few Netnographic studies in India which used Netnography as a major research method on research articles to identify and find solutions to Indian research problems. As indicated on Table 2 the scope of Netnographic studies is increasing in India with the popularity of budget smartphone users and cheap 4G mobile network connections. Chakraborty, Ahuja, Jain, Bhardwaj are the popular Indian authors who practiced Netnography on their research. The table below (Table 3) tries to show major Indian netnography studies and analysis of the Year, Theme, Category and Used digital platforms of the study.

Table 3: Research articles used Netnography as a major research method in India.

Author & Year	Theme	Category	Digital Platform Used
Chakraborty & Bhat (2019).	Online community interaction in the Consumer Electronics Industry.	Consumer behavior. Virtual community. Digital Marketing.	Facebook.
Dey (2019).	Digital activism against gender violence.	Sociocultural. Virtual community. E-activism.	Facebook, Twitter, and Blogs.
Singhvi, and Srivastava (2019).	Consumer Perception for Selecting Sports Brands.	Consumer behaviour. Virtual community. Digital Word-of-Mouth.	E-commerce sites, SNSs, Blogs and Reviews sites.

Valacherry & Pakkeerappa (2018).	Socialization aspect in customer knowledge management (CKM).	Customer Strategies. Social Media Marketing.	Facebook, Twitter and Foursquare.
Sharma (2018).	Behaviour of Facebook users for brand engagements.	Consumer behaviour. Digital Marketing. Online Branding.	Facebook.
Nedungadi <i>et al.</i> (2018).	Using mobile technology for monitoring and supporting teachers, to reduce both teacher and student absenteeism.	Education. Sociocultural. Tech trends. Virtual community.	AmritaRITE apps and WhatsApp.
Ahuja & Alavi (2017, 2018).	1. Cyber psychology and Cyber behavior of adolescents. 2. Brand engagement and visibility of the airline	1. Sociocultural. SNSs culture. Psychology. 2. Online Branding. Social Media Marketing.	Facebook, Instagram and Twitter.
Jain <i>et al.</i> (2016, 2018).	1. Gender Trends on Female Bikers. 2. Surrogate Branding via Online Image Development.	Digital Marketing. Online Branding. Virtual community.	Facebook. Q&A sites and Blogs.
Bashir and Gupta (2017).	Tourist reviews and experiences on craft tours.	Consumer feedback/reviews. Visual anthropology. Online Branding. Digital Word-of-Mouth.	Blogs.
Dasgupta (2017).	Experience of queer Indian men in digital spaces.	Sociocultural. Psychology.	Planet Romeo, Facebook and Grindr.
Kujat (2016).	Subaltern Voices Entering the Public via Social Media.	Sociocultural. Tech trends. Virtual community.	Twitter and Facebook.
Bhardwaj <i>et al.</i> (2014, 2016).	1. Facebook Content Management Strategies Fast Food company. 2. Brand-Community Benefits.	Virtual community. Online Branding. Customer engagement.	Facebook.
Panda <i>et al.</i> (2015).	Consumer acceptance of the sharing economy.	Sociocultural. Consumer behaviour. Online community.	Airbnb site and App.
John <i>et al.</i> (2014).	Users' characteristics and factors affecting purpose of using Facebook.	Sociocultural. SNSs culture. Psychology.	Facebook.
Tripathi and Verma (2014).	Relationship Building on Social Media: NGOs in the education sector.	Sociocultural. Virtual community. Stakeholder engagement.	LinkedIn, Facebook, Twitter, YouTube and Blogs.
Chauhan & Pillai (2013).	Social media content strategies of educational institutions.	Customer engagement. Digital Marketing. Online Branding.	Facebook.
Dwivedi (2009).	Online destination image of India as a tourist destination.	Consumer feedback/reviews. Virtual community. Online Branding.	Major SNSs and Review sites.

Source: Compiled by Researcher.

The majority of the existing Indian studies have used Facebook as a digital platform to do netnographic research (Dwivedi 2009; Chauhan & Pillai 2013; Tripathi and Verma, John *et al.*, Bhardwaj *et al.*, 2014; Kujat 2016; Dasgupta 2017; Jain *et al.*, Ahuja & Alavi, Sharma, Valacherry & Pakkeerappa 2018; Chakraborty & Bhat, Dey 2019). Facebook is the popular SNSs in India and also it is easy to do an ethnographic kind of research on Facebook by participating in Groups, Page

updates etc. Trend analysis further reveals that most of the Netnographic-based studies comes under the category of 'Online Branding', 'Digital Marketing', and 'Consumer Behavior'. Then comes the 'Sociocultural' and 'Virtual/SNSs community'. There are few studies with traces of the 'Psychology' and 'Tech trends' categories. The table shows that there is an immense increase in the number of studies as the technology becomes popular in India over the years.

## Conclusion

Even research ethics are a major issue in online ethnography (Kozinets 2015). The popularity of Netnography is increasing among more young scholars as it demands a better understanding of both contemporary technology and culture. The study shows that the size of the digital space and the number of digital users is growing at a high penetration rate, due to the booming popularity of 4Gs and smartphones in India. In the future there will be a huge digital population for research sampling with a wide variety of virtual cultures. Research findings further reveal that there exists a substantial gap between the scope of different Netnographic studies and the size of the current Indian digital space, virtual networks/SNSs and number of digital users. Netnographic methods are not yet widely used by different disciplines including for Humanities and Social Science research. Even in India, it is seen that Netnography is commonly used outside the academic field for the purpose of Market studies or Business planning or development studies. Right now there are only a few disciplines promoting Netnography as a serious research method. However, future social science research will be practicing Netnographic methods as humans adapt and become addicted to technologies for basic needs, similar to how mobile phones slowly have become sort of artificial appendices if human hands. The future is the Age of AI and IoT, in which the Internet powers all human activities and shapes cultures.

**Acknowledgement:** *We would also like to extend my thanks to Prof. SC Bagri and Prof. Jesurathnam Devarapalli for elucidating the related conceptual framework. The assistance of Eldhose Varghese and Chinthu Viswanath is gratefully acknowledged in the development of this research paper, for their patient guidance, enthusiastic encouragement and useful critiques.*

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