DIGITAL INTERVENTIONS FOR EMPOWERING INDIANS AT THE BOTTOM OF THE LINGUISTIC PYRAMID

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Abstract:

The call for 'Digital India' has to be understood in the context of its geographic and sociolinguistic spread. With 692 million Internet users by the beginning of 2023, it is clear that these users who belong to different strata of our society felt the power of the Web. The January 2023 estimate shows 467 million social media users in India (or 32.8% of the total population). For this modern-day facility to reach the last mile, the current Internet penetration has to double the figure of 48.7%. It looks impressive when compared to the year 2000 figure of 1%. However, by the global statistics with 60% of users, and Europe as well as Central Asia figures being 87% (even Latin America and Caribbean Islands being 73% – 74%), India and South Asia still lag[1]. Disinformation and misinformation exemplify the wrong use of the Internet. It demonstrated the sharp rise, especially during and post-COVID-19. One needs to begin by sparking interest through 'Permanent and Continuous Digital Interventions' through two essential gateways – Digital Education and Digital Entrepreneurship. The current paper is a Narrative Review analysis of research literature on initiatives taken by state and non-state actors for cultivating digital learning and entrepreneurial environment in India, including the marginalized in these developments. The paper discusses the recommendations of researchers and current gaps, addressing linguistic interventions as a medium for increasing Internet penetration. A multilingual imagination in these two gateways, focusing on marginalized communities of India, can solidify the meaning of "Internet for Social Good" both in theory and action.
Keywords: digital, Internet, empowerment, artificial intelligence, India, multilingual, digital divide

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[1] Data acquired from the 'DataReportal' online reference library. https://datareportal.com
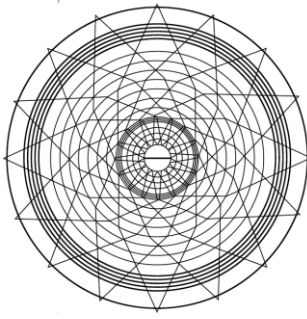
Introduction

1.1 Is Multilingualism the Way to a Digital India?

India is home to a rich diversity of languages with 19,569 speech varieties or dialects spoken in India as Mother Tongues (ORGI, 2022). Majorly 121 languages map the length and breadth of India. About 96.71% of Indians have one of the Scheduled languages as their mother tongue and the rest 3.29% speak other 99 languages. There are 22 scheduled languages, including Assamese, Bengali, Bodo, Dogri, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Maithili, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Santhali, Sindhi, Tamil, Telugu, and Urdu. Interestingly, English is counted as the 122nd language in this category and is deemed as India's Associate Official language, even though it is not part of the 8th Schedule of the Constitution of India (ORGI, 2022).
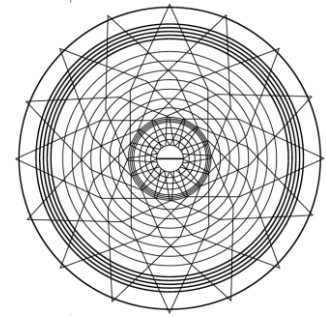
The problem remains with the inequitable representation of Indian languages on the Internet, in comparison to languages of other nations. Fault lines lie with the Multilingual Language Models (LM's) that include a small number of Indian languages among the 100+ languages used for training these models (Khanuja et al., 2021). Language representation on the Internet is strongly linked with Internet penetration across a nation. Finding their mother tongues on the Internet would pose a natural and visceral impetus to participate in online communication for billions of un-digitized Indians. We understand that true and raw data in Indian Languages (IL) is sparse across the Internet (Wu & Dredze, 2020; Lauscher et al., 2020). This is due to the often observed transliteration practices from IL to Latin, even the code-switching of Hindi and English, further aggravating the problem (Rijhwani et al., 2017).

Thus, Khanuja et al. (2021) created a language model called MuRIL, particularly for IN language corpora that is capable of handling even transliterated data effectively. This way their language model includes 17 languages with 16 IL (Assamese (as), Bengali (bn), Gujarati (gu), Hindi (hi), Kannada (kn), Kashmiri (ks), Malayalam (ml), Marathi (mr), Nepali (ne), Oriya (or), Punjabi (pa), Sanskrit (sa), Sindhi (sd), Tamil (ta), Telugu (te) and Urdu (ur)along with English. It makes sense now that Indian scholars and computational language experts, also experts in Natural Language Processing (NLP), will have to take the lead in creating more of such Indian language models. Their adoption, however, by software brands, and businesses online shall have to be ensured and enforced from time to time. While the representation of Indian languages shall situate many multilingual groups of India in the digital sphere, one is compelled to worry about those who are illiterate. There are still many in India, especially tribal populations that communicate only through speech and lack any formal understanding or training of writing in any language.

### 1.2 Reference Framework: Conceptualizing 'Internet for Social Good'

The current study investigates 'Internet for Social Good' from a multilingual lens. A fair and diverse representation of India's multitudinous linguistic diversity on the Internet is necessary to increase digital penetration figures and, most importantly, protect these languages through digital footprints and archival mechanisms. We propose some 'Permanent and Continuous Digital Interventions' on the learning and entrepreneurial fronts in India. They are inter-connected and support each other's proper manifestation and realization within the larger dream of digitization in India. Through promoting digital learning right at the student level, all through the formative years of education and growth, up-skilling even at collegiate levels, India's youth will be conditioned to operate digital systems and functions effectively and efficiently, further promoting social good. This learning shall also assist in their chosen careers and drive away the ongoing resistance to digital entrepreneurism which is largely due to ignorance of the Internet and other literacies.

2. Research Methodology: Reviewing Digital Education and Entrepreneurship in India

When addressing India's digital penetration scenario on an urban-rural scale, we see that the digital penetration in urban India is twice that in rural. In 2021, India had a rank of 73 out of 120 countries for Internet literacy. Viewing Internet penetration at the level of gender (both 15 years and above), adult men enjoy higher exposure (57.1%) to the service as compared to adult women (33.9%) (IAMAI & Kantar, 2021; Ministry of Health & Family Welfare, 2021).

There have been many propellants and roadblocks to India's wider digitization. Among propellants, significant have been governmental efforts in India to bring all government services onto digital platforms. Their online accessibility encourages Internet usage and gifting convenience by eliminating the hassle of physical visits to government and private offices. The COVID-19 pandemic has made Internet access a major dependency for all kinds of services, financial, educational, health, informational, and even mental. With ISPs like Reliance Telecom, Airtel, IDEA-Vodafone and BSNL, offering affordable data packs, targeting especially those from economically low strata of India, a digital revolution is already in sight (Thakur,2023). Some statistics, however, point to the lack of derision and skills in using the Internet for good, thus, bringing social benefits (Statista Research Department, 2022). Poor understanding of Internet usability also prevents its adoption and exploration of the various functions it has to offer.

Language is the medium through which people make sense of themselves and the world around them. Providing Internet services and the communication of these services
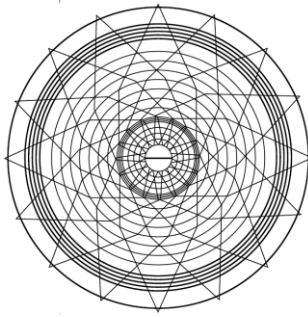
in local languages can increase their intelligibility, thereby increasing adoption. Moreover, digital training at schools and workshops for adults is essential to teach rural communities the good use of the Internet. There are many countries whose Internet penetration figures, and digitization models are worthy of praise and emulation. Nations like Ireland, Norway, Saudi Arabia, and the U.A.E have achieved nearly 100% Internet penetration figures, i.e., the percentage of the population using the Internet. Asia and Africa still lag considerably in their Internet penetration with India standing at 48.7% (Statista Research Department, 2022).

The current study analyses digitization in India from two lenses– digital education and digital entrepreneurship. A Narrative Review Analysis provides a holistic view of incumbent literature1comprising articles from research journals, newspapers, government, and non-government websites, to scan the initiatives taken by different state and non-state actors for digitizing the marginalized communities of India. This helps in providing recommendations in these two areas which would further help in improving Internet penetration figures in India. Internet research organizations and universities are all geared to realize an Internet that is increasingly utilized for the good and betterment of countries and their people. Here, we understand 'Internet for Social Good' as the utilization of digital devices and Internet services for the growth and enhancement of the most marginalized sections of society through education, employment, and entrepreneurial impetus.

The COVID-19 pandemic made it abundantly clear that Internet access has become a necessary social good, allowing people to save themselves from complete social deprivation (Archer & Wildman, 2021). It borrows from Townsend's (1962) idea of poverty that is based on a particular society at a given time; Internet poverty in modern times would deem every individual or society socially, educationally, culturally, and even politically deprived.

3. Analysing Past Interventions and Foreseeing Next Steps: 'Permanent and Continuous Digital Interventions'
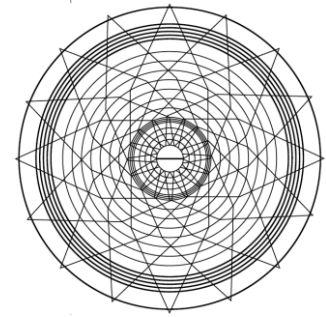
The COVID crisis shifted global public discourse to online media. It became the information portal of the world but also the mouthpiece of individual, organizational and national voices. Thus, it is imperative to redefine the importance of digital education, especially for the marginalized communities of any nation. Digital education infused with vital skills not only empowers them to navigate online arenas for seeking information but also learning to produce information for others to seek.

Studies emanating from India have been extensively exploring the role of technology in education. Singh et al. (2022) have assessed the power of technology spearheaded

by civil society organizations in India, especially for the uplift of the marginalized. Legacy non-profit organizations in India such as Child Rights & You (since 1979), Pratham Education Foundation (since 1994), Azim Premji Foundation (since 2001), and The Akshaya Patra Foundation (since 2000) have made a huge difference in providing necessities to the underprivileged children in India.

While education, food, shelter, and clothing are basic human rights that are desired by all, information needs and self-expression are equally important for survival. Digital media is at the cynosure of these communication needs in current times. Speaking of communities at the Bottom of the Pyramid (BOP) in India, Prahalad & Hart (2002) ask a question, quite visceral, and the want of nations globally, 'Can there be some measures taken that will help these communities ascend to the top and flatten out the pyramid?' Resources are central to this question and digital media as the Pandora of present-day innovative learning solutions is the way to these resources.

The current impetus of these and other civil society organizations (CSOs) and NGOs (non-government organizations) today is to focus on digital learning and up-skilling to truly bring marginalized communities on par with the privileged in India. Many of these play partners to state actors, and public institutions working towards similar goals and even hold them to account (World Economic Forum, 2020). 'Pratham Education Foundation' in India has been fundamental in creating learning through play and gamified pedagogies that utilize the Internet as a tool for a fun-based and interactive learning experience (Banerji & Chavan, 2016; Singh et. al, 2022).

While digitized teaching-learning initiatives are necessary, their medium in the native languages of the students is a major rung in the ladder of their development. Coinciding with this need is the need for an active and urgent representation of the several indigenous languages of India in the digital sphere. Open learning programmes, such as Pratham's 'PraDigi', have been successful in providing the necessary digital infrastructure across rural areas, placing mobile devices and technology in the hands of these children, and guiding them through their correct and ethical use for a fun and interactive learning experience (Singh et. al, 2017; Singh et. al, 2022). However, indigenous linguistic interventions are also important in making the learning experience more natural and adaptive. The Indian Space Research Organization (ISRO) as early as 2004, launched its education satellite EDUSAT, disseminating information in local languages for a truly multilingual learning experience (Chandwani et al., 2010; Khanchandani et. al, 2015).

Educational frameworks, such as India's NEP (National Educational Policy) 2020, lay huge emphasis on multilingualism within teaching-learning processes, starting at the primary level of school education and going up to secondary and senior secondary. There is a huge impetus to learning in one's mother tongue along with other languages.
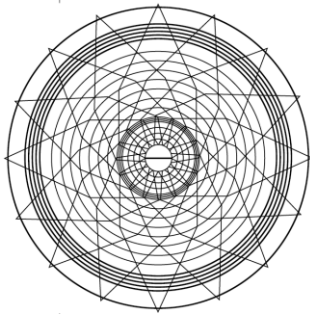
This is a drastic step, in contrast to the erstwhile monolingual or bilingual teaching-learning approaches with a disproportionate emphasis on Hindi and English (Dhokare et. al, 2023). However, technological impediments will need to be checked and worked out for a multilingual e-learning experience to be possible.

Indian Internet users display reliance on multiple online sources for information (Kantar& Google, 2023). YouTube is the strongest benefactor in fulfilling information and education needs for Indian Internet users, followed by social media apps, like Facebook[2], and Instagram[3] (Kantar& Google, 2023). There are 384 million Indian language Internet users (i.e., 53 per cent) out of a total of 729 million who belong to rural India. So, there is a major need to improve the Internet literacy skills of the rural population. Ladli Foundation Trust has provided 1000+ students with free Digital Devices with Pre-loaded E-Learning Content and 3 Years Premium Subscription to BYJU, a leading online educational service provider in India, during the pandemic. In India, government initiatives, such as the National Repository of Open Educational Resources (NROER), Shiksha Van, DIKSHA (Digital Infrastructure for Knowledge Sharing), SWAYAM (Study Webs of Active Learning for Young Aspiring Minds), E-Pathshala, and National Mission on Education Through ICT (NMEICT) have been major game-changers. The use of ICT for mass education (Chandwani et. al, 2010) is becoming even more significant post-COVID-19.

Another step is the Digital Platformization of Local Businesses alias the Kirana stores or "SMEs with owner-managers and individual entities that operate inthe retail eco-system in India," (Seethamraju & Diatha, 2019, p. 5177). Indian Internet shoppers (33% per cent), buying in all categories - Fashion, Grocery, Furniture, and Medicines, are affluent with more spending capacity than overall online shoppers (Kantar& Google, 2023). While the e-commerce market in India has been witnessing a major uptick, linguistic interventions can spur growth manifolds by capturing the low-literate groups in India who have discovered the technology and smartphone use but have not realized its complete potential with an independent user-friendly experience.

When reviewing research discussing the adoption of e-commerce practices both by retailers and shoppers, a detailed focus on the experiences of the uneducated or low-literate groups seems to be absent from the respondent sample. In many studies, language barriers as possible impediments are also not discussed (Seethamraju & Diatha,

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[2] The activity of the social media is recognized as extremist and prohibited on the territory of the Russian Federation, the data here and further are used for research purposes and are not aimed at approving extremist activities.
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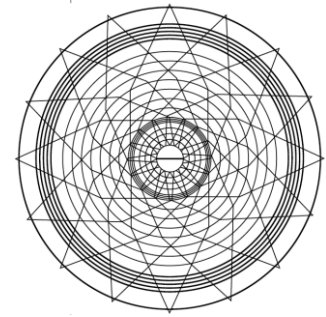
2019; Gopalan, 2022). For Kirana stores operating in India, many factors are deterrents to e-retailing, the primary being slow Internet speeds, perceived risk in online transactions and hesitancy arising from low to no education (Seethamraju & Diatha, 2019). Thus, a multilingual Internet is one major solution to promoting digital usage among such groups. Theoretical frameworks like the Diffusion of Innovations Model (Rogers, 1995) or the Technology Acceptance Model (TAM) (Davis et. al., 1989) can be useful in gauging the adoption of digital services by this under-researched demographic in India and other developing countries.

There is also a need to broaden the meaning of digitalization of retail stores in India encompassing digital payments as well as digital selling mechanisms. The idea is not to wipe off their physical presence but to give an added benefit through an online presence.
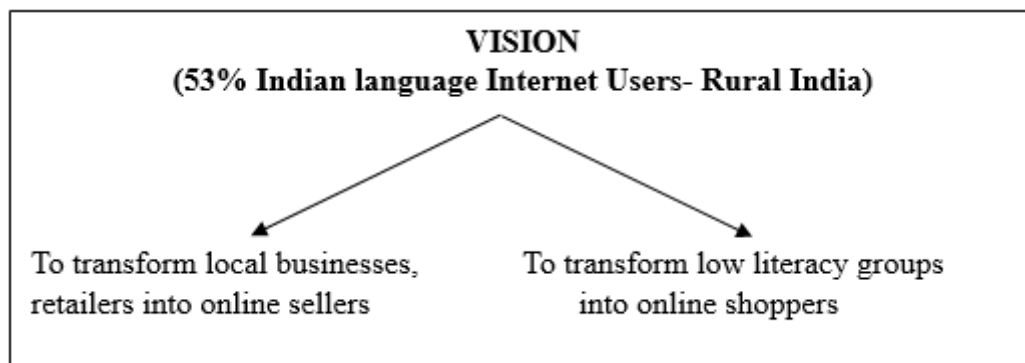

VISION
(53% Indian language Internet Users- Rural India)

To transform local businesses, retailers into online sellers

To transform low literacy groups into online shoppers

Figure 1. Vision for India's Rural Population Accessing E-commerce

Some Suggestions of 'Permanent and Continuous Digital Interventions':
Workshops and community learning to promote digitalization in the working practices of local retailers.

- Regular educational sessions on the use of digital payment methods and other digital interventions in supply chain management to smoothen work processes.
- Surveys conducted by Central and State government (s) to gain insights on local retailers' interests, challenges, and reservations in extending business to an online platform.
- Computer Literacy in Mother Tongue: E-learning is promoted through teaching and learning interactions in students' native languages.
- Tablets with pre-loaded learning material, interactive games, and quizzes provided to students enrolled in government schools, supported by NGOs, etc., to be given to each student for learning during school hours.
- The e-learning content should be dubbed in multiple Indian languages and students can learn in the language of their choice.
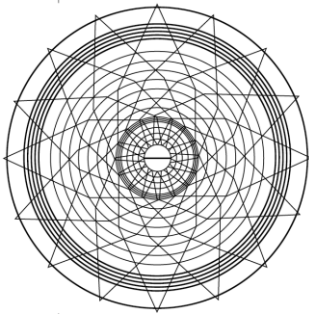
- To also promote learning of languages other than one's mother tongue, the digital device can provide courses, and videos teaching various Indian languages. The availability of content in this way can encourage interest in the linguistic diversity of India.
- Getting unorganized sellers on a single app, a venture that can be initiated by the Govt. of India, promoting these Kirana owners as certified sellers. It can be a 'Make in India' initiative promoting small businesses, considering India has the highest retail density in the world with one retail store per 100 (Kalhan & Franz, 2009).

4. Discussions &Conclusion- Multilingualism within the Fold

Text and Speech-based multilingual interventions on the Internet are the need of the hour. Voice-powered virtual agents, especially targeted towards groups with low literacy levels, must be adopted by global e-commerce sites. This can be AI-driven, allowing app and user interaction in the user's dialect, detected through location tracking. Voice Search is a popular tool in online navigation as nearly 61% of Indian Internet users rely on Search Engines (e.g., Google Search) for news and 39% rely on Audio News. This is mainly due to user convenience afforded by Voice Search (Kantar & Google, 2023).
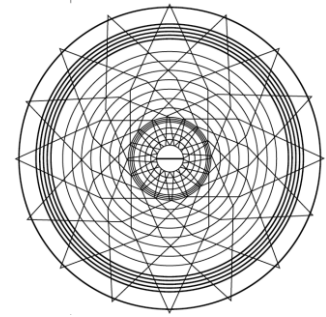
Concerning digitalization, including low-income and low-literate groups in India, past studies speak of "cross-lingual speech identification and text translation systems" (Rudrappa et. al, 2023, p. 1572) in e-shopping in India. While this study reviews past literature and provides recommendations, future studies can probe real-time behaviour or experiences of target groups through surveys and interviews. Past studies have proposed the adoption of virtual assistive features, an "artificial intelligence-based solution that uses state-of-the-art speech recognition and text-to-speech techniques to power an interactive virtual agent that can speak and understand the local language to assist an uneducated person in filling up a survey or a form totally through speech-based conversations" (Pathak et. al, 2017, p. 1). The majority of these Kirana stores have adopted digital payment methods but further digitalization will allow them to reach customers to the last mile. This multilingual voice assistant shall promote successful forays of local retailers into online selling and of low-literate groups into online shopping. Digitalization initiatives should not just mean investing in digital and mobile technologies but providing training and facilitating for 'ease of use' (Burton-Jones & Gallivan, 2017).

Singh et. al (2021) point out the lack of Computer Literacy as a major disadvantage for E-learners. This should not be read as simply ignorance or ineptitude at operating digital devices but also inability due to language barriers. A Multilingual Internet (MI) is the only way to achieve computer literacy in its truest sense. Providing a multilingual online reading and listening experience should be at the forefront of digital learning in

India. DAISY (Digitally Accessible Information System) in India with study materials in sign languages have been instrumental in assisting differently abled learners. Also integrating language varieties and dialects in vocal content would be beneficial in crossing language barriers (Singh et. al, 2021). These digital interventions have become truly necessary to achieve total inclusivity for those at the Bottom of the Linguistic Pyramid.

ENDNOTES

1. The literature for the review analysis is sourced from databases like JSTOR, Scopus and Web of Science, supported by preliminary research on Google Scholar.

REFERENCES

FICCI and EY. (2022). Turning into Consumer: Indian M&E rebounds with a customer-centric approach.
https://assets.ey.com/content/dam/ey-sites/ey-com/en_in/topics/media-and-entertainment/2022/ey-ficci-m-and-e-report-tuning-into-consumer_v3.pdf

Archer, A., & Wildman, N. (2021). Internet Access as an Essential Social Good. In E. Aarts et al. (eds.), The New Common, https://doi.org/10.1007/978-3-030-65355-2_4

Banerji, R., & Chavan, M. (2016) Improving literacy and math instruction at scale in India's primary schools: The case of Pratham's Read India program. Journal of Educational Change, 17(4), 453-475

Burton-Jones, A. & Gallivan, M.J. (2017). Toward a Deeper Understanding of System Usage in Organisations: A Multilevel Perspective. MIS Quarterly, 31(4), 657-680.

Chandwani, A., Lihitkar, S., & Anilkumar, S. (2010). E-learning initiatives in India. [Conference Session]. In Modern Practices in Library and Information Services, Nagpur (India). http://eprints.rclis.org/15721/6/E-learning.pdf

Davis, F. D., Bagozzi, R.P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. Management Science, 35(8), 982-1003.

Dhokare, S., Jadhav, S, Gaikwad, A. (2023). Embracing Diversity: The Multilingual Approach to Education in India's NEP 2020. Remittances Review, 8(4), 3534-3553. https://doi.org/10.33182/rr.v8i4.243

Gopalan, B. (2022). Regionalization of Online Shopping, Product Listings and Logistics Management in the Digital Economy. Annals of the University Dunarea de Jos of Galati: Fascicle: I, Economics & Applied Informatics, 28(3), 103-116. https://10.35219/eai15840409294

IAMAI & Kantar. (2021). Internet Adoption in India. https://images.assettype.com/afaqs/2021-06/b9a3220f-ae2f-43db-a0b436a372b243c4/KANTAR_ICUBE_2020_Report_C1.pdf

Kalhan, A. & Franz, M. (2009). Regulation of Retail: Comparative Experience, Economic & Political Weekly, XLIV (32), 56-64.

Kantar & Google. (2023). Indian Languages Understanding India's Digital News Consumer. https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:cc319af4-d043-3710-88c0-2329d1aef61d

Khanchandani, V., Kumar, M., & Kumar, R. (2015). E-learning Initiatives in India and Libraries. [Conference Session]. 2ndTecnia SRFLIS Summit. International Conference on Grey to Green (pp. 517–527).

Khanuja, S., Bansal, D., Mehtani, S., Khosla, S., Dey, A., Gopalan, B., ... & Talukdar, P. (2021). Muril: Multilingual representations for Indian languages. Arxiv. https://arxiv.org/pdf/2103.10730.pdf

Lauscher, A., Ravishankar,V., Vuli᷄c, I., &Glavaˇs, G. (2020). From zero to hero: On the limitations of zero-shot language transfer with multilingual Transformers. [Conference Session]. In Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP), 4483–4499. Association for Computational Linguistics.

Ministry of Health & Family Welfare. (2021). National Family Health Survey (NFHS-5) 2019-21. Government of India. https://main.mohfw.gov.in/sites/default/files/NFHS-5_Phase-II_0.pdf

Office of the Registrar General & Census Commissioner, India (ORGI). (2022). Census of India 2011 - LANGUAGE ATLAS – INDIA. Census Digital Library, Government of India. https://censusindia.gov.in/nada/index.php/catalog/42561

Pathak, N., Bhandari, A., Singh, S., & Podder, S. (2017). Designing a multilingual virtual agent capable of interacting with uneducated people for automated data collection. [Symposium]. In 2017 IEEE Symposium Series on Computational Intelligence (SSCI) (pp. 1-7). IEEE. https://10.1109/SSCI.2017.8280828

Prahalad, C, & Hart, S. (2002). The fortune at the bottom of the pyramid. Strategy+Business, (26). https://www.strategy-business.com/article/11518
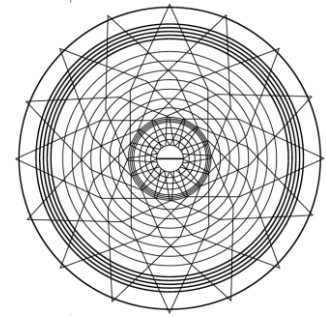
Rijhwani, S., Sequiera, R., Choudhury, M., Bali, K., & Maddila, C.S. (2017). Estimating code-switching on twitter with a novel generalized word-level language detection technique.[Meeting].In Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics, (pp.1971–1982), Vancouver, Canada. Association for Computational Linguistics.

Rogers, E.M. (1995). Diffusion of Innovations. The Free Press.

Rudrappa, N. T., Reddy, M. V., & Hanumanthappa, M. (2023). KHiTE: Multilingual Speech Acquisition to Monolingual Text Translation. Indian Journal of Science and Technology, 16(21), 1572-1579. https://doi.org/10.17485/IJST/v16i21.727

Seethamraju, R, & Diatha, K.S. (2019). Digitalization of Small Retail Stores – Challenges in Digital Payments. [Conference Session]. In Proceedings of the 52nd Hawaii International Conference on System Sciences. Scholar Space. https://hdl.handle.net/10125/59954

Singh, M., Adebayo, S. O., Saini, M., & Singh, J. (2021). Indian government E-learning initiatives in response to COVID-19 crisis: A case study on online learning in Indian higher education system. Education and Information Technologies, 26(6), 7569-7607.

Singh, R., Chandrashekhar, A., & Baghel, N. (2022). The Role of Civil Society Organizations and Scalable Technology Solutions for Marginalized Communities. In D.A. Wagner, N.M Castillo & S. Lewis (Eds.), Learning, marginalization, and improving the quality of education in low-income countries. (pp. 309-321). Open Book Publishers. http://doi.org/10.11647/OBP.0256.11

Singh, R., Sharma, N., Verma, K. (2017). Chapter 6 Learning and Evolving in Hybrid Learning: A PAR Perspective. In Kidwai, H., Iyengar, R., Witenstein, M., Byker, E., Setty, R. (eds), Participatory Action Research and Educational Development. South Asian Education Policy, Research, and Practice. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-48905-6_7

Statista Research Department. (2022). Internet usage in India - statistics & facts. https://www.statista.com/topics/2157/internet-usage-in-india/#topicOverview

Thakur, T.S (2023, May 12). Super Affordable Broadband Plans from Major ISPs in India. TelecomTalk. https://telecomtalk.info/super-affordable-broadband-plans-from-major-isps/702770/

Townsend, P. (1962). The Meaning of Poverty. The British Journal of Sociology, 13(3), 210–227. https://doi.org/10.2307/587266

World Economic Forum. (2020). Schools of the future: Defining new models of education for the fourth industrial revolution. https://www3.weforum.org/docs/WEF_Schools_of_the_Future_Report_2019.pdf

Wu, S, & Dredze, M. (2020). Are all languages created equal in multilingual BERT? [Workshop]. In Proceedings of the 5th Workshop on Representation Learning for NLP, 120–130. Association for Computational Linguistics.

ЦИФРОВЫЕ ИНТЕРВЕНЦИИ КАК СПОСОБ РАСШИРЕНИЯ ПРАВ И ВОЗМОЖНОСТЕЙ ИНДИЙЦЕВ, НАХОДЯЩИХСЯ ВНИЗУ ЛИНГВИСТИЧЕСКОЙ ПИРАМИДЫ

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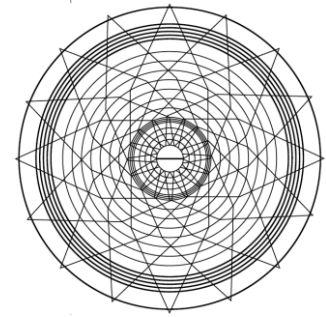*rbedi@ggn.amity.edu*

Аннотация:

Необходимость в проведении кампании «Цифровая Индия» следует понимать в контексте географических и социолингвистических масштабов. Учитывая, что к началу 2023 года в Индии зафиксировано 692 миллиона пользователей, очевидно, что все эти пользователи, принадлежащие к разным слоям нашего общества, ощутили силу Интернета. По оценкам на январь 2023 года, в Индии насчитывается 467 миллионов пользователей социальных сетей (или 32,8% от общей численности населения). Чтобы существующая сегодня инфраструктура соединилась со всеми потребителями, текущий уровень проникновения Интернета в 48,7% должен вырасти в два раза. Эта цифра выглядит впечатляюще по сравнению с показателем 2000 года в 1%. Однако, по сравнению с долей пользователей Интернета во всем мире в 60%, в Европе и Центральной Азии в 87% (даже в Латинской Америке и островах Карибского бассейна эта доля составляет 73% и 74%, соответственно), Индия и Южная Азия всё ещё отстают [4]. Дезинформация и недостоверная информация служат примером неправильного использования Интернета. Её объём резко вырос, особенно во время и после COVID-19. Нужно начать с того, чтобы вызвать интерес с помощью «Постоянных и непрерывных цифровых интервенций», используя две основных точки входа — цифровое образование и цифровое

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[4] Данные получены из онлайн-библиотеки справочной информации "DataReportal". https://datareportal.com

предпринимательство. Настоящая статья имеет обзорный характер, представляя анализ исследовательской литературы об инициативах, предпринимаемых государственными и негосударственными субъектами для развития цифрового обучения и предпринимательской среды в Индии, включая маргинализированных участников этих событий. В статье обсуждаются рекомендации исследователей и существующие пробелы, касающиеся лингвистических интервенций как средства увеличения проникновения Интернета. Многоязычное воображение в этих двух точках входа, сосредоточенное на маргинализированных общинах Индии, может укрепить значение «Интернета на благо общества», как в теории, так и на практике.

Ключевые слова: цифровой, Интернет, расширение прав и возможностей, искусственный интеллект, Индия, многоязычный, цифровое неравенство