*Cultural Discourse Studies Series*

# DIGITAL INEQUALITY

## STUDIES IN CULTURAL COMMUNICATION

Edited by
Anna Gladkova, Elena Vartanova and Shi-xu

# Digital Inequality

Tracing the development of new technological skills and digital cultures, this book looks at the rise of new digital divides and reveals how these inequalities affect cross-cultural communication from a cultural discourse studies perspective in various ethnic and cultural groups across the world.

The authors discuss the development of multicultural societies across the globe under new challenges brought by digitalization, such as digital exclusion, and new professional and personal demands in terms of digital engagement. In addition to highlighting digital inequalities in access, use and benefits of using ICTs, case studies from different national contexts demonstrate the ways minority ethnic and cultural groups are adapting to the new digital environment; explore the transformations that multicultural affairs and communication undergo in the new digital setting; and analyse policy measures aimed at fostering digital inclusion of minor groups. The book advances knowledge of the digital divide, showing its development from a technological access- and skill-based problem into a social and culture-oriented one.

This resourceful text will be of interest to students and scholars of social inequality, digital media and communication studies and anyone interested in learning how multicultural discourses are developing in varied national contexts today.

**Anna Gladkova** is Leading Researcher and Deputy Dean for International Affairs at the Faculty of Journalism, Lomonosov Moscow State University, Russia. She is also Co-Chair of the IAMCR Digital Divide Working Group, International Council member and IAMCR Ambassador in Russia. Dr. Gladkova has published and edited collections on ethnic media, multicultural affairs, digital inequalities and digital divides.

**Elena Vartanova** is Professor, Dean and Chair in Media Theory and Economics at the Faculty of Journalism, Lomonosov Moscow State University, Russia. She is also Academician of the Russian Academy of Education and President of the National Association of Mass Media Researchers. Her research interests focus on the impact of digital technologies upon journalism and media systems, issues of media economics and media management, digital divide, transformation of media systems under national and global tendencies, and so on.

**Shi-xu** is Distinguished Professor and founding Director of the Centre for Contemporary Chinese Discourse Studies, Hangzhou Normal University/Communication University of Zhejiang, China. He is also founding Editor-in-Chief of the *Journal of Multicultural Discourses* and General Editor of the Routledge Cultural Discourse Studies Series.

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# Editor biographies

**Anna Gladkova**
Lomonosov Moscow State University
Russia
Anna Gladkova is Leading Researcher and Deputy Dean for International Affairs at the Faculty of Journalism, Lomonosov Moscow State University, Russia. She is also Co-Chair of the IAMCR Digital Divide Working Group, International Council member and IAMCR Ambassador in Russia. Dr. Gladkova has published and edited collections on ethnic media, multicultural affairs, digital inequalities and digital divides.

**Elena Vartanova**
Lomonosov Moscow State University
Russia
Elena Vartanova is Professor, Dean and Chair in Media Theory and Economics at the Faculty of Journalism, Lomonosov Moscow State University, Russia. She is also Academician of the Russian Academy of Education and President of the National Association of Mass Media Researchers. Her research interests focus on the impact of digital technologies upon journalism and media systems, issues of media economics and media management, digital divide, transformation of media systems under national and global tendencies, and so on.

**Shi-xu**
Hangzhou Normal University
China
Shi-xu is Distinguished Professor and founding Director of the Centre for Contemporary Chinese Discourse Studies, Hangzhou Normal University/Communication University of Zhejiang, China. He is also founding Editor-in-Chief of the Journal of Multicultural Discourses and General Editor of the Routledge Cultural Discourse Studies Series.

# Contributors

**Afonso de Albuquerque**
Media and Cultural Studies Department, Fluminense Federal University
Brazil

Afonso de Albuquerque is Full Professor at the Cultural and Media Studies Department, Fluminense Federal University. Currently, he is Coordinator of the National Institute of Science and Technology in Informational Disputes and Sovereignty, backed by the Brazilian research agency CNPq.

**Gifty Appiah-Adjei**
Department of Journalism and Media Studies, University of Education, Winneba
Ghana

Gifty Appiah-Adjei (PhD) is Senior Lecturer and Researcher with the Department of Journalism and Media Studies at University of Education, Winneba in Ghana. She has a PhD in applied communication (University of Ibadan, Nigeria) and MPhil in communication and media studies (University of Education, Winneba – Ghana). Her research interests include digital media technologies, ethnic journalism and artificial intelligence.

**K. S. Arul Selvan**
School of Journalism and New Media Studies, Indira Gandhi National Open University (IGNOU)
India

Professor K. S. Arul Selvan is Professor and Director at the School of Journalism and New Media Studies, IGNOU, India. He serves as the editor for *IGNOU Journal of Media and Empowerment*. He has been a member of the curriculum committee of UNESCO on MIL for Teachers in 2010 and 2020.

**Evandro Bonfim**
Department of Anthropology, National Museum, Rio de Janeiro Federal University
Brazil

Evandro Bonfim is Collaborator Professor of ethnology and anthropological linguistics at the National Museum, Rio de Janeiro Federal University and member of the International Decade of Indigenous Language in Brazil.

**Madhumita Das**
School of Journalism and New Media Studies, Indira Gandhi National Open University (IGNOU)
India

Madhumita Das is Senior Research Fellow (UGC-NET) and PhD student at the School of Journalism and New Media Studies, Indira Gandhi National Open University (IGNOU), India. Her doctoral work examines the digital divide among women. Her research interests include media and information literacy, gender and media, the digital divide and political communication.

**Emiliana De Blasio**
LUISS University
Italy

Emiliana De Blasio is Professor of sociology of communication, open government and gender politics at LUISS University, Italy. She is Director of the Observatory on Gender, Inclusion and Democracy and Rector's Delegate for Diversity and Inclusion at LUISS University, Italy. Her works adopt an intersectional perspective on media, culture and the public sphere.

**Carolina Escudero**
University of Missouri
United States and Spain

Dr. Carolina Escudero is Professor and Researcher at the University of Missouri, United States. Her research focus on the relationship between journalists, media and emotion – and how it is influenced by the technological change and innovation. She holds a PhD in social psychology (Argentina), a master's degree in gender studies (Spain) and a bachelor's degree in journalism (France).

**Israel Ayinla Fadipe**
North West University
South Africa

Israel Ayinla Fadipe is Postdoctoral Fellow in indigenous language media in Africa research at the North West University, South Africa. He specialises in communication and cultural and gender studies. He has written journal articles and book chapters in both local and international journals.

**Gerard Goggin**
Western Sydney University
Australia

Gerard Goggin is Professor in the Institute for Culture and Society, Western Sydney University. Gerard has published widely on media, culture, technology and disability. His books include *Routledge Companion to Disability and Media* (2020), *Normality & Disability* (2018), *Disability and the Media* (2005; with Katie Ellis), and with Christopher Newell, the two books *Disability in Australia* (2005) and *Digital Disability* (2003).

**Mustapha Muhammed Jamiu**
Department of Mass Communication, RUDN University named after Patrice Lumumba
Russia

Dr. Mustapha Muhammed Jamiu is Senior Researcher at the Center for Geopolitical Communication and Lecturer of communication, media, and journalism courses at the Department of Mass Communication, RUDN University of Russia. Mustapha is also Associate Professor of Digital Communication at MISIS University, Russian Federation. Beyond the university arena, Mustapha leads a research organization in Africa where he serves as Executive Director at the Center for Research on Development of African Media, Governance and Society, CEREDEMS-Africa. His areas of interest include political communication, development communication and media literacy.

**Mutiu Iyanda Lasisi**
Department of Media Communications, National Research University Higher School of Economics
Russia

Mutiu Iyanda Lasisi is Postgraduate Student at the Department of Media Communications, National Research University Higher School of Economics, Moscow, Russian Federation. Over the years, media research, journalism, big data, computational journalism and development communications have been his areas of interest. He has more than 20 academic and technical publications in reputable journals and books.

**Fahad Mahmood**
Assistant Professor Department of Digital
Media, SCS, University of the Punjab,
Pakistan

Fahad Mahmood is a researcher, journalist, and a content creator working for sustainable future. He was a resident scholar at Center for the Study of Religion and Conflict and Walter Cronkite School of Journalism and Mass

Communication, ASU, USA in 2017. His research interests include climate change, journalism, media and democracy, digital divide, media literacy, public sphere and cinema studies. He is a general secretary of AMCAP, Pakistan. Currently, he is an HDR at HLSS Griffith University, Australia.

**Lucineide Magalhães de Matos**
Territorial Development Training Center (CFDT), Federal University of Southern Bahia, Teixeira de Freitas, Bahia
Brazil

Lucineide Magalhães de Matos is Substitute Professor of the digital media course/UFSB and postdoctoral student at InEAC-UFF, backed by the Brazilian research agência CNPQ.

**Trust Matsilele**
Birmingham City University
United Kingdom

Dr. Trust Matsilele is Senior Lecturer in journalism at the School of English and Media, Birmingham City University, United Kingdom. He has published on changing journalism ecologies, social media and protest cultures and on technology and higher education. Trust's research interests are in changing journalism ecologies, social media and protest cultures and the intersection of technology and society.

**Belinda Osei-Mensah**
Center for Communication, Education, Research and Professional Development, University of Education, Winneba
Ghana

Belinda Osei-Mensah is Research Fellow in the Center for Communication, Education, Research and Professional Development at the School of Communication and Media Studies, University of Education, Winneba. She holds a Master of Philosophy in communication and media studies. Her research interests include strategic communication, ethnic journalism and popular culture.

**Elizabeth Owusu Asiamah**
Department of Journalism and Media Studies, University of Education, Winneba
Ghana

Elizabeth Owusu Asiamah is Lecturer in the Department of Journalism and Media Studies at the School of Communication and Media Studies, University of Education, Winneba. She holds a Master of Philosophy in communication and media studies. Her research interests include digital and new media, ethnic journalism and popular culture.

**Natalia Poplavskaya**
Department of Mass Communication, RUDN University named after Patrice Lumumba
Russia

Dr. Natalia Poplavskaya is Associate Professor of media and communication studies at the Department of Mass Communication of RUDN University, Head of the MA Program Global and Digital Media and organizer of a series of international events for young media professionals. Her main areas of research are media discourse, comparative media studies and intercultural communication.

**Padma Rani**
Manipal Institute of Communication
Manipal Academy of Higher Education
Manipal-576104
India

Padma Rani is Director and Professor of Manipal Institute of Communication at Manipal Academy of Higher Education in India. She teaches courses on defense communication and media management and media policies. She was Visiting Faculty at Technische Hochschule Nurnberg Georg Simon Ohm, Nuremberg, Germany and Visiting Faculty on DAAD Scholarship at University of Applied Sciences, Bremen, Germany. Her research interests include sociology, media management, media and conflict, intercultural communication, human rights and more.

**Rainbow Sackey**
Center for Communication, Education, Research and Professional Development, University of Education, Winneba
Ghana

Rainbow Sackey is Research Fellow at the Center for Communication, Education, Research and Professional Development at the School of Communication and Media Studies, University of Education, Winneba. He holds a Master of Philosophy in communication and media studies. His research interests include ethnic journalism, media convergence and journalism education.

**Abiodun Salawu**
North West University
South Africa

Abiodun Salawu is Professor of Journalism, Communication and Media Studies and Director of the research entity, Indigenous Language Media in Africa (ILMA) at the North-West University, South Africa. He has to his credit, well over a gross of scholarly publications in academic journals and books. He has also edited/co-edited fourteen books and authored one. Abiodun has also enjoyed a number of international fellowships and has also won a number of research grants. He is a co-vice chair of the journalism section of International Association for Media and Communication

Research (IAMCR) and a member of editorial/advisory boards of a number of journals. He is rated by the NRF as an established researcher at the level of C1 (with international recognition).

**Gracy Samjetsabam**
Manipal Institute of Communication
Manipal Academy of Higher Education
Manipal-576104
India

Gracy Samjetsabam is a PhD scholar based at Manipal Academy of Higher Education in India. Her research interests include literary criticism, comparative literature, cultural studies, critical theory, arts and humanities, creative writing, fiction, modern literature and culture.

**Donatella Selva**
University of Florence
Italy

Donatella Selva is Associate Professor of digital media and cultures at the University of Florence, Italy, and Senior Member of the Observatory on Gender, Inclusion and Democracy. Her works focus on the intersection between technology and social, political and cultural processes. Together with Emiliana De Blasio, she has recently published *Gender and Culture Wars in Italy*.

**Sangeeta Tripathi**
University of Technology and Applied Science, Salalah
Oman

Dr. Sangeeta Tripathi is Professor of mass communication at the University of Technology and Applied Sciences in Oman with an impressive background in communication and mass media research. She has previously worked at the Institute of Management Studies in Noida, India. She has been awarded the UN Gold Ambassador Award for cooperation with UN SDG-05 and three best paper awards for her research papers. She is currently working on two funded projects approved by the Ministry of Higher Education, Research and Innovation, Oman.

**Thulani Tshabangu**
North West University
South Africa

Thulani Tshabangu is Postdoctoral Researcher in Indigenous language media in Africa at North West University, South Africa. His research interests include digital journalism, the political economy of alternative media in Africa, journalism innovation, ethnographies of media production and consumption, meaning making in the news media and critical discourse analysis.

**Lungile Tshuma**
Universidade Católica Portuguesa
Portugal

Dr. Lungile Tshuma is Researcher in the Centre for Communication and Culture, Universidade Católica Portuguesa, Portugal. Prior to this, he was a senior postdoctoral research fellow in the Department of Communication and Media at the University of Johannesburg, South Africa. Lungile's research interests are in photography, memory and journalism studies.

**Ivaylo Yoshkov**
Faculty of Journalism and Mass Communication, Sofia University
Bulgaria

Dr. Ivaylo Yoshkov is Department Member of the Faculty of Journalism and Mass Communication at Sofia University "St. Kliment Ohridski". Dr. Ivaylo Yoshkov conducts research in the fields of online journalism, social media, the roles of journalists and audiences in online communication, the digital divide and digital sustainability. The first Bulgarian researcher to defend a doctoral thesis in the field of online journalism, Dr. Yoshkov has participated in many conferences and projects both in Bulgaria and internationally.

**Kuansong Victor Zhuang**
Wee Kim Wee School of Communication
and Information, Nanyang Technological University
Singapore

Kuansong Victor, Zhuang is Assistant Professor in Disability Communication at the Wee Kim Wee School of Communication and Information, Nanyang Technological University. He was a Chevening scholar in 2013/14, and a 2022/23 Princeton University Fung Global Fellow. His research lies at the intersections of communications, media, and cultural studies, and disability studies, especially as it pertains to inclusion and the workings of technology. He hopes to use his research to contribute to current debates about how inclusion happens both in Singapore and around the world.

# Introduction

*Anna Gladkova, Elena Vartanova and Shi-xu*

Today, we observe how multicultural societies in the Global South and Global North regions of the world are facing new challenges brought up by the digital divide. Previously analysed by scholars as inequalities in access to internet and information and communication technologies (ICTs) (Van Dijk, 2013) and in use of digital technologies, today the digital divide has extended to new levels, forms and domains. This includes inequalities in benefits or tangible outcomes people receive through their online engagement (Van Dijk, 2020), different levels of users' digital capital and previously understudied gaps such as the algorithms divide or epistemic inequality (Vartanova & Gladkova, 2022). Given the fact that social and digital inequalities tend to reinforce each other, those who are more socially advantaged tend to get the most out of the internet, further reinforcing their social position by using ICTs. This problem gains particular importance in big multicultural and multi-ethnic societies, where providing equal opportunities for online engagement for all minor groups spread across a huge territory of the country can be a serious challenge.

Previous research on Russia (Vartanova & Gladkova, 2019), Brazil (Nishijima et al., 2017), China, India, South Africa (Mutsvairo & Ragnedda, 2019) and many other multicultural nations that have so far received less coverage in scholarly literature compared to European countries, the Middle East (Jamil, 2020) or the United States showed that many ethnic and cultural groups across the globe face common difficulties in accessing internet and ICTs. Many indigenous groups are traditionally based in regions that are less economically advantaged or have harsh climatic conditions and a low urbanization level, which affects the cost and speed of connection as well as the availability of infrastructure and ICTs to a broad population in those regions. As Helsper (2008) notes, technological forms of exclusion are a reality for significant segments of the population, and for some people they reinforce and deepen existing disadvantages. This is particularly true for multi-ethnic societies, where small ethnic groups are often underrepresented in online spaces due to lack of access, skills, motivation or even technical abilities (lack of computer software or coding systems for some extinct languages); therefore, they are missing

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the benefits – both professional and personal – of online engagement. Recent challenges brought by the pandemic intensified these processes, leading to a situation when minor groups did not have access to relevant – and also verified and trustworthy – information sources online, could not use online services (for healthcare, transport, education and entertainment, etc.), or and could not communicate with peers at a distance during lockdown.

Although digital exclusion of ethnic and cultural groups is an important problem on its own, the book approaches this problem through a broader theoretical lens, that is, the cultural discourse studies theoretical paradigm. Following Shi-xu, we argue that culture is an integral part of the life practice of a social community in relation to others, complex and dynamic, rather than fixed to people, place or time (Shi-xu, 2016, p. 2). In the new digital environment, ICTs and internet studies are no longer limited to the technology domain; they are becoming important topics for communication/discourse/cultural studies, too, with new digital cultures and 'cultures of the internet' appearing and new digital means enabling us to 'identify, characterize, explain, interpret and appraise culturally divergent, productive or competing discourses' (Shi-xu, 2016, p. 3). As a result, the digital divide is turning from a technological access- and skill-based problem into a social and culture-oriented one.

Minor ethnic and cultural groups around the world often find themselves in a less-privileged position than others in terms of access to ICTs, skills and benefits from using them; therefore, these groups risk becoming a part of what scholars define as the 'digital underclass'. Quite often their digital capital and digital inclusion index are lower compared to the ethnic and cultural majority living in the country. They also risk falling behind when it comes to new forms of the digital divide, such as understanding-programming-treatment of new digital technologies (three levels of algorithms divide). Finally, these minor ethnic and cultural groups have fewer opportunities for self-representation and self-actualization both offline and online, which can lead to a situation where their languages, cultures, historical traditions, values and identities are not fully protected by current policies or are not equally represented in the new digital space.

In this vein, we believe there is a need for more research focused on how ethnic and cultural groups across the world are adapting to the new digital environment, what transformations multicultural affairs and communication undergo in the new digital setting, what policy measures are taken to overcome digital inequalities and foster digital inclusion of minor groups and, above all, how the digital divide concept today is developing in multicultural contexts around the world. This book examines these multilevel processes that are happening steadily but slowly, which ensures a long-term relevance of the insights presented here.

Digital inequalities faced today by minor ethnic and cultural groups across the world are discussed in regard to access, skills and benefits from using ICTs,

that is, three levels of the digital divide that have been previously identified by scholars (Van Dijk, 2020). Using specific case studies from different multicultural societies in the Global South and Global North, we show how these inequalities affect cross-cultural communication from a cultural discourse studies perspective (Shi-xu, 2015) and what impact the digital divide can have upon people's identities, languages and cultures. Regardless of national specifics and current peculiarities of communication systems, there are challenges all multicultural/multi-ethnic societies are facing nowadays under the ongoing digitalization process. This book shows how multicultural societies across the globe are developing under the challenges brought by digitalization (digital exclusion, new forms and levels of the digital divide, new professional and personal demands in terms of digital engagement, etc.) and how multicultural discourses are developing in this new context.

In this vein, we examine changes enabled and intensified by the overall spread of ICTs in the world, including the rise of the digital divide and digital exclusion, which are still serious issues in BRICS (Brazil, Russia, India, China, South Africa, Iran, Egypt, Ethiopia, and the United Arab Emirates) and other countries (Vartanova & Gladkova, 2021), and we show how the remaining digital gap is affecting communication across cultural and ethnic groups and how digital inequalities in access and skills (Norris, 2001; Attewell, 2001; Hargittai, 2002; Van Dijk, 2013) are developing into social inequalities (Van Deursen & Van Dijk, 2018; Ragnedda, 2017; Vartanova, 2018) in the multicultural setting of these countries. Furthermore, we analyse how media in ethnic languages are currently transforming their editorial and content strategies in the digital environment (Gladkova et al., 2019; Jamil, 2020) and how the role and functions of journalists working for such media are changing in the modern convergent newsrooms (Vartanova, 2012). We also discuss, from anthropological and social discourse studies perspectives, how the consumption of news varies in different ethnic and cultural groups. Finally, we examine current communication and media policy on both federal and regional levels aimed at supporting offline and online activities of cultural, linguistic and ethnic groups in multicultural contexts (Nordenstreng & Thussu, 2015).

Communication in multicultural societies is examined through the following broad lenses: (a) the social, political, economic, cultural and technological transformations of the societies and their impact upon cultural discourses; (b) the digital divide as a challenge to minor ethnic and cultural groups, including technological and social issues and policy measures; (c) digital communication as a dimension of 'soft power'; (d) diasporas and multicultural discourses; (e) the development of multiculturalism models under current digitalization processes; (f) the construction of ethnic/cultural/linguistic identities under the remaining digital gap; (g) the digital media consumption of cultural and ethnic groups and the rise of digital natives; and (h) communication policy and its role in supporting intercultural communication across various groups in the society/between societies on a global level.

The book discusses the development of multicultural societies across the globe under new challenges brought by digitalization (digital exclusion, new professional and personal demands in terms of digital engagement, new forms and levels of the digital divide, etc.), in addition to remaining digital inequalities in access, use and benefits of using ICTs. Case studies from different national contexts aim to show the way ethnic and cultural groups across the world are adapting to the new digital environment, explore transformations multicultural affairs and communication undergo in the new digital setting, and analyse policy measures aimed at fostering digital inclusion of minor groups. The book advances knowledge of the digital divide, showing its development from a technological access- and skill-based problem into a social and culture-oriented one.

We strive for a sensible balance between theoretical/methodological and empirical chapters. The book opens with a theoretical chapter by the co-editors, approaching digital inequalities through a broad cultural discourse studies theoretical paradigm. It shows that cultural studies today should be approached as a dynamic field, closely connected to recent technological advancements – the increase of the internet penetration rate, the development of new technological competences and skills, the growth of digital literacy and digital education programs across the world, increasing attention to digital capital as an essential non-material capital, and the rise of new digital divides (algorithms divide, etc.). Still, in multicultural societies, reaching equal access and use of ICTs can be sometimes difficult, with small ethnic and cultural groups being excluded from online space and therefore lacking opportunities for self-representation; airing their views in public; preserving their cultural heritage, identities and indigenous languages; receiving benefits from their online activities and much more. Case studies from specific national contexts follow the introductory chapter, exploring the digital inequalities in access, skills and benefits ethnic and cultural groups can get from being online, as well the role digital inclusion plays in the protection of cultures, languages, histories, values, norms and identities of minor groups.

Chapters are selected purposefully to show how multicultural discourses are developing in more and less technologically advanced countries, that is, where the digital divide is still a serious issue recognized by policymakers, government officials, scholars and public society. Here, we focus on case studies from the Global South and Global North regions of the world, looking specifically at multicultural nations there (Russia, China, Brazil, India, the United States, New Zealand, etc.). The choice of countries was meant to explore the digital divide as a global, but at the same time retaining national specifics, culture-oriented problem, not limited to binary division between haves and have-nots or between people with different levels of ICT skills.

This book fills an existing gap in theoretical understanding of the digital divide in multicultural and multi-ethnic societies. Regardless of numerous publications on the digital divide in specific national contexts – Africa,

Global South region (Ragnedda & Gladkova, 2020), CIS countries (Smirnova, 2013), studies allowing for a comparative international perspective (Ragnedda & Muschert, 2013; Trappel, 2019) or in relation to particular countries of the BRICS area (Deviatko, 2013; Vartanova, 2002, 2012; Vartanova & Gladkova, 2019 on Russia; Lin, Yang, & Zhang, 2018 on China, etc.) – a deep investigation and comparative analysis of digital inequalities in multicultural contexts up to now has been missing. This volume discusses digital inequalities in access, use and tangible outcomes of ethnic and cultural groups using cultural discourse studies as a key theoretical approach. The main idea is to underline, with specific case studies, how different ethnic and cultural communities are now attempting to participate in the information age, despite high costs, the lack of relevant content and technological support. Besides, this book centres on correlations and interdependencies between social and digital inequalities in multicultural contexts, paying special attention to the way current political, economic, cultural conditions and regulatory mechanisms are creating or, on the contrary, bridging these divides and at the same time affecting multicultural discourses in the new digital environment.

The book can be of interest to students, scholars of digital divide and cultural discourse studies and everyone interested in learning how multicultural discourses are developing in various national contexts today. We expect it to be of use both for the professional academic community and for students of undergraduate and graduate courses across the world. The book's accessibility and rigor will be appealing to instructors who teach a wide variety of graduate and undergraduate courses, including media studies, social inequalities/stratification, global communications, sociology of communication, communications policy, law and society, internet courses and social problems.

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# 1 Mitigating the rural–urban digital divide in Ghana

## The role of community radio

*Gifty Appiah-Adjei, Rainbow Sackey, Elizabeth Owusu Asiamah and Belinda Osei-Mensah*

### Introduction

There has been a rapid expansion of the internet and penetration of technology globally (Gambarato & Alzamora, 2018; Ingram, 2021), yet this has unevenly proliferated (Ragnedda & Gladkova, 2020; Ragnedda & Mutsvairo, 2018) within and among nations (Napoli & Obar, 2014) and has led to a digital divide between developed and developing countries (Jamil, 2020). Hence, Domínguez et al. (2019, p. 135) explain the digital divide as the "inequality that exists between individuals, households, companies and geographical areas at different socio-economic levels concerning their opportunities of access to information and communication technologies and the use of the internet for a wide variety of activities". Ingram (2021, p. 1) avows that developed countries are digitalising "at a speed that threatens to leave behind the less advantaged – countries and underserved groups". So, even though "half of the world population now have internet access and at least one access device (from PC to smartphone)", the gap between developed and developing countries – like Ghana – keeps widening (Van Dijk, 2020, p. 2).

Evidence submits that the digital divide was seen from the physical access dimension, but this has changed over the years (Scheerder et al., 2017) because there are "several digital divides" that "are continually changing" (Van Dijk, 2020, p. 1). Thus, the evolution of research and policy on the digital divide over the past two decades has brought to fore three levels of the divide: physical access (first level), digital literacy/skills and usage (second level) and the positive and negative outcomes from access to computers and internet (third level) (Van Deursen & Van Dijk, 2019). Studies conducted in the Global South have concentrated on the first (access) and second (digital literacy, skill and usage) levels of the digital divide, leaving behind the third level, which deals with the outcome of using computers and the internet (Ragnedda & Gladkova, 2020). Since all three levels of digital inequality exist in the Global South (including Ghana), Ragnedda and Gladkova (2020) call for a broader three-level investigation of the phenomenon in order to help researchers and practitioners to better comprehend its social, economic and cultural effects. Critical examination of the three levels of the digital divide "show that existing

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social inequalities of all kinds are reflected" and "are even reinforced" because the "inequality of outcomes supports better or worse resources and participation in society" (Van Dijk, 2020, p. 14). In this regard, van Dijk avows that digital inequality reinforces existing social inequality.

Digital exclusion resulting from the divide has profound implications because the three levels of the digital divide heighten the risk of social exclusion and intensify social inequalities (Ragnedda & Mutsvairo, 2018), especially in a developing country like Ghana. First, exclusion from the digital arena comes with severe disadvantages for those at the 'have not' side of the divide (Ingram, 2021) because currently, "contemporary society has considerably increased its dependence on information and communication technologies (ICT) and digital media" (Vartanova & Gladkova, 2019, p. 193). Thus, everyday life increasingly revolves around digital technologies and innovation because they are "gradually shaping modern social and individual life" (Vartanova & Gladkova, 2019, p. 193). Therefore, digital exclusion denies the less privileged in the divide the opportunity to participate in and benefit from the socially valuable resources and knowledge gained from the internet or an information-based society (Ragnedda, 2017; Ragnedda & Muschert, 2016). Vice versa is the case of the haves, which further widens the divide and the social inequalities between the haves and the have nots.

As a result, digital inclusion is seen as the means to bridge the divide. Ragnedda and Mutsvairo (2018) suggest that such inequalities can be addressed to decrease social marginalisation through digital inclusion of citizens, provision of affordable access, competencies and reasons for use. Digital inclusion refers to the initiatives public or private actors implement to guarantee that individuals have access to and proper use of information and communication technologies (ICTs) regardless of their socio-economic status. This definition is in line with the suggestion by Van Dijk (2020) that solutions to the digital divide must be considered from the multidimensional angle, namely, technological, economic, educational, social and persuasive (creating awareness). Digital inclusion refers to the ability of individuals and groups to access and use information and communication technologies. It encompasses access to the internet and the availability of hardware and software, relevant content and services, and training for the digital literacy skills required to effectively use information and communication technologies (IMLS et al., 2012, p. 1).

To Robinson et al. (2015), efficient internet users can fully participate in a digitally mediated society. Thus, access and efficient use of ICTs may help the have nots in a wide array of activities that enhance their quality of life and may also improve the quality of democracy. Digitally included individuals enjoy the full spectrum of opportunities and advantages offered by ICTs, which positively affects their quality of life. Ragnedda and Mutsvairo (2018) support this assertion when they note that a high level of digital inclusion has positive effects on an extensive range of outcomes in life, such as job markets, leisure, entertainment, educational opportunities, valuable information and welfare services, among others.

The foregoing underscores the reason that Ingram (2021) posits that there is an "urgent need not only to construct the physical infrastructure and software but also to establish rules of the road and ensure that underserved populations have both the access and digital literacy they need to avoid being left even further behind" (p. 2). Unfortunately, digital inclusion, especially in developing countries, remains a challenge that needs to be addressed (UNDP, 2024), and Ghana is no exception. As a developing country, Ghana belongs to the have nots of the divide. Also, within Ghana, the rural–urban digital divide has been affirmed (USAID, 2013). So, despite the appropriation of technological innovation in media operations, it has been established that the issue of the digital divide continues to affect online news consumption, especially in the rural contexts within the African setting where the rural areas, unlike the urban areas, are still very underserved by online news outlets (Mare, 2021). Thus, there exists a strong form of inequality in relation to technological access in the Global South, which is linked to elements of social inequalities such as gender, income, education, cost of internet service, literacy level and age group (Jamil, 2020; Ragnedda & Gladkova, 2020). In this regard, this chapter seeks to investigate the potential of community radio stations in Ghana in using multimedia content and integrating social media platforms into their programming (like their counterpart in urban communities) to bridge the rural–urban digital divide in their communities.

Specifically, the chapter seeks to identify the types of new media technologies used by the selected community radio stations, examine how these new media technologies are integrated into the programming of the selected community radio stations and explore the perspectives of the audience on the integration of the new media technologies in the programming of the selected community radio stations.

## Background to the study

The digital divide between developed and developing nations is well established in the literature. Digitisation of societies implies that access to ICTs and the internet must be a prerequisite for development in every society. Unfortunately, Africa is one of the least connected continents as it continues to see slow growth of ICT infrastructure, access and use (ITU, 2021). Though the continent is progressing in the first level of the divide, it has not made decent progress in the second and third levels of the divide. The ICT indicators on internet coverage and access in the 2021 International Telecommunications Union (ITU) Digital Trends in Africa Report show that Africa has the lowest 3G coverage and internet access globally. Thus, wireless networks reach 77.4% of the African population (the least of all continents), and it has the lowest access rate of 14.3% (ITU, 2021) with a rural–urban internet access ratio of 6.3% to 28%. Hence, "both fixed and mobile broadband markets have shown growth", yet "a very significant rural/urban divide persists" (ITU, 2021, p. 4).

This situation comes with implications so far as the appropriation of technological innovations in the production and distribution of news in Africa is concerned. It has been noted that the media ecology in Africa has undergone seismic changes since the early 2000s. Therefore, newsrooms across Africa have also adopted digital technologies, particularly mobile phones, social media platforms and wireless internet, as instruments through which they can quickly collect, package and disseminate information (Mare, 2021). However, the author adds that the digital divide issue continues to affect online news consumption, especially in the rural contexts within the African setting, where online news outlets, unlike the urban areas, are still very underserved (Mare, 2021).

The Ghanaian situation is not different from the situation just described. "Ghana has historically been among the leading African countries in terms of telecommunications sector growth and policy. . . . However, the country's progress in Internet and broadband development has been far slower" (USAID, 2013, p. 2). The 2019 household survey across all 16 regions in Ghana on ICT by the National Communications Authority and the Ghana Statistical Service focused on ICT indicators consistent with the ITU's standards in computing: the ICT Development Index (IDI). Findings indicate that regarding physical access, 54.1% of the 30, 916 respondents had functional mobile phones and 7.9% owned a computer, comprising the following: 5.1% had laptops, 1.2% had desktops and 1.6% had tablets.

Regarding access and usage, the report revealed that 39.7% of the respondents know about the internet, and out of that number, 55.6% have used the internet for one activity or the other within the last three months. Multiple responses from the respondents revealed that most of them (78.2%) use the internet to access information. This was followed by 75.3% of them using it for communication and collaboration, 73.9% for entertainment, 40.1% for learning, 19.1% for consumption of digital content, and 9.9%, 9.6% and 1.8% for professional life, e-commerce and trade, and creation of digital content, respectively.

Disaggregation of data by locality showed a rural–urban divide where 63.2% (out of the 54.1%) who own a mobile phone are from the urban locality, while the remaining 44.8% are rural dwellers. It was also observed that people living in urban communities own more computers (12.9%) than those in rural communities (2.9%); hence, those living in urban settings use the internet more often than those living in rural communities. Thus, out of the 55.6% with access, 63.2% of that number are in urban areas, while 40.8% are in rural areas. This implies that 36.8% and 59.2% of the respondents in urban and rural areas are not active on the internet. Also, the study showed that the majority of the respondents in both urban and rural areas use their mobile phone to access the internet, followed by laptops, desktops and tablets. The previous details confirm the first, second and third levels of the digital divide in Ghana and avow risk of social exclusion and intensification of social inequalities as indicated by Ragnedda and Mutsvairo (2018). Hence, the need to mitigate the digital

divide (Ingram, 2021; Ragnedda & Mutsvairo, 2018) applies to the Ghanaian context. This chapter is on the premise that the appropriation of technological innovations in the production and distribution of news offers community radios in Ghana the opportunity to respond to this call and mitigate the rural–urban digital divide in ethnic communities through media convergence, a common characteristic of the current Ghanaian media landscape.

## Rural–urban digital divide in Ghana

Access to digital technology is a significant determinant of a country's success and ensures digital inclusion for its citizens (Ingram, 2021). What may appear as a proliferation of digital technology adoption is a widening gap in the use of digital technologies in rural–urban communities. For instance, the integration of social media into the operations of the community radio stations are supposed to encourage more interaction with their audiences. In Ghana, while this may work for community radio stations and the literate audiences, it widens the divide for the illiterate audiences because they would be unable to type and post their views on issues of interest onto social media platforms, even though they have access to phones with Facebook and other social media applications being used by the stations. This is in relation to the six categories for consideration in the analysis and interpretation of discursive events as outlined in critical discourse studies (CDS) literature (Shi-xi, 2014). Hence, the rise of technology and the issues it poses in the rural–urban digital divide are not simply a matter of who has access to digital technology tools against who does not.

The preliminary population figure of Ghana is estimated at 30.8 million, according to the 2021 Population and Housing Census. Such a growth figure has implications in terms of employment, housing and access to information and communication technologies (ICT). According to the Ghana Digital Economy Diagnostic report (2019) published by the World Bank Group, efforts by the government of Ghana, as part of its Ghana Beyond Aid agenda, seeks to position the country as a regional centre for digital services and ICT innovation by 2023. Ghana is required to "bridge the rural–urban divide by expanding digital services to rural and underserved communities and leverage ICT to increase efficiency, improve citizen experience and engagement" (p. 18). This is a clear indication of the digital divide in rural communities (Ghana Digital Economy Diagnostic, 2019).

Through its data and discussion, the National Communication Authority and Ghana Statistical Service household survey provided clear evidence of the rural–urban digital divide in the country. The survey's significant average monthly expenditure revealed that 86.8% of rural residents spend less than GHS 50 on communication products and services. The survey elaborated on this viewpoint by discussing data, voice and SMS bundling, which illustrates how mobile network subscribers purchase airtime for either data or voice or all three bundle packages offered by the network service provider. The practice of

some telecommunication companies packaging data packages with free social media access, known as social media bundling, has been persistent. For example, in 2020, Airtel Tigo teamed with Opera to provide three months of free data and browsing on the Opera Mini browser. As previously noted, the same network also enables access to various Facebook programs that allow users to access restricted content on Facebook without incurring data charges in exchange for user information used to improve their services.

Ghana Digital Economy Diagnostic (2019) elaborated on this perspective by discussing data, voice and SMS bundling, which illustrated how mobile network subscribers access telecommunication bundles on voice, SMS and data on their device. The Ghana Digital Economic Diagnostic report (2019) affirms the high cost of the internet and limited access, particularly in rural communities. According to Lai and Widmar (2021), the rural digital divide is exacerbated by the lack of internet access and, invariably, poor internet speed. This problem forces people to seek out alternative sources of data and internet speed, which come at a high cost.

Most literature on inequalities in access to and the use of ICT indicates more than an individual's inaccessibility to digital tools but the acquisition of skills to adequately utilise digital technology in a worthwhile and cost effective manner (Scheerder et al., 2017; Van Dijk, 2020). The availability of broadband access and cost for rural residents varies significantly at the country, urban and rural levels (Lai & Widmar, 2021); however, digital skills needed to accompany its use are challenging. De Haan (2004) points out the three concepts in understanding the digital divide as material, cognitive and social resources. These perspectives on the digital divide can be appreciated from several perspectives, such as the fact that a person's ability to use technology in a meaningful way is not determined by his or her ability to use a mobile phone and social resources, such as voice, data or SMS. As part of its digital economy foundation pillars, the government of Ghana is focusing on developing digital skills. This goal is included in Ghana's National ICT in Education Policy, which aims to empower and equip students, teachers and communities with skills beyond basic or fundamental usage of digital technology (Ghana Digital Economy Diagnostic, 2019). While the government has a strong commitment to the digital economy and a high need for digitally competent professionals, the underserved rural areas are making slow progress in Ghana's inclusive digital economy.

According to the Ghana Digital Economy Diagnostic (2019), the government's intervention is to expand digital services to bridge the rural–urban divide through digital financial services, digital infrastructural and digital skills development, all of which are accessible via the internet from anywhere in Ghana. In 2020, the Ghana Investment Fund for Electronic Communications (GIFEC) implemented the Rural Telephony and Digital Inclusion Project to connect Ghana's rural populations to internet and telephony services (GIFEC, 2020). Cell sites will be built in some communities as part of this initiative, which will improve the degree of ICT knowledge and skills required to

overcome Ghana's rural–urban gap. This plan is to help underserved and marginalised communities gain fairness, inclusion and access to digital services.

## Ghanaian media environments and digital inclusion

The Ghanaian Constitution gives prominence to the vital contribution of the media toward democracy in the country. The 1992 Constitution provides the most comprehensive fundamental freedoms of speech and media in the constitutional history of Ghana (Owusu, 2012). It has dedicated a whole chapter (Chapter 12) with 12 Articles on the freedom and independence of the media. As a result, Ghana can boast of a very liberal and pluralistic media environment within Africa. The media-friendly legal environments, the expansion of ICTs and the rapid internet penetration allow Ghanaian media organisations to own and produce content across multiple platforms (Avle, 2011). This aligns with the assertion that the integration of social media and websites into the traditional means of broadcasting media content have ensured interactive online environments (Scannel, 2010). Hence, most mainstream media organisations have acquired online platforms in addition to their traditional media platform so they can disseminate media content across these platforms. For instance, leading media organisations like Despite Media Group and Multimedia Group have radio, TV and online outlets, so content disseminated on their radio or TV platforms is also disseminated on their online platforms. This is done via posting digital content and live streaming.

The community radio stations are not left out so far as the previous phenomenon is concerned. Traditional community radio stations in Ghana also employ new media technologies in their operations to enable them to engage with their audiences at the various stages of production (Avle, 2011). As a result, community radio audiences now have access to increasing content, including news and entertainment, from different new media platforms and formats (Cordeiro, 2012). It also allows more engagement between audiences and hosts of programmes. For instance, Radio Peace and Breezy FM are community radio stations operating within Ghana's Efutu and Ajumako rural communities. These stations have integrated new media technologies into their traditional means of broadcasting

This study borrows insights from Cordeiro's (2012) concept of 'r@dio' to argue that integrating new media technologies into the programming of community radio stations has great potential to mitigate the rural–urban digital divide in Ghana. To Cordeiro (2012), r@dio means that radio and its available content would be streamed online or over the internet. This ensures that mobile phones are used to access online content (first level), digital skills are used to navigate and access online content through new media technologies (second level), and information accessed equips the audience with knowledge and skills that afford them equal social privileges (Ragnedda & Mutsvairo, 2018). Most importantly, the effectiveness of this assertion in rural communities is better when the online content consists of culturally situated meanings

that express identity, relations and feelings of the audiences when they engage with the community radio stations.

Cultural discourse studies (CDS) is based on the principle that communication comprises culturally situated means and meanings that are active in several local contexts (Carbaugh, 2009). It examines culturally unique communication codes (Carbaugh & Cerruli, 2017) and further explains how groups are formed through common ways of speaking, familiar ways of organising communication conducts and other ways of engaging in specific discursive dynamics (Carbaugh, 2009). Thus, CDS explores the meanings that individuals at specific geographical areas make of communication when they adopt and practice it in their way and how they further understand this communication through their terms and explanations (Carbaugh, 2007). CDS ensures that local, native and cultural knowledge is drawn from the phenomenon under study, and at the same time, global perspectives are also taken into consideration. It also opposes cultural dominance and promotes developing societies' growth, freedom and development (Shi-xu, 2014).

CDS focuses on the practical accomplishments of communication from the participant's conduct, their actions and the sense of meaning they give to what they are doing (Carbaugh, 2009). Six categories are considered when analysing, evaluating, describing, explaining and interpreting a discursive event (Shi-xu, 2014), like producing information through the community radio stations under study. These categories are as follows: *Speaker* (who is [not] speaking/listening, their social position as well as the capacity within which they are speaking/listening); *Intent/form/relation* (verbal and nonverbal actions and their correlated social relations used in studying what is said and done as well as how they are responded to and the nature of social relationships that emanate from these actions); *Medium* (the medium used in communication with respect to the language used, conventional and new media, channels of communication, the time and place for examining the communicative means that are or are not utilised and how these channels are coordinated); *Purpose/effect* (the aims, results, effects and penalties of a specific communicative action, for learning about the purposes, reasons and causes of a specific interaction and its social, cultural, political and economic consequence); *Culture* (the ideas, principles, guidelines, norms, illustrations and strategies used in a specific communication process and how they have historically evolved as compared to the discourse of other communities); *History* (all the historical processes involved in the other categories noted earlier, for examining the processes, [moral] directions of change of discourses through time and how time itself is applied in discourse usage) (Shi-xu, 2014).

## Methods and material

This study employed the qualitative approach. To Brennen (2017), this approach permits a more detailed and in-depth engagement with the subjects under study. In consonance with Creswell (2014), the researchers can interpret

the phenomenon based on the experiences, expertise and perspectives of study participants. The study used a case study design, which allowed the researchers to gather corroborated data from multiple methods to gain insights into the potential of community radio in bridging the digital divide in two ethnic communities in the Central Region of Ghana. Through virtual mode, in-depth interviews and document analysis were used to gather data for the study.

For the interviews, 15 participants were purposively selected. This consisted of two station managers, two programmes managers, one presenter and 10 audience members who are active listeners of the selected community radio stations. The presenter, station and programmes managers were interviewed to gather data on the types of new media technologies the stations used and how these technologies were integrated into their programming. Also, the interviews with the 10 audience members were used to gather data that considered their perspectives on the integration of the new media technologies into the programming of the stations. On average, each interview lasted for 25 minutes. Questions from the interview guide and follow-up questions were used when necessary. The interviews were recorded, transcribed and cleaned for analysis. In agreement with ethical standards, the consent of the participants was sought before the interviews, and the names of the interviewees were replaced with numbers and letters to ensure confidentiality. Thus, the names of participants working with the radio stations were replaced with numbers 1–5, and those of the audience members with letters A–J.

Corroboration of the interview data necessitated the need to employ document analysis to analyze the social media handles of the stations purposively. This method was used to evaluate purposively selected posts/contents on social media accounts (that were relevant to the focus of the study) and websites of the stations. The period of study was from the date the accounts were created to the end of October 2021. The posts were examined to enable the researchers to affirm or refute the types of new media technologies the stations used and to determine the extent of interactivity between the community radio stations (as producers of media content for the audiences) and their audiences (as consumers of the media content from the stations).

Data gathered from the interviews and the document analysis was thematically analysed. Major thematic areas were deduced from the data collected after identifying, analysing and categorising patterns within the data. Finally, patterns that emerged from the data were categorised and used to answer the research questions (Bowen, 2009).

## Findings and discussions

### *Types of new media technologies used by the radio stations*

Evidence submits that newsrooms in Africa have adopted digital technologies, mainly social media platforms and wireless internet, as instruments through which they can quickly collect, package and disseminate information (Mare,

2021), and the Ghanaian newsrooms are no exception. Analysis of data showed that as an addition to the traditional radio broadcast, *Radio Peace* and *Breezy FM* have also adopted the internet, social media platforms and websites in their operations. The interview data revealed that the new media technologies adopted were Facebook, WhatsApp, Twitter and websites. While all the five participants admitted that Facebook, WhatsApp and websites were commonly used by both stations, two of the participants noted that Twitter was peculiar to *Breezy FM*. In this regard, the station manager of *Breezy FM* noted the following:

> Yes, the radio itself is technology because it uses the transmitter to transmit voices and all that. But, nevertheless, we use social media such as Facebook, Twitter, and WhatsApp in our operations.
>
> (Participant 3, IDI)

His counterpart at *Radio Peace* also indicated the following:

> We as well have a Facebook account, where we post some of the activities that we have been doing, and beyond that, we have a website. We have a WhatsApp line for people to contribute to our shows.
>
> (Participant 2, IDI)

Apart from the radio stations using their social media accounts, data analysis indicated that some of the presenters of the stations also use their social media accounts to share the content of their programmes and encourage interactions with their friends and followers. Hence, a participant claimed the following:

> I have a personal Facebook page that enables me to go live during programs like the morning show. Since it is my private page, only my friends can see, like and share. I am also able to post videos and pictures for my viewers to participate in the whole process. Other journalists here, too, are at liberty to do the same.
>
> (Participant 1, IDI)

Again, one of the stations also used its website to post articles on issues of concern and interest to their audiences. So, the General Manager at *Radio Peace* disclosed the following:

> On our websites, we post articles on developmental issues as a way of communicating to [our] external stakeholders. This is to assure them that the donations they have been making to support our operations have been used judiciously.
>
> (Participant 1, IDI)

The findings noted earlier were affirmed by the document analysis of posts on the social media handles of the stations. In all, 53 posts relevant to the focus of

the study were selected for the review. This consisted of 42 posts (79.2%) from *Radio Peace* and 11 posts (20.8%) from *Breezy FM*. The Facebook account of *Breezy FM* was created in September 2020, while that of *Radio Peace* was created in 2015; hence, the review of Facebook posts from *Breezy FM* was from September 2020 to October 2021 and that of *Radio Peace* was from 2015 to October 2021. Due to the study period, posts from the social media handles of *Radio Peace* were more than that of *Breezy FM*.

Analysis of data revealed that the stations used their Facebook accounts and websites to broadcast their activities and content to their audiences. They also outlined the profiles of the stations. The screenshot in Figure 1.1, for instance, shows the interface of the profile of the Facebook account of *Breezy FM*.

Also, the screenshot in Figure 1.2 is the interface of the website of *Radio Peace*, which outlines the profile of the radio station.

Even though it was discovered that *Radio Peace* has a YouTube account (see Figure 1.3), it has not been active for the past 10 years.

These findings align with the assertion by Vartanova and Gladkova (2019) that "contemporary society has considerably increased its dependence on information and communication technologies (ICT) and digital media", hence "the process of digitalisation has influenced almost all social practices and individual experiences" (p. 193). Thus, digitisation has influenced the social practices of the community radio stations and the experience of their audiences.

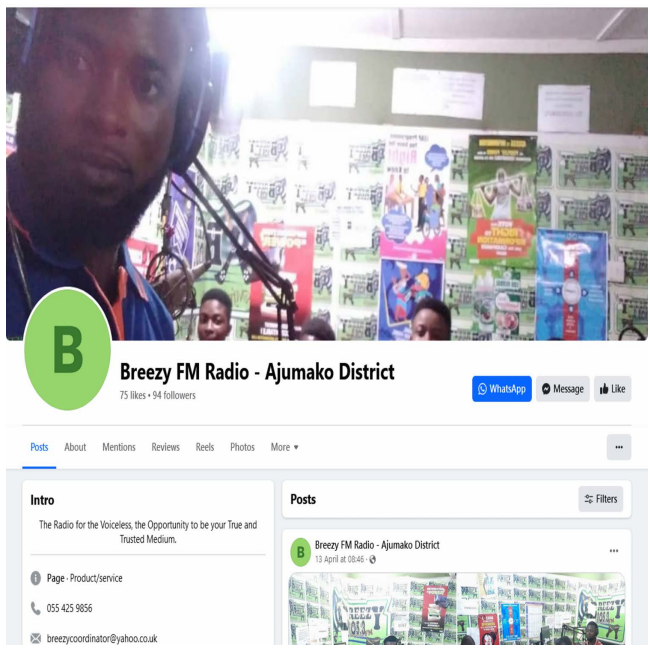


*Figure 1.1* A screenshot of the interface of the Facebook profile of *Breezy FM*

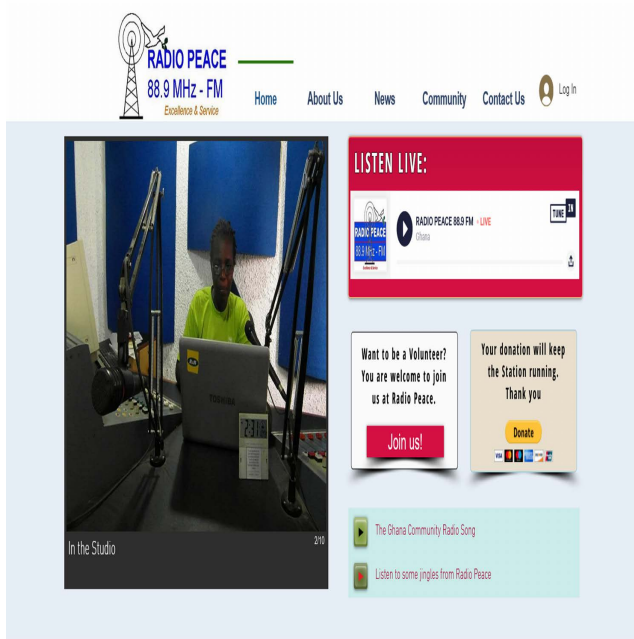


*Figure 1.2* A screenshot of the interface of the website of *Radio Peace*

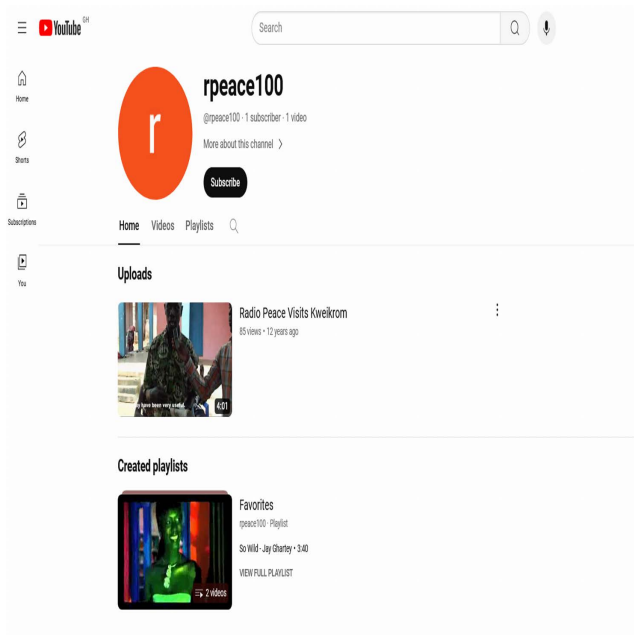


*Figure 1.3* A screenshot of the dormant YouTube account of *Radio Peace*

Therefore, as Ragnedda and Mustsvairo (2018) indicated, audiences within the ethnic communities who belong to the have-nots of the divide can fully participate in a digitally enabled society and function effectively in an increasingly mediated ICT world only when they can have access to and use ICTs. Besides, Shi-xu (2014) contends that culture is continuously being preserved, challenged and changed in the modern competing world order, and this keeps blurring its boundary, changing its content and shifting social position. Hence, the new technologies adopted by the radio stations are not in conformity with the indigenous mediums of communication associated with the culture of the selected ethnic communities but are modifications and changes that ensure that they are at par with the rapid digitisation of the world.

Again, our findings are in tandem with the contention by Mare (2021) that the appropriation of technological innovations in the production and distribution of news in Africa has resulted in the shift toward content that could attract clicks, views, shares and retweets by global citizens in an increasingly interconnected world. The stations use these technologies to get their audiences to comment on, like, view, share or retweet the contents they post on their social media handles and websites. This ensures digital inclusion since it can bridge the three levels of divide among the audiences of the stations. Thus, audiences within the reach of the stations and who have physical and internet access can develop their digital skills as they browse, navigate, consume, comment on, like and share media content from the stations. They can also benefit from their consumption of the media content from the stations that seek to empower them by informing and educating them on issues of interest and concern.

## Integration of new media technologies into the programming of the radio stations

Studies in Africa have shown that newsrooms have also adopted digital technologies, particularly mobile phones, social media platforms and wireless Internet, as instruments through which they can quickly collect, package and disseminate information (Mare, 2021). Our findings aligned with Mare's (2021) assertion. Findings from the review indicated that out of the total of 53 posts analysed, 15 posts (28.3%) were in pre-production, 25 posts (47.2%) were in the production stage and 13 of them (24.5%) were in the post-production stage. Analysis of the interview data also revealed that the new media technologies were integrated at the pre-production, production and post-production stages of the programming of the radio stations.

### *Integration at the pre-production stage*

Findings showed that new media technologies were integrated at the pre-production stage by sharing the topic or the images of hosts and panellists of programmes on the various social media platforms/pages of the selected radio stations or the hosts' personal accounts. All five participants agreed that

the pre-production posts were mainly used to foreshadow the programmes to be aired, whip up the audience's interest and attract them to listen and take part in the audience contribution segments of the programmes. As a result, a participant noted the following:

> Sometimes we even announce programmes on the pages before they start. We tell people the time the programme will take place to ginger them to listen to us.
>
> (Participant 4, IDI)

It was also discovered that, apart from using the social media handles of the stations, some of the presenters also use their social media accounts to pre-inform their followers of the yet to be aired programmes. Hence, another participant from *Radio Peace* admitted the following:

> Before my show, I post on my page to alert my followers that I am about to go on air.
>
> (Participant 2, IDI)

Findings also indicated that pre-informing audiences about the topic for discussion or the panellists for the programme enable the station and the programme host to gauge the audience's reaction or attitude towards the topic or panellist.

Data from the document analysis affirmed these findings. Out of the total posts on pre-production (28.3%), 22.6% were from the accounts of *Radio Peace*, and 5.7% were from *Breezy FM*. Furthermore, it was established that the stations posted comments/posts on their Facebook pages, which served as a foretelling of the programmes they broadcast. For instance, in Figure 1.4, a post on March 22, 2016, about the topic for discussion on the morning show (the physical structure for a police station that had not been operating for years after its completion) was shared on the Facebook page of *Radio Peace* an hour before the programme.

#### *Integration of new media technologies at the production stage*

Analysis of the interview data revealed that new media technologies were integrated at the production stage via live streaming and sharing of posts. All the participants agreed that they live stream their programmes to reach out to their targeted audience and establish an instant connection. Four of the participants noted that live streaming was one of the most effective means to reach out and interact with their audiences. A programmes manager with one of the stations claimed the following:

> One of my presenters channels his show via our Facebook live, but the others do it on their own [personal account]. Sometimes, I hear them


*Figure 1.4* A screenshot of a post pre-informing the audience of the topic for discussion on a programme

> mentioning their name in terms of their handles for people to access information.
>
> (Participant 5, IDI).

Another participant who is a presenter with *Radio Peace* and whose programmes target the youth also admitted the following:

> I go live during my show. I have people who follow my show on Facebook because they are not in Winneba. So they get the chance to follow me during any of my two programmes.

Again, findings indicated that the language used during the live streaming is predominantly Fante (the local dialect of the catchment area). However, the stations sometimes broadcast in the English language because each of the communities has a university in its catchment area; hence, the programmes in the English language are targeted at their audiences in the university communities as well as people from their catchment area who have migrated to other parts of the country and beyond. In this regard, a participant from *Breezy FM* acknowledged the following:

> Initially, our broadcast was 99% Fante and 1% English, but now it is 95% Fante and 5% English. The percentage change was a result of the

> increase of diverse ethnic groups in the community. For instance, due to the university, we now have an audience from the Volta Region, Northern part of Ghana, and other regions who may not understand the local Language (Fante) and the English language's need in our programmes. Because we mainly broadcast our programmes live, whatever language we use is what the audience on social media hears. It makes them recognise their root and origin no matter where they find themselves. We ensure that our programmes are communicated in local language, so that community members feel like a part of it, even on social media.
>
> (Participant 5, IDI)

Commenting on the language used in broadcast, the programmes manager from *Radio Peace* also noted the following:

> We operate 10% in the English Language, 10% in the Effutu Language and 80% in the Fante Language because of the Agona. The 10% English Language is the recognition that there is a university here, Winneba.
>
> (Participant 1, IDI)

Data from the document analysis affirmed these findings because it showed that the stations used new media technologies to live stream and draw the attention of their audiences to some of their programmes. Findings revealed that out of the 47.2% production posts, 39.6% were from the accounts of *Radio Peace*, while 7.5% were from *Breezy FM*. While *Breezy FM* used Facebook live for the streaming of its programmes, *Radio Peace* used Tunein.com. Also, data revealed that some of the presenters used their personal accounts to live stream their programmes. It was also discovered that all the posts on the social media handles of the stations were in English, but the local language is used during live streaming, so the audience gets to hear the local dialects. For instance, on September 28, 2021, *Breezy FM* was live on Facebook, and the programme, which was about the International Day for Universal Access to Information, was used to educate their audience on Ghana's Right to Information Act in Fante, the local dialect of their audiences within their catchment area, as seen in Figure 1.5.

Aside from live streaming, the stations also shared posts on their Facebook accounts to invite their audiences to tune in and watch or listen to their programmes as they are transmitting. For example, in Figure 1.6, *Radio Peace* used its Facebook account to share a post inviting its audience to listen to an ongoing programme via Tunein.com.

Figure 1.7 is another post on the Facebook page of *Radio Peace* inviting its audience to join the morning show as transmission was ongoing.

Again, findings revealed that the new media technologies were used during the audience contribution segments of the programmes to allow the audience to contribute to the programmes by sharing their experiences or asking questions on the topic being discussed via WhatsApp, Facebook and phone-ins.


*Figure 1.5* A screenshot of a Facebook live on access to information by *Breezy FM*


*Figure 1.6* A screenshot of an invitation to listen to *Radio Peace* via Tunein.com on its Facebook page

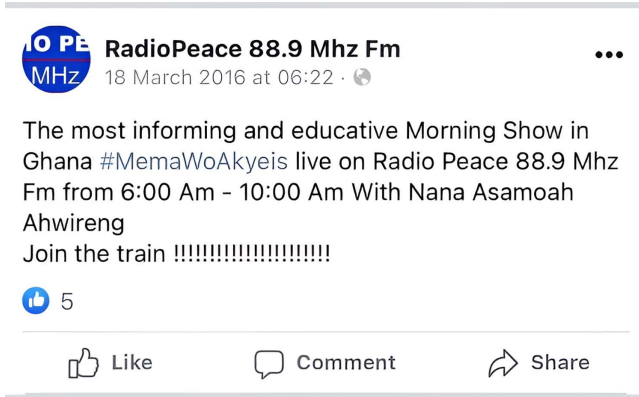


*Figure 1.7* A screenshot of an invitation to listen to *Radio Peace*'s Morning Show on its Facebook page

While the phone-ins and WhatsApp voice messages permitted the audience to contribute in the local dialect, Facebook contributions were made in the English language.

***Integration of new media technologies at the post-production stage***

Data established that the new media technologies were used to share videos and images of programmes that have been covered and broadcast to the audience. All five interviewees agreed that some of the posts on their social media accounts and websites were shared after transmission of the programmes to give their online audience, especially those who were unable to listen to the live programmes, the opportunity to know of issues happening in the communities. A participant from *Radio Peace* indicated the following:

> If you saw the woman who just left my office, we discussed a story angle about a developing issue on the vaccination we discussed on the Morning Show this morning. We were discussing the angle we should take to write a story we will soon post.
>
> (Participant 1)

It was also to afford donors outside the community the opportunity to know what they have been using their donations for. Hence, a participant from *Radio Peace* claimed the following:

> Most of our assistance are from people outside the community. Therefore, the idea was also to bring in this new media and all that, to be able to reach out to those stakeholders for them to know what is happening.
>
> (Participant 2, IDI)

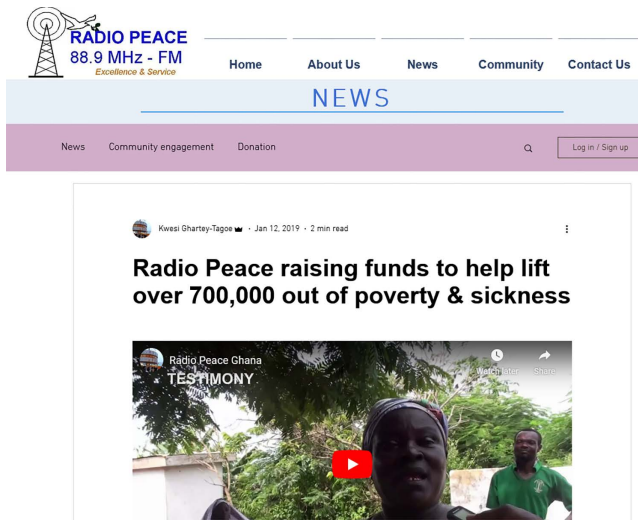


*Figure 1.8* A screenshot of a poverty reduction article on the website of *Radio Peace*

It was also discovered from the document analysis that the stations used new media technologies at the post-production stages. Out of 24.5% of post-production posts analysed, 17% were from *Radio Peace*, whereas 7.5% were from *Breezy FM*. *Radio Peace* used its website to post articles and videos on some programmes or projects they had already aired, whereas *Breezy FM* used its Facebook and Twitter account to share pictures on programmes they had already aired. The articles on *Radio Peace*'s websites (Figures 1.8 and 1.9) had uploaded videos in the local dialect of the catchment area, but the captions on the images shared on the Facebook and Twitter accounts of *Breezy FM* (Figures 1.10 and 1.11) were in the English language.

CDS focuses on acts, events and communication styles that people use when conducting their everyday lives, including their practical rhetorical arts (Townsend as cited in Carbaugh, 2009). Also, under CDS, Shi-xu (2014) posits that medium is one of the six categories considered when analysing, evaluating, describing, explaining and interpreting a discursive event. Furthermore, Shi-xu (2014) adds that the medium used in cultural discourse includes the language used, conventional and new media, channels of communication, time and place for examining the communicative means that are or are not utilised and how these channels are coordinated. Critical analyses of our findings show that the integration of new media technologies into the programming of the stations afforded the presenters/hosts and their audiences the opportunity to engage in a meta-cultural commentary in the communication of social realities (Carbaugh, 2007, 2009, 2014) of the catchment area. Thus, the stations used local dialects during the conventional broadcast and live streaming to inform, educate and entertain their audience on issues of interest and

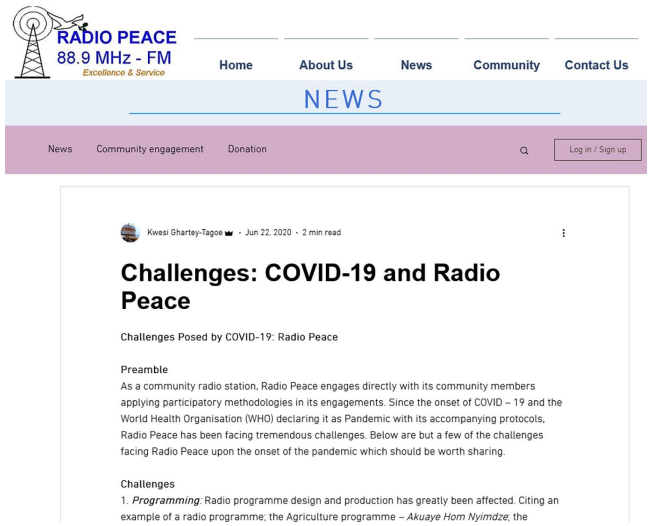


*Figure 1.9* A screenshot of a COVID-19 article on the website of *Radio Peace*

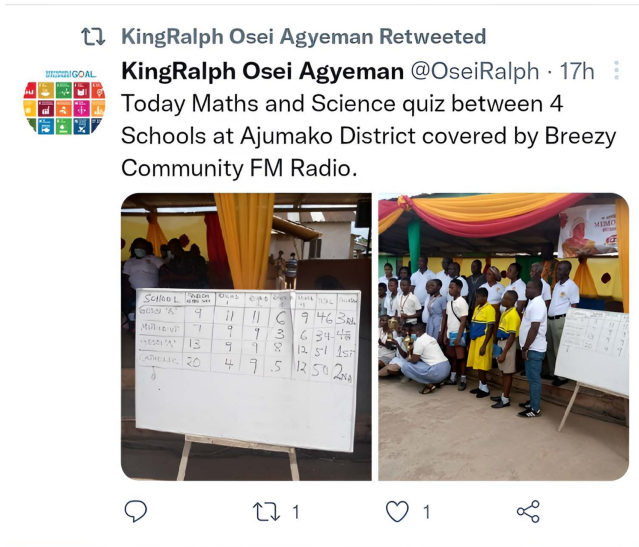


*Figure 1.10* A screenshot of a post on a story covered by *Breezy FM* from a presenter's Twitter account

concerns. Besides, the audiences used some new media technologies to make contributions and ask questions during the audience contribution segments of their programmes. This implies that the audiences, through their engagements with the presenters/hosts of the stations, can use "cultural structures, specific


*Figure 1.11* A screenshot of a post on a story covered by *Breezy FM* from a presenter's Twitter account

terms and phrases, which are deeply felt, commonly intelligible, and widely accessible" to them as they listen and contribute to the issues of interest and concern (Carbaugh, 2009, p. 70).

However, it can be argued that the integration of new media technologies at the pre-production stage was not adequately coordinated, especially regarding the morning programmes. Thus, the timing for posting some of the pre-production posts was not conducive enough. For instance, in Figure 1.4, the pre-production post on the Facebook account of *Radio Peace* pre-informing audience of the topic for discussion on "Mema Wo Akye", the morning programme was posted at 5:35 A.M. on March 22, 2021; therefore, the time of posting afforded the audience almost one hour before it started. However, the timing was not conducive because the targeted audience would be sleeping or just waking up at that time.

### Audiences' perspectives on the integration of new media technologies into programming

Regarding the interviews with the audiences, 60% of the interviewees belonged to the older generation, while 40% were from a youthful generation. This was because most of the inhabitants in the catchment areas are the elderly due to the migration of the youth to the urban areas. Two broad themes emerged from the analysis of interviews, namely, *the relevance of the integrated new*

*technologies to the audience* and *inconsistency in the promotion of the new media by the station*.

***Relevance of the integrated new technologies to the audience***

Analysis of the interview data showed that the elderly generation found the integration irrelevant because they preferred accessing the station via radio airwaves than via any of the new media technologies the stations have been using. Again, the cost of data was another factor that caused the older generation to prefer access to information via the radio since it was at no cost. As a result, a participant contended the following:

> I do not care whether they introduce it or not. What is an older woman's business with Facebook? Should they introduce it, I know for sure I personally will not patronize it.
>
> (Participant J, IDI)

Another participant noted the following:

> I do not even go on Facebook because of data issues. I listen to them, so why should I go on Facebook.
>
> (Participant F, IDI)

Findings also revealed that the type of mobile phone used by some elderly generations had only essential functions (unlike smartphones), hence, the irrelevance perspectives. For instance, Participant C from the catchment area of *Radio Peace* admitted that though he had heard of some of the presenters asking that the audience follow them on Facebook, he was not able to do that because the functions of his phone did not support the technology. Some of the elderly participants (three of them) believed that new technologies were for the younger generation. One of the participants who subscribes to this view admitted that he did not "use any of those things because they [were] for young people. My son tells me social media is exciting, but I'm too old to try it" (Participant H, IDI).

Two of the participants belonging to the older generation admitted that they were not aware of new media technologies being used by the stations. For instance, a participant from the catchment area of *Breezy FM* asserted the following:

> I have not heard of Twitter before and Facebook too; I have not heard of them but I think there is one man called Agbomo. I think on one of his shows; he gave the listener's the chance to send messages on WhatsApp or so.
>
> (Participant B, IDI)

However, 40% of the participants who belong to the youthful generation believed that integrating the new media technologies was relevant and enabled them to access programmes by and follow their favourite presenters. For example, one of the participants noted the following:

> Yes, she says that we should comment on the show. So we follow her on Facebook live. So it is Mavis Agyeiwaa on Facebook live.
>
> (Participant A, IDI)

Regarding the language of broadcast, one of the participants from the youthful generation claimed this:

> I do want them to modernize the station. *Breezy FM* is too local and old fashioned for my liking, and I do not even blame them. . . . The station finds itself in a community where the people are old-fashioned and fear civilization. . . . However, there are also students like myself who would patronize it. I hope *Breezy FM* knows it's high time they did something to change the old-fashioned state of this village.
>
> (Participant D)

***Inconsistency in the promotion of the new media technologies being used by the station***

Findings from the interviews were a mixed bag so far as this theme was concerned. While some of the participants noted that the stations hardly promoted their social media handles on their networks to make them known to all their audience, others believed that the stations did promote their social media handles even though they were not consistent. Data analysis revealed that some participants from both the youthful and older generations admitted that the stations did not consistently promote their social media handles on their programmes. Hence, if an audience member misses listening to the specific programmes that promote the social media handles, they will not be privy to the fact that the stations are using the new media technologies.

On the other hand, the remaining participants also stated that the station hardly promoted their social media handles, so they did not even know that the stations used such new media technologies.

Another participant opined the following:

> Frankly, I have not heard anything like that, so I am sure I would have heard by now since I'm always listening.
>
> (Participant G)

In Ghana, it has been established that the mobile phone is the most accessible ICT, and it is the device often used to access the internet in rural areas (National Communications Authority & Ghana Statistical Services, 2020).

Also, GIFEC has been implementing the Rural Telephony and Digital Inclusion Project as part of initiatives to connect Ghana's rural populations to internet and telephony services (GIFEC, 2020). This implies that the mobile phone has more significant potential in helping to bridge all the levels of the digital divide than any other ICT.

Our findings show that this assertion is more applicable to the younger generation than the older generation within the catchment areas of the stations. Thus, the older generation believes that the integration of the new media technologies into the stations' programming is irrelevant to them, hence, they prefer the medium of radio airwaves. However, the younger generation thinks otherwise. Therefore, it can be argued that though radio falls under ICTs, dependence on it to access information mitigates only the first level of the digital divide but fails to address the second and third level of the divide since its use in accessing information does not equip them with digital skills needed to take advantage of the empowerment that the internet offers. Hence, digital exclusion and social inequalities among the elderly audiences will deepen because they do not see the relevance of the integration in a contemporary world where social and individual lives are shaped by ICTs and digital media (Vartanova & Gladkova, 2019). However, by seeing the integration of new technologies as relevant, the younger generation in the catchment areas is afforded the social privileges of those who are already in an advantaged position in society to enable them to gain the most from the internet (Van Dijk, 2020; Ragnedda & Mutsvairo, 2018). Thus, finding it relevant and using it in their engagement with the stations ensures digital inclusion, which addresses all three levels of the divide. This will not only mitigate the three levels of the divide among them but further reinforce their privileges (Ragnedda & Mutsvairo, 2018).

Since 2020, the airtel Tigo telecommunication network has enabled access to various Facebook programmes that allow users to access restricted content on Facebook without incurring data charges in exchange for user information. This means that the issue of the cost of internet data as a factor deepening digital exclusion and social inequalities can be solved if the stations can create awareness in this regard. However, findings on the promotion of the social media handles indicate that much education is needed to create awareness and sensitise the stations' audiences to embrace the integration of digital platforms into community radio station's content production and dissemination to encourage digital inclusion and mitigate the three levels of digital divide among the audiences of *Radio Peace* and *Breezy FM*.

## Conclusion

In conclusion, our study established that *Radio Peace* and *Breezy FM* had integrated new media technologies at the pre-production, production and post-production stages of their programming. This was done by creating and using social media accounts and websites to engage with their audiences in

both the English language and the dialects of the catchment area. This allowed the audiences to be pre-informed of issues to be discussed on the networks and engaged with the stations during live broadcast and streaming and after transmission of programmes. It also enabled the audiences to use "cultural structures, specific terms and phrases, which are deeply felt, commonly intelligible, and widely accessible" to them as they listened and contributed to the issues of interest and concern (Carbaugh, 2009, p. 70) on the networks. While these engagements were deemed relevant by the youthful audiences, therefore providing them with opportunities for digital inclusion and mitigation of the three levels of the digital divide, the older generation felt such engagements were irrelevant, therefore deepening digital exclusion and social inequalities among such audiences. Again, our study revealed low awareness of access to content on Facebook without incurring data charges and the new technologies used by the stations in their programming.

Therefore, our study recommends that there should be more awareness and sensitisation of the audiences on such issues to enable them to embrace the integration and use Facebook to engage with the station. This will encourage digital inclusion and mitigate the three levels of digital divide among *Radio Peace* and *Breezy FM* audiences. This study also originates new paths for future research into the potential of community radios in mitigating the three levels of the digital divide in rural communities. Future research into the potential of other community radio stations in Ghana in mitigating the digital divide via the integration of new media technologies and digital inclusion or exclusion of the elderly in rural Ghana is recommended.

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# 2 Digital inequalities in Brazil

## The native Brazilian communities

*Evandro Bonfim, Afonso de Albuquerque and Lucineide Magalhães de Matos*

### Introduction

The digital divide is a serious problem in Brazil. According to the latest estimates, the Brazilian population is approximately 215 million people. Of them, 87.5 percent live in urban centers, and 12.5 percent live in rural areas. Roughly 80 percent of Brazilians aged ten or over have some kind of digital access, yet there are significant differences in this group: 29 percent of Brazilians have full access to the internet (29 days in a month on average); 26 percent are partially connected (25 days in a month), and 25 percent are under-connected (19 days in a month). These groups have different profiles of access, too. The connected people use notebooks and post-paid cell phones. The under-connected group rely mainly on prepaid cell phones. The digital divide also runs across social and racial lines: 100 percent of the richer group (A class) have digital access in contrast with only 60 percent in the poorest group (D and E classes). Of white people, 83 percent have some digital access in contrast with 75 percent among black people. There are significant regional differences, too: digital access is bigger in the South/Southeast regions in comparison with the North/Northeast (PwC, 2022). These data do not make any reference to the digital access in Brazilian indigenous people. This does not happen by accident.

The mainstream literature on the digital divide often discusses this topic as a "technical" problem. In this view, the digital divide is an unintended and negative consequence of something inherently good: social progress. As progress does not occur in a uniform manner along the society, some of its sectors stay behind. According to this literature, the responsibility of facing the problem and proposing solutions to it lies in the hands of experts. Drawing on a critical discourse studies (CDS) perspective, this chapter proposes a different approach to the problem. CDS argues that discourse is a "social practice in which interactants accomplish social tasks by using language as well as other symbolic means through particular communicative mediums (e.g. writing, speaking, the Internet) in given historical and cultural relations" (Shi-xu, 2017, p. 308). Accordingly, we maintain that the "technical" approach to the digital divide is a discourse grounded on a social basis and promotes political agendas. This discourse not only obscures the fact that the digital divide

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results from social injustice but also attributes to the sectors of the society that benefit from this injustice the responsibility for solving it. This type of reasoning is deeply rooted in a tradition associated with Western imperialism.

The reference to this tradition is central for discussing the specific manner in which the digital divide affects the Brazilian native people. In 1500, when the first Portuguese colonizers arrived, the population of Brazilian indigenous people (usually referred as *índios*) was estimated at 2–4 million people. In the early 1900s, this number had dropped to circa 200, 000. At the present, there are around 800,000 native Brazilians registered. The Brazilian indigenous population encompasses different cultures and languages and corresponds to roughly 0.5 percent of the country's population. From the perspective of Brazilian elites, however – and a large part of the Brazilian population – "índios" are alike. Racism and cultural prejudice have been persistent in Brazilian society. The Civil Code of 1916 considered them relatively incapable to exert their rights. They should be "tutored" until being "assimilated to civilization". In fact, it was only in 1988 that native Brazilians had recognized their constitutional right to preserve their own cultures. Despite this improvement, native Brazilian communities still face numerous threats: farmers and gold miners invade their areas; Christian missionaries attempt to change their culture; military officials accuse them of putting Brazilian sovereignty at risk.

The indigenous communities' access to the internet became a topic of public discussion in the first decade of the 2000s (Renesse, 2012; Pereira, 2012, 2018). This resulted from policies intended to promote the access of minority groups to the internet. Various social actors took part in this initiative, involving government agencies in the federal, state, and municipal levels; NGOs; and private organizations. The results of the convergence between these actors were especially fruitful during the time when the Workers' Party (Partido dos Trabalhadores, hereafter PT) was ahead of the Brazilian presidency (2003–2016). Two examples in this regard are the Alive Culture Program (Programa Cultura Viva), promoted by the Ministry of Culture (2003), and the Oi New Brazils Program [Programa Oi Novos Brasis], promoted by the telecommunications corporation Oi. These policies fostered the creation of an infrastructure that allowed indigenous communities to have digital access. Still, problems persisted. Indigenous mobilization has been severely hampered by the lack of access to the internet. The main way to get connected is through schools in indigenous lands, which places teachers as the main users of digital technologies in their communities. There is virtually no internet access via cell phone. The problems do not occur only in remote areas of forests but also in villages close to or even adjacent to cities in regions of large energy facilities or agribusiness. Due to the pandemic, travel to urban areas is limited, expanding digital isolation.

In recent years, governmental support to the indigenous communities' digital access has decreased, especially after the impeachment of President Dilma Rousseff in 2016. Vice President Michel Temer, who replaced her, began to revert several social policies established during the PT government's era. This

situation became even worse after the rise of the far-right politician Jair Bolsonaro to the presidency. An openly racist person, Bolsonaro often pictures the indigenous peoples as "lazy" and "barbaric" and contends they hamper national development. In his view, multiculturalism puts at risk the integrity of Brazil as a nation. Besides, his decision to finish the Ministry of Culture led to the suspension of the inclusive programs created during the time when PT was ahead of the presidency.

Our chapter intends to explore topics related to Brazilian indigenous communities' access to the internet in the light of a critical view of the mainstream literature on the digital divide. Rather than merely a "technical" issue, the digital divide is anchored in history. In the case of the native Brazilian communities, this history traces back to a five-century legacy of oppression.

## De-Westernizing the digital divide

As it happens to other research topics, the digital divide has been discussed often from a Western-centered advantage point. Debates about this topic often present a problem/solution structure which pictures Global South societies as bringing problems and the Global North and neoliberal globalization institutions as conveying solutions for them. In search of an alternative approach, we explore a cultural discourse studies (CDS) perspective. CDS emerges from the critique of two twin phenomena: "Globalism in society" refers to the frustrated promise of globalization, which resulted in a unipolar order, structured around the United States; and "Western-centrism in scholarship" refers to the attribution of a global status to knowledge produced in the West (Shi-xu, 2014). Consequently, she calls for an effort to demystify the West-centric basis of global scholarship. Accordingly, CDS proposes that discourses must be understood as grounded in culture, and cultures are fundamentally diverse. Therefore, it encourages scholars to challenge the premise of universality associated with the Western neoliberal culture and to look for alternative views, referring to other cultural backgrounds (Shi-xu, 2016).

The mainstream view on the digital divide depicts it as a technical problem. Its core purpose is to identify the existing inequalities with respect to access to digital media and propose means for minimizing this problem. At a first glance, this approach seems well-intentioned and progressive; however, things are more complex than this. The technical approach on the digital divide takes for granted that a given development model – originated in Western societies and the United States in particular – is universally applicable. Several consequences follow this premise. To begin with, it establishes the basis for another distinction, that between societies that have problems and those in charge to provide solutions for them. Additionally, the promise of problem-solving is repeatedly postponed given the continuous evolution of digital technology. Hilbert (2015) refers to it as an example of the "red queen effect". This is a reference to Alice in Wonderland's Red Queen. In her words, people have to keep running just to stay in the same place.

Taken from a CDS view, the digital divide rhetoric provides a means for enhancing differences among societies instead of reducing them. It divides the existing societies into two groups: those having problems and those able to provide solutions for these problems in "advanced" and "backward" societies. Hence, this digital divide approach naturalizes the uneven distribution of power and legitimized knowledge among different societies and within a particular society. In other words, it works as a neocolonial device. This section explores some elements of the technical digital divide approach. It examines its ties with the US-promoted modernization theory and neoliberal globalization and its impact in Brazil.

**Modernization theory and neocolonial practices**

The modernization theory from the 1950s is an integral part of the rise of the United States to a global power status. At that time, US international relations faced a double challenge. On the one hand, there was the challenge to manage a changing international order, in the wake of the decline of European imperial rule over most of the rest of the world, and the emergence of dozens of new sovereign states, mainly in Africa and Asia. A former colony turned global power, the United States presented itself as a model of success for the new, emerging states. This happened in the Cold War era, and the United States disputed with the Soviet Union the emerging societies' hearts and minds. Contrary to the Soviet Union's "political" and "revolutionary" approach, US modernization presented itself as "technical" and "reformist".

To be sure, the roots of the debate on modernization can be traced to the 19th century. The nature, the causes and the impact of modernization have been discussed in classical sociology since the 19th century. These are core topics of the work of authors such as Karl Marx, Émile Durkheim and Max Weber. Still, the US approach to the problem differs significantly from those proposed by these authors. It takes for granted that the United States provides a model of successful modernity and postulates that other societies should follow its example. Additionally, this theoretical model was inseparable from US-directed modernizing initiatives. Daniel Lerner's *The Passing of Traditional Society* is one of the earlier (and more influential) works in this respect. Based on the analysis of a few Middle Eastern societies, Lerner (1958) sustains that modernity enhances a new, more emphatic type of personality. He also proposes a model for transition to modernity as linked to increasing urbanization, literacy, media participation and political participation.

A few years later, during John Fitzgerald Kennedy's presidency, this modernization theory received a practical follow up in the Alliance for Progress (Latham, 2000), an initiative to induce the modernization of the Latin American countries under US leadership. In the context of the Cold War, it aimed to contain the Soviet Union influence in the region, especially after the Cuban Revolution. In the US view, the US-led modernization was the "right kind of revolution" (Latham, 2011). This model of development was not less

ideological than that advocated by the Soviet Union. Still, the US managed to present it as being merely "technical" rather than politically motivated. The Alliance for Progress became a model for further US foreign relations policies. Still more important, this approach about what modernization means got naturalized by the academic literature. It lies on the basis of the mainstream digital divide rhetoric (Ish-Shalom, 2006).

**Neoliberalism and digital divide**

Neoliberalism provides another, more immediate ideological source for the mainstream approach on the digital divide. In fact, the digital media was born and raised in the neoliberal globalization era, in a time when the United States was the undisputed leader in a unipolar global order. Hence, it is not surprising that neoliberal premises came to define both the expectations about what the digital media could offer for humanity and the losses that would result from staying out of it – the digital divide problem.

To put it short, neoliberalism is both an economical and a social doctrine. Taken from the economic angle, it affirms market freedom – and not individual freedom, as in the original version of liberalism – as its core principle. Otherwise, taken as a social doctrine, neoliberalism contends that market logic should organize all aspects of social life. Neoliberalism has a suspicious attitude regarding the state and representative politics, in general, as their core principle is popular sovereignty, rather than the maximization of market freedom (Brown, 2013).

Following the end of the Soviet Union and the collapse of the Communist regimes in East and Central Europe in the 1990s, the neoliberal credo acquired a hegemonic status worldwide. This happened in the wake of a major process of organization of the international order led by the US and International Financing Institutions (IFIs) such as the World Bank and the International Monetary Fund (FMI). Acting together in an arrangement known as the Washington Consensus, they imposed adherence to neoliberal principles as a prerequisite for debtor countries obtaining loans (Williamson, 2008). These "conditionality" rules obliged these countries to open their economies to the global finance market, to de-regulate their economies, and to adopt austerity policies. The strict adoption of these prescriptions led many peripheral societies to experience a huge social and economic crisis – in Latin America, this period is known as the lost decade. Another consequence was the increasing economic and social inequality among the central and peripheral countries and inside the peripheral countries. In the late 1990s, the World Bank changed toward a softer approach by rebranding itself as a "Knowledge Bank" committed to "sharing knowledge" and "building capacity" around the world (Lera St. Clair, 2006). Accordingly, it claimed epistemological authority for providing assistance in several areas described as key for promoting a sustainable economic growth and good governance practices (Williams & Young, 1994). They include promoting the Rule of Law (Santos, 2006), fighting corruption

(Rothstein, 2011), promoting freedom of the press as a means for enhancing the government's accountability (Norris, 2010) and curbing poverty (Dutta & Rastogi, 2016).

Neoliberal values have influenced the development of the digital media since their very beginning. Barbrook and Cameron (1996) labeled "Californian ideology" the amalgamation between technological determinism and neoliberalism. Here, the internet provides a means for the rise of both an electronic agora and an electronic marketplace and, indeed, treat both as being the same. This view casts suspicion on the representative political institutions, the political parties and the state itself, and perceives hierarchical organizations as putting in danger individual freedom (Mosco, 2004). Otherwise, it presents consumerism as a model for citizenship. Lifestyle politics is politics at its best (Bennett, 2013), and having a personal computer (or the other digital devices that followed) is the passport for real freedom, which can be found only in cyberspace. In this view, being excluded from digital media means being unable to take part in democracy at its best.

Ironically enough, the same agents who stayed ahead of the neoliberal globalization project claim for themselves the authority to solve the problem. The following excerpt provides an example of how this logic works: "Leaders in the World Bank, European Union, United Nations, and G8 have highlighted the problems of exclusion from the knowledge economy, where know-how replaces land and capital as the basic building blocks of growth" (Norris, 2001, p. 6). This perspective presents the digital divide as unintentional, a side-effect of technological progress. Otherwise, critical authors emphasize that inequality is structural, and its basis is rooted in the technological infrastructure of digital media itself. Not only was the internet's basic structure built by the US Department of Defense, but also a US-based non-profit organization – ICANN (Internet Corporation for Assigned Names and Numbers) – is ahead of the Internet protocol addresses and domain name systems (DNS) worldwide (Thussu, 2015). By minimizing the social, political and economic roots of the global divide, the technical rhetoric of the digital divide continues to perpetuate, rather than curb, the existing inequalities.

## Brazil in a post-colonial/neoliberal context

Modernization and the neoliberal discourses affect the distribution of power and prestige not only in the international arena but also within particular societies.

From the viewpoint of the Latin American elites, in general (and Brazilian elites, in particular), the perception of their country as being backward in comparison to the Western industrialized democracies is not bad news at all. Instead, it provides them with the opportunity to depict themselves as being in charge of a civilizing mission. According to González-Casanova (1965), they act as internal colonizers. In colonial times, Christianity provided the main parameter defining civilization. Other criteria followed: the Enlightenment,

modern science and industrialization. In all cases, Europe provided the civilizational model for the Latin American elites. After World War 2, the United States progressively replaced Europe as Latin America's civilizational model, first through modernization ideology and then through neoliberalism.

Studying abroad in prestigious Western universities is an important part of life for the Latin American elites. This is especially true in Brazil as their universities developed later than those in other Latin American societies. Universities were created in Spanish colonies as early as 1551 (Peru and Mexico) and 1613 (Argentina). Otherwise, Portugal averted the creation of universities in Brazil during the entire colonial period, despite numerous requests for doing so (Russell-Wood, 2002). At the time of Brazilian independence, Portugal's Coimbra University was the alma mater for nearly all Brazilian elites holding a university degree (Carvalho, 1996). In the decades following independence (1822), these elites showed little interest in building universities in Brazil. The first Brazilian university – Paraná University – dates from 1912. In the subsequent decades, a solid university infrastructure developed in Brazil. Nevertheless, attending graduate courses in Europe and the United States remained a key factor of distinction for Brazilian elites (Dezalay & Garth, 2002), allowing them to picture themselves as being up to date with state-of-the-art international debates.

This kind of intellectual training leads Brazilian elites to look at their country with foreign eyes. Accordingly, they present Brazil as being backward compared to the developed Western societies and endow themselves with the mission of modernizing it. Yet, the criteria defining what modernity is changes with time. During the John Fitzgerald Kennedy government, the Alliance for Progress initiative associated modernization as an effort to achieve a "stage of self-sustained growth" under US supervision. In this view, modernization implied making systematic efforts to upgrade industrial building infrastructure. Nevertheless, in the 1990s, a new model of modernization emerged. Now being modern meant opening the country's economy for foreign investments and, at the same time, adopting an "austerity" approach, that is, curbing public investments in infrastructure. In the space of a few decades, modernization was associated with very different policies. In some aspects they were even opposed. Still, both served Brazilian elites as a means for presenting themselves as civilizing agents in their society.

## Indigenous people and digital media in Brazil

The term *Indian* is misleading in many significant ways. It has been used all along the Americas to refer to the societies existing before the arrival of the European colonizers in the late 15th century. The colonization of America happened in the context of the maritime expansion of Europe, which originated as a means to reach India by sea. For this motive, the first European colonizers referred to the newly discovered territories as Indias Occidentales/Índias Ocidentais – or West Indias. Added to this, the use of a single term to

refer to all native populations existing in the Americas erroneously suggests that they are fundamentally the same people. According to Aryon Rodrigues, "Brazilian indigenous are not an only people: the term comprises people different from us and from each other. They also differ from us and from each other because they speak different languages" (1986, p. 17). The 2010 Census listed 305 indigenous groups in Brazil, corresponding to 900,000 people. This corresponds to roughly 0.5 percent of the entire Brazilian population. Roughly two-thirds of them live in rural areas.

Indigenous people are usually identified according to linguistic criteria in "linguistic families". Groups of families receive the name "linguistic branches". The two more important branches in Brazil are the Tupi Branch and the Macro-Jê Branch. Guarani – which is an official language in Paraguay – belongs to the Tupi Branch, and Pataxó is the language of the first indigenous group to have contact with the Portuguese when they landed in Brazil in 1500. Other linguistic families include Caribe, Arawak, Tukano, Maku and the so-called isolated languages – that is, which do not belong to a larger language family – such as the Tikuna, the largest indigenous group in Brazil, located in Brazil's frontier with Peru and Colombia. During the first centuries of the colonial period, Tupi served as the basis for the lingua franca in Brazil. For this reason, this is the most-known indigenous Brazilian language, although at present it is not widely spoken in the country.

**Indigenous societies and colonizing efforts**

At that time of the Portuguese arrival, there were 2 to 4 million indigenous habitants living in the Brazilian territory. Archeological studies have found evidence of the existence of cities and communication networks in parts of the Amazon rainforest. This contradicts common sense notions about the social organization of the people who lived in that region in the past. Still, violence associated with the colonization process and the dissemination of diseases has a very negative impact on the indigenous population. According to the anthropologist Darcy Ribeiro, approximately 80 indigenous groups disappeared in the first half of the 20th century. This resulted from the efforts to expand the Brazilian agricultural frontier toward the Center-West and North regions. The "March towards the West", an initiative promoted during the Getúlio Vargas government (1030–1945), is exemplary of the dynamics of internal colonialism during this period. It established a pattern of land expropriation and violence against indigenous leaders that remains active at present.

The Brazilian colonizers took advantage of the natives' knowledge about their territory in their colonizing effort. Accordingly, white colonizers were encouraged to learn native languages and have children with indigenous women. These children became the basis of the Bandeirantes, who conducted expeditions to the interior of Brazil. They looked for precious minerals and captured indigenous people to work as slaves. The Bandeirantes turned the

knowledge of the native people against them. As Eduardo Galvão has noted, every Brazilian town was an indigenous village in the past (1955).

Religious missions were another colonial initiative intended to control the indigenous populations, especially those carried out by Jesuit Catholic priests. In concrete terms, these missions acted as agents reducing indigenous diversity. They promoted simplified versions of the original languages and elaborated the grammatical rules for general languages, such as the Amazon Nheengatu and the Southeast Tupi. For management purposes, they also classified different groups in the same ethnic categories, thus affecting the indigenous sense of social belonging and identity. In 1759, under the orders of the Marquis of Pombal, the Jesuits were expelled from Brazil. Still, this did not put an end to the missionary activity in the country. In the 1880s, Emperor Pedro the Second invited to Brazil Catholic missionaries belonging to the Salesian Order. They established bases in distant regions, in the High Rio Negro (Black River) region and the Yanomani territories. In the 1970s, the Brazilian government agency dedicated to the indigenous people Funai (Fundação Nacional do Índio) established an agreement with the Summer Institute of Linguistics (SIL) allowing them to work with native people, collect data about their languages and send it to the SIL headquarters in the United States. The SIL's work had a strong missionary influence as it focused on learning languages in order to make vernacular versions of the Bible to make it accessible to the native populations (Leite, 1981; Barros, 2004).

Despite foreign missionary initiatives – such as New Tribes and Young People with a Mission – the so-called native churches have a more visible presence in the indigenous communities. As it was during colonial times, these churches demonize elements of the native cultures (Meyer, 1999). At the same time, they incorporate in their belief systems traditional elements of these cultures, such as the systems of witchcraft blaming and the influence of malicious spirits (Monticelli, 2020).

During the Bolsonaro presidency (2019–present), the missionary perspective has become the basis for government policies regarding the indigenous people. One of Bolsonaro's first initiatives was to put Funai under the control of the Ministry of Women, Family, and Human Rights. The ministry itself was put in the hands of Damares Alves, a fundamentalist Christian woman. People formerly involved with missionary activities have played an increasing role in the life of the Funai.

## Recognition policies and their limits

Recognition is a critical theory category used to describe topics associated with social justice. Initially, this category was mobilized in defense of workers' rights in the wake of the Industrial Revolution (Honneth, 1996). Recognition was associated mainly with the social classes. At that time, the category "social classes" provided a paradigm for sociological theories to discuss all sorts of social conflicts, yet the notion of "struggle for recognition" is much

more recent. It emerged in the wake of the May 1968 protests, which brought visibility to political agendas that were once peripheral. Examples include the rights of women, non-heterosexual, and non-white people. As diverse as they were, these agendas had in common the struggle for recognition carried out by individual and collective subjects. For the "new social movements" emerging after 1968, social justice went beyond socioeconomic material welfare and social classes. It included post-material values associated with intersubjective dynamics, involving topics such as identity, cultural diversity and different forms of being and feeling. The struggle for recognition provides a means for discussing these movements under new analytical angles, such as the moral grammar (Honneth, 1996), difference (Taylor, 1992) and economic redistribution (Fraser, 1997).

In Brazil, the new social movements did not acquire public visibility until the end of the military regime (1964–1985). Only then did topics such as race, gender and indigenous rights enter the political agenda. The debates preceding the promulgation of a new Constitution, in 1988, were the first occasion when these topics became a subject of public debate. They became the basis for affirmative action policies in public universities, benefiting Afro-descendent and indigenous people and people with physical disabilities and recognizing homoaffective unions.

The indigenous people provide an especially vocal example of struggle for recognition in Brazil as their rights have been systematically disregarded since the beginning of the colonization process. The Constitution of 1988 was the first to ensure the indigenous people full citizenship, breaking with patterns of tutelage established in the colonial era. Concretely, this did not grant them with effective rights but allowed them to better organize their struggle for recognition.

## Bolsonaro and the setback in indigenous policies

Jair Bolsonaro, the incumbent President of Brazil, is a declared enemy of the interests of the so-called traditional populations, a category that includes the indigenous people, ribeirinhos (riverside people) and the quilombolas (people descending from African slaves who built communities in rural areas). His hostility to these people is grounded in different bases. To begin with, there is cultural prejudice and even racism. Bolsonaro and his allies present themselves as defending the civilizing values of the West against the "Rest" of the world barbarians. In the international arena, they have been suspicious of Africans, Latin Americans and especially the Chinese people. In Brazil, they are particularly hostile with respect to the indigenous people, who they depict as being "lazy" and antimodern. A second element refers to the environment. Bolsonaro is a climate change denier. In his view, forest burning promotes economic progress as it opens ground for agrobusiness. Finally, Bolsonaro depicts the indigenous people as a threat to Brazilian sovereignty. In practical terms, his government has suspended the process of demarcation of new indigenous

territories. Added to this, it has sided with the agribusiness and gold miners against the indigenous land rights. This situation was denounced by the book *The Fall from Sky* written by the Yanomani leader David Kopenawa and Albert (2015).

In concrete terms, Funai has contested an international agreement establishing self-declaration as the core principle defining the indigenous people's identity. Otherwise, it proposed that criteria defined by the state should be used in this respect. History has provided numerous examples about how externally defined criteria to define who are indigenous and who are not are associated to ethnic and cultural homogenizing policies, to the occupation of their lands by settlers and to the prohibition of the use of native languages. For the native populations, this has two main consequences: losing territory and legal protection (Pacheco, 1997). A complementary threat is the "time frame" principle, referring to the demarcation of indigenous rights, which has been discussed by the Brazilian Supreme Court. This principle denies the indigenous communities the originating right to their lands. Additionally, it affirms that the current Brazilian Federal Constitution – promulgated in 1988 – should be considered as the legal basis for the indigenous peoples' land rights. Bolsonaro and the members of the agrobusiness bench in the National Congress have actively supported this approach on the indigenous peoples' land rights. In August 2021, more than 6,000 indigenous people rallied in Brasilia in an effort to influence the Supreme Court's judgment on that topic.

**Indigenous communities and social media – origins**

Indigenous people have employed communication technologies as a resource for their struggle for recognition. In the 1970s, the Xavante tribal chief Mário Juruna became famous for using tape recorders for taping conversations with government officials as a resource for registering the promises they made to the indigenous (but did not accomplish). He later released them to the press (Juruna, 1983). This initiative made him well-known nationwide, allowing him to become an elected federal representative for Rio de Janeiro in 1982. Following the 1980s, a number of initiatives using electronic media in defense of the indigenous peoples' rights – as the Vídeos nas Aldeias (Videos in the Villages) – followed (Pereira, 2012).

Social media enhanced opportunities for indigenous people to communicate with a larger public (Berrío-Zapata et al., 2017; Castells, 2015). Initiatives aiming to ameliorate indigenous peoples' digital inclusion have gained ground since the 2000s (Renesse, 2012; Pereira, 2012) as a result of greater participation of civil society, beginning in the 1990s (Dagnino, 2005), at different levels of government (municipal, state and federal) through the articulation of spaces such as NGOs, councils and regional and national forums. These initiatives gained momentum during Luiz Inácio Lula da Silva's first presidential term. Initiatives such as the Programa Cultura Viva (Living Culture Program) – co-sponsored by the Ministry of Culture and the private NGO Oi

Novos Brasis – were instrumental in this respect, allowing a significant expansion of internet access to several indigenous communities.

A notable example is the Índios Online Network, created in 2004. Counting on the support of the Ministry of Culture, it established a network that united indigenous communities located in municipalities such as Pau Brasil, Ilhéus, Prado and Banzaê, in Bahia, in addition to Porto Real do Colégio and Palmeira dos Índios in Alagoas, and Tacaratu in Pernambuco. In these locations, the distribution of computers, internet access and technical maintenance ensured the expansion of the network, which began as a channel for dialogue between indigenous people in the Northeast and later began to aggregate ethnic groups from other regions of Brazil.

The search for greater visibility of indigenous peoples' demands may have been one of the great motivators for the creation of websites, blogs, Facebook pages and, more recently, the use of social networks such as Twitter, Instagram and WhatsApp (Franco et al., 2020). Discussing topics such as recognition of rights, defense of their territories, affirmation of their identities, articulations and denunciations on social media increases the opportunity for indigenous people to be heard. This is also true from an individual perspective. Especially among younger people, the use of profiles on social networks such as Instagram expands the spaces of visibility and strengthens their affective bonds. From another point of view, public policies for access to different spaces are fundamental for different indigenous ethnicities to come closer together.

## Indigenous communities and social media – current challenges

The lack of infrastructure in their territories and nearby is the main obstacle hampering indigenous peoples' access to digital media. This happens not only in isolated areas but also in indigenous areas sited close to small and medium-size towns. Most indigenous communities do not have access to an electric power grid. They rely mostly on fuel oil generators for electricity. For economic reasons, these generators remain switched off during part of the day, which makes the internet inaccessible to them during that time. Problems are particularly serious in the Amazon region, as strong rainfalls frequently result in less energy supply.

In many indigenous communities, schools provide a core infrastructure that allows people to access the internet. Thanks to the Innovative Program for Connected Education, schools are provided equipment that enables them to get radio and satellite signals. This happened, for instance, to the Macuxi, a Karib indigenous group living in Terra Raposa Serra do Sol, in Roraima, a state located in the Brazilian extreme North. Still, the Bolsonaro government has curbed initiatives aiming to expand this program.

Apart from political obstacles, the school-centered model of accessing the internet presents intrinsic difficulties. In this model, only people associated with the schools' staff or their students have access to the internet. They only have access when the schools are open, and the geographical scope of the

internet access is limited. One example is the Bakairi, a Karib people living in Mato Grosso, a state in the Brazilian Center-West region. For a long time, their access to the internet was limited to the principal village, Pakwera. Recently, a telecommunications tower was built in the region that allows broadband access to the internet. Still, the low quality of the internet service provider limits their use of it to the basics.

The COVID-19 pandemic highlighted the precariousness of indigenous peoples' access to the internet in the midst of the process of greater participation of the population in higher education due to the recent implementation of quota systems in universities across the country. The distribution of basic infrastructure (electricity, schools and access points) is uneven within indigenous lands, and the implementation of improvements is not part of the communication policy, especially at the federal level. Travel to support cities, where internet access is better, became restricted during the pandemic due to the disruption of transport systems and the reduction in income that allows indigenous people to pay for stays in urban areas close to their lands. Thus, the impact of the lack of internet access has repercussions on the general exercise of indigenous citizenship in other areas such as education.

## Conclusion

The debate on the digital divide usually considers it a technical problem. According to this view, unequal access to digital media – more characteristic of some societies than others – is a matter of level of development. It follows that the most developed societies (or international organizations closely associated with them) would be in charge of providing solutions to mitigate the problem. In the light of the CDS perspective, this chapter casts a critique of this perspective as based on a Western-centric neoliberal worldview. It is argued that digital media is a by-product of the neoliberal globalization process, which increased asymmetries between and within societies. From a neoliberal perspective, the existence of such asymmetries is not only tolerable but, in fact, may even be desirable: producing new inequalities is what market societies do. This chapter explored the mechanisms excluding Brazil's indigenous people from the digital media. It is argued that the numerous problems that prevent them from decent access to digital media are an extension of a broader internal colonialism policy that extends the European colonization of native Brazilians.

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# 3 Digital inequality and ethnic minority

## A case study on digital experience of the Santhal community in India

*Madhumita Das and K. S. Arul Selvan*

### Introduction

The growing culture of the internet and penetration of information communication technology serve to be an opportunity as well as an obstacle for 21st-century minority culture. Santhals are one of the largest tribal groups in South Asia (Adhikari & Dash, 2020). The case of digital participation of Santhals from the point of view of digital inequality should be considered as a practice of digital discourse of ethnic minority groups. The struggle, advancement, and self-cultural practice of this community have developed with the manifestation of digital resources, in addition to non-digital, such as the national identity of language and script. Language is the first and foremost to flag the cultural identity of any culture. In Shi-xu's (2005) words, "Culture is a collectively shared consciousness of particular groups or regions." Therefore, the cultural approach to looking into native discourse follows the same angle to understand the individual and unique culture.

Presently, among several world democracies, India is hit not only with high death records but with higher levels of inequality (Kasi & Saha, 2021). The lack of developmental measures in India has always led the tribal population to dwell at the margins without proper resources for economic sustenance (Mehta & Singh, 2021). Tribes that are poor and live in remote locations have their natural affiliations and some specific territory, but often they have not maintained any specific economic activity or function (Dungdung & Pattanaik, 2020). The case of tribes in India represents the phenomenon of digital inequality in ethnic minority groups. According to Basu (2020), "India's tribal population adds a very dynamic and interesting element to the diverse and multifaceted socio-cultural background of the Indian population."

The Santhal community is a tribal community in India that retains an aboriginal language, locally known as Santhali, that belongs to a sub-family of the Austric family called Austro-Asiatic (Ghosh & Malik, 2007). The Santhals community lives in the states of Jharkhand, Bihar, Odisha, West Bengal, and Assam (Dey, 2015). Santhals have their unique ethnic identity of customs, traditions, rituals, beliefs, and artistry (Basu, 2020). With

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the rise of information communication technology, Santhals started to get techno-savvy, and their cultural identity was influenced by digital communication, mainly through social media (Talukdar & Mete, 2021).

This chapter aims to understand digital discourse in terms of digital skills and tangible outcomes of digital usage that serve various purposes of a minority group. Using the specific case of the Santhal community, we have elaborated on how the minority faces exclusion due to low digital participation and the occurrence of the reinforcement of existing inequality into digital inequalities. This chapter is based on empirical research to bring forth the real-world problem in third-world countries where no digital policy serves the marginalized, for example, India. It brings two power dynamics together with significant insight; digital inequality and cultural inquiries about the significance of digital skills in shaping the cultural identity of tribals. It focuses on the issues of digital inequality among the Santhal (Indian tribal community) through the lens of cultural discourse studies (CDS). The discussion is divided into three parts; first, the paradigm of CDS; second, the ethnic identity of the Santhal community; third, a manifestation of tribal digital discourse (TDD) and the digital inequality through the personal experiences of people from the Santhal community. The first and second sections of this chapter are based on secondary review, and the third section portrays the empirical findings.

## CDS, digital inequality, and tribals

### *Cultural discourse studies (CDS)*

Usually, discourse is understood as the interpretation of dialogue that is set for conversation or communication. Asian discourse theorist Shi-xu vocalizes human cultural coexistence and harmony, which is more than a communicative event or human interaction using textual or non-textual cues and has been considered the dynamic cultural approach to discourse. Methods in culturally inclusive approaches to discourse analysis include Jan Blommaert's critical discourse analysis, Shi-xu's cultural approach to discourse, Asian communication theories, and Donal Carbaugh's cultural discourse theory (Scollo, 2011). Discourse as a cultural practice has been discussed as cultural discourse analysis (Carbaugh, 2007) and cultural discourse studies (Shi-xu, 2014a). Discourse as defined by the Western school of thought is a conversation or interaction, popularly known as critical discourse (Harding, 2015; Wooffitt, 2005). Interaction and participation on online platforms open avenues for cross-cultural communication, but imbalances in cultural representation can marginalize non-dominant cultures. The Asian school of thought (Dissanayake, 2009; Shi-xu, 2005, 2009, 2014b) considered discourse as a human event that is historically blended and culturally influenced. In the 21st century, with the growing concern on digital exclusion, inequality, and marginalization, both

the human discourse and dialogical discourse focused on a new paradigm of cultural discourse: cultural discourse studies (CDS). The emerging debate on cultural consciousness in every sphere of third-world discourse has given the lens to look into digital discourse, hegemony, imperialism, or imbalance. As a result, the third-world countries having condensed digital inequality in all of its forms could summon third-world researchers to ponder on the critical issue through a critical lens. The critical framework of individualistic digital inequality, influenced and subjugated, is to be extrapolated within the paradigm of CDS, a lens to investigate any social phenomena.

Cultural discourse studies could be called a paradigm rather than a method, framework, or methodology. It is a viewpoint through which a non-Western approach looks into non-Western third-world debates on discourse. Works on the cultural approach to discourse analysis consider the role of the background actors in shaping a discourse on specific platform (e.g., Wu, 2010). Focusing on discourse dynamics, Carbaugh et al. (1997) described cultural discourse as a communication practice of symbols, norms, and the meaning of a certain historically transmitted event. Holding the same thread, Shi-xu gave attention to the symbolic and cultural aspects of discourse. The CDS approach understands and analyzes native conceptions of discourse and the practice of indigenous discourse, integrating them to bring a global perspective to Western-based critique theories (Shi-xu, 2014a). Developing nations need non-Western, culturally inclusive critical frameworks, theories, and models for discourse and communication (Scollo, 2011; Shi-xu, 2014b). Here, discourse is a fundamentally social practice, and the power relations in digital discourse are a consequence of social, cultural, and economic individuality. The historical context must not be looked over.

Cultural discourse studies (CDS) is guided by open and various theoretical, methodological, and philosophical terrain that is the human discourse of extra-linguistic aspects, which follows holistic ontology (Shi-xu, 2014a, 2014b) and gives importance to diversity, power struggle, and critical consciousness as the core characteristics of discourse (Shi-xu, 2005). The fundamental assumption of CDS is that different cultural communities have individual communication or dialogue in respect to rules, values, strategies, purposes, consequences, etc. (Shi-xu, 2014a). The tribal culture in India follows multiple values and traditional norms as a homogeneous entity. The liberalization and globalization of media include cultural norms in the state of uneven exercise of cultures between nations and within nations. And, the socio-cultural position of tribals resembles a greater inequality within the national sphere. The historical circumstances of colonial India began the vertical distribution of cultures, making the tribals the lowest section. The ongoing struggles of tribals thus bring their ethnocentrism into vulnerability. The evaluation of tribal discourse within CDS could be from a global or local perspective. Here, the local perspective of human discourse has been taken to evaluate Santhal's digital participation and inequality in digital discourse. The local or native perspective deals with the

cultural deprivation in the power dimension, imperialism, ethnocentrism, and cultural inclusion (Shi-xu, 2014a).

### *Tribal identity: ethnic identity and Santhal community*

Ethnic identity, a social construct (Waters, 1990), is viewed as an individual's identification with a group identity and with a common origin and common culture (Phinney & Ong, 2007; Yinger, 1976). Components of ethnic identity are many-faceted; first, self-identity as a member of a particular group and, second, group identities (Phinney & Ong, 2007). The development of ethnic identity caters to a highly conscious identification with one's own cultural beliefs, values, and traditions (Chavez & Guido-DiBrito, 1999). According to Chandra (2006), ethnic identities are a subset of the descent-based attributes acquired genetically (e.g., skin color and physical features), through cultural and historical inheritance (e.g., language, place of birth), or in the course of one's lifetime as markers of such an inheritance (e.g., last name or tribal markings).

The Santhal community, as a tribal group, has an individual, distinguished ethnic identity. In colonial times, the notion of 'tribe' indicates a people marginalized and politically excluded (Banerjee, 2006); later on, it was defined primarily based on geographical and social isolation from mainstream Indian society (Paltasingh & Paliwal, 2014; Xaxa, 2014). The tribe is an indigenous section and political division of the population in India (Dhargupta et al., 2009). They have been constitutionally termed Scheduled Tribes (STs) (Das & Sanskar, 2021). The Indian Constitution specified the 'Scheduled Caste or Scheduled Tribe' in Articles 341 and 342 (Gupta, 2019). There is a range of terms used to express tribal identity, such as 'indigenous people', 'Adivasi', and 'Scheduled Tribe (ST)'. The constitutionalization of tribal languages enhanced tribal identity into national discourse as a way to sustain common identity all over India (Carrin, 2020). It triggered consciousness as well as threats to ethnic self-concept in India.

### *Tribal concern and development*

Tribal communities are called primitive due to their marginalization within the purview of knowledge, use of technology, and, specifically, economic and educational backwardness (Paltasingh & Paliwal, 2014). According to the 2011 Census, the tribal population constitutes 8.6% of the total population in India,[1] and the majority of the STs reside in forest regions, depending on the forest for their economic livelihood, and separate themselves from the city (Kasi & Saha, 2021).

The forest land has declined due to technological/infrastructural projects initiated by stakeholders of development (Mehta & Singh, 2021). As a result, the occupation of tribals shifted from traditional practice to modern works. In

the past, migrations and other factors destabilized and threatened the Santhal society (Carrin, 2020), so they remained isolated physically and socially (Xaxa, 2014). The complexities of people around tribals too are the cause of inequality and discrimination (Dungdung & Pattanaik, 2020).

The Constitution of India has provided many privileges to tribal communities (Baiju, 2011; Paul & Gupta, 2016). Still, the facilities of protective constitutional provisions have been availed by economically potent and highly educated tribals (Mehta & Singh, 2021). As per the Office of the Registrar General in India, there is a visible disparity between literacy rates among STs and other Indians. Although there has been a generous development in the rate, still the gap is not bridged. In 1961, the literacy rate was 28.30, and in 2011, it was 73.00 for Indians, whereas in 1961, it was 8.53, and in 2011, it was 68.50 among STs.[2] A recent study found that a large percentage of the indigenous population in India are in a vulnerable position because of social stigma and economic inequality (Mehta & Singh, 2021). The Santhal community is facing large-scale economic and livelihood insecurity due to the lack of employment opportunities in villages.

### *The unique ethnicity of the Santhal community*

According to the 2011 Census, the tribal population is 52,96,963, which is 5.08% of the total tribal population of the country and about 5.8% of the total population of West Bengal.[3] The Santhal are one of the largest tribal communities in India and are spread over Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, and West Bengal.[4] Santhals are ethnonationalist, indigenous minorities at risk (Gurr, 1993). According to Sarkar and Singha (2019), "The Santals are descendants of pre-Dravidian people who migrated to regions of East India about three centuries ago, preserving their language, culture and traditions."

Santhal village used to have a sacred grove at the outskirts of the settlement that was considered the home of spirits.[5] The Santhals believe in four types of supernatural powers: the benevolent spirit, which they worship at the community level for a healthy life; the protective spirit for preventing ill occurrence; the malevolent, an evil spirit that limits diseases; and the ancestor spirit (Sonowal & Praharaj, 2007). The system of governance they follow is called Manjhi-Paragana and is equal to local self-governance. The Santhals have a great influence on the village council, which consists of the following members: a headman (*majhi haram*), an assistant headman (*jog-majhi*), a priest (*nacke*), and a messenger (*godet*) (Sonowal & Praharaj, 2007). The Santhals have faith in folk medicine and removing disease by worshipping the gods (*Bongas*) (Sarkar & Singha, 2019).

Why is there a change in Santhal culture? First, the benefits of modernization and the interrelationship between tribal and non-tribal aided the Santhals in climbing the social ladder, achieving better education, increasing employment opportunities, and improving health care, thus bringing a change in tradition and cultural image among the Santhals (Paul & Gupta, 2016). Second,

a religious transformation is noticed among Santhals as many of them are inclined to follow either Hinduism or Christianity (Paul & Gupta, 2016). Art, dancing, and singing are an integral part of Santhal culture. Santhal religion is different from others in West Bengal. They worship Marang Buru as the supreme deity. The tribal community's real-life participation in the democratic process stabilizes their ethnic identity. Some factors add value to the cultural identity of Santhals, and digital presence is one of the factors. Therefore, the Santhal community's digital inclusion is an important concept to be investigated.

### *The concept of digital inequality*

An extensive dimension of inequality in access to the internet and computer devices was talked about in developing and developed countries. Access to technology has paved the path of digital engagement and participation that creates inequality in society. The individualistic notion of inequality forms several differences (Van Dijk, 2005). Jan van Dijk in his book *The Deepening Divide* has given core arguments on divides caused by differentiation in individualistic access, the cause of the divide, and the consequences of the digital divide. The digital divide and digital inequality were being used by scholars to define the gap in digital access, skill, and usage in society. Most recently, the capital-based understanding (Ragnedda, 2018) has taken attention. The digital divide exists on three levels: first-level digital divide (binary material access), second-level digital divide (skill), and third-level digital divide (tangible outcome of digital usage).

A plethora of studies has been conducted to identify determinants of digital divides. There have been explorations of third-level digital divide (Calderon Gomez, 2020; Van Deursen & Helsper, 2015), sociodemographics factor in the digital divide (Elena-Bucea et al., 2020; Reisdorf & Groselj, 2017; Tirado-Morueta et al., 2017; Lengsfeld, 2011), and the mobile internet as a tool (O'Neill et al., 2016; Reisdorf et al., 2020). In the past years, the main focus of digital divide research was on the second-level digital divide, and the third-level divide was underexposed (Scheerder et al., 2017). Digital divide research follows an individual approach. Social categories such as age, gender, and education import inequality into online participation. It was evident from the literature that there was an age divide in digital usage skills (Alam & Salahuddin, 2015). The research found that there is a link between operational and information navigation skills and age groups (Van Deursen et al., 2015). Along with this, there were infrastructural gaps and economic gaps among users (Khan et al., 2020). Altogether, digital divide research is primarily limited to sociodemographic and socioeconomic determinants (Calderón Gómez, 2019; Scheerder et al., 2017).

Digital exclusion is compound and multifaceted, and internet skill is the core element of that. Internet skill has been categorized into operational skill, information navigation skill, social skill, creative skill, and mobile skill (Van

Deursen et al., 2016). Internet skill is very crucial to the substantive outcome of internet usage. There are strong relationships between uses and participation outcomes as well (Van Deursen et al., 2017). Internet skill influences the use of the internet and the extent of internet usage (Alam & Salahuddin, 2015). According to Van Djik's causal and sequential model of access to digital technology, motivation to use internet is more important in explaining the physical adoption of the internet. In this context, the attitude towards internet acts as a motivational factor, as explained by Scheerder et al. (2017). The outcomes of internet usage, according to a study by Van Deursen and Helsper (2015), were economic, social, political, institutional, governmental, educational, and institutional health.

## Methodology

The objective of the study was to evaluate the digital inequality among ethnic minorities of India. Several concepts have been used to study this human discourse as a social occurrence. 'Asian discourse' is described as any form of contemporary cultural-communicative practice by Asian peoples (Shi-xu et al., 2016), and tribal digital discourse (TDD) in India could be on the same line within the paradigm of cultural discourse studies (CDS). The design of methodological approaches in CDS is diverse and transdisciplinary (Shi-xu, 2005, 2014a, 2014b). One can follow any research tool depending on the nature and objective of the research. In discourse analysis, interview as a method (Harding, 2015; Flick, 2017) is used for data collection.

For this study, following a qualitative approach, a series of semi-structured interviews (a total of 19 interviews of people from various socioeconomic groups) were conducted with Santhal people visiting four districts: Purulia, Bankura, Hooghly, and Murshidabad in West Bengal (India).[6] The state of West Bengal consists of various ethnic groups but is largely dominated by the Bengali-speaking Hindu and Muslim communities. Hence, national multiculturalism could have an impact on the ethnic minority of the Santhal community. The data has been collected through an openly designed interview to achieve the highest subject engagement and subjective viewpoint from the Santhal villages of West Bengal. The users of digital devices such as mobile, computer, and internet were selected purposefully as participants and interviewed on their digital usage, skill, cultural practice via the internet, and tangible outcomes of their usage. In addition, the digital usage of family and relatives was also investigated.

The discourse of tribal digital participation and inequality has been interpreted using the lens of SIMPHC (Subject-Intent-Medium-Purpose-History-Culture). In the book *Chinese Discourse Studies*, Shi-xu (2014b) stated the framework of CDS, which incorporates the interrelated categories in discursive events that is SIMPHC.

*Table 3.1* SIMPHC lens used to interpret Tribal digital participation and inequality

| *Categories* | *Explanations* |
|---|---|
| Subject | Santhal community as speaking actor in digital discourse and hearing actors as well |
| Intent | Digital participation to produce tangible outcome |
| Medium | Use of digital media |
| Purpose | The outcomes, effects, and consequences of digital action |
| Culture | The concepts, principles, rules, norms, representations, and strategies involved in digital communicative actions and intercultural communication |
| History | The historical processes and relations involved in the previous categories |

*Source:* Adapted from Shi-xu (2014b).

## Discussion on tribal digital discourse

### *Tribal digital discourse (TDD): an approach to CDS*

The role of digital media in real-world participation is an area that many scholars have explored in different ways. The trend in media technologies and participation and the role of new media in development have to be understood against the backdrop of digital media systems, which focus on the relationship between marginalization and digital media as a response to declining position of ethnic communities and their (inter)cultural participation. Our argument is that digital inclusion can motivate ethnic communities to take part in the cultural engagement.

The neo-colonialism discourse inspired, academically, a new paradigm (2014) to investigate cultural identity, individuality, and diversity and to impart a human-centric approach to digital discourse. Tribal digital discourse (TDD) looks at discourse study as a developmental tool that helps to uncover cultural consciousness and identity over digital platforms. It is a human discourse scholarship proposed to join the new paradigm of CDS. Following the aligned work, we added to this paradigm an ethnocentric work on the Indian tribal community. Tribal cultural pluralism has been shaped by colonial history, vast geography, class conflict, and social inequalities. Therefore, it can be examined through the lens of Shi-xu's work, which seeks to deconstruct cultural identity, digital inclusion, and the imbalances faced by marginalized communities. The tribal discourse is an unpopular topic to the global society and unfamiliar to many of them. Looking into the tribal cultural coexistence in multicultural society, through CDS, we portrayed 'elements of tribal digital discourse' and 'components of tribal culture', and we elaborated on the exercise of identity of the Santhal community through digital practice. It is not possible to discuss the tribal community of India as a whole, but the case of the Santhal community can bring insight into the whole phenomenon. Santhal culture is historically formed; it is the representation of their belief, value, rule, system, and

social relations. As described by Robertson (1992) and Shi-xu (2005), culture is rooted in a civilization and historically developed. The Santhal culture is transformed and blurred in modern society, and digital inequality is giving leniency to this phenomenon. Digital participation in the minority community forms with the use of digital tools, such as mobile devices, computers, tablets, laptops, internet access, and other communication aids.

### *Digital presence of the Santhal community*

The Santhal/tribal culture in India had been victimized, or the circumstances forced it to be suppressed. Adhering to pre-assumptions of CDS (Shi-xu, 2009), it could be stated that the Santhal community communicates differently; their social and political experience shaped the rules, values, and means of communication. The intercultural power relation originated in colonial times, and the ensuing years continued to increase inequality in the dimensions of Santhal's life. Santhal tradition and culture have been wiped away for cultural hegemony: firstly, national cultural hegemony, and second, global cultural hegemony. Historically, many of the Santhals have been transformed from the Santhal religion to Hinduism. As a result, their religious identity and practice have transformed. During the colonial period, many adopted the Christian religion and stopped the religious practice of their community. Thus, religious identity has evaporated. Although, the communal identity, as described by the Indian Constitution, has remained Scheduled Tribe (ST). The hegemony thus expands and is visible in the political field as well. In the minority community, Santhal is only one example of how the Indian minority has been driven from the ground of power imbalance to digital imbalance. According to Shi-xu (2005), discourse is essentially a meaning-making activity. The internet brings the opportunity to share, enrich, inform, and interact through web platforms and social media. The activities on the web by ethnic minority groups allow them to cultivate their ethnic identity and achieve useful outcomes. Santhal digital media (community media) highlights information related to the tribal community that is not covered by mainstream media. Digital platforms such as YouTube, Facebook, and blogs add value to the cultural identity of the Santhal community. Ethnic languages also could be spread via digital media, serving as an alternative public sphere.

There has been a huge escalation in the digital presence of the Santhal culture. Presently, YouTube officially supports the Santhali language in subtitles, and Santhali became India's first tribal language to get its own Wikipedia edition (Ol Chiki script).[7] There are websites, such as Santhaledisom.com, that focus on social and cultural issues and news, literature, culture (art, festival, food, dance), tradition (oral tradition, customary law, philosophy, clan, attire), movies, and albums[8]. 'Santhali Mingle', is a blog that helps to digitally empower Santhal people with basic information, a list of useful websites and useful applications, and so on. Blogs by Santhals for the Santhals cover various topics of interest, such as music albums, traditional music instruments,

musical symbols, books, mythology, the history of Santhal hul, freedom fighters, books, dance, and culture. Some specific sites are as follows: (i) a television channel's website 'Tribe TV' (the first Santhali satellite TV channel's website); (ii) cultural information on 'Santhal – E – Disom', 'Edelburu', and 'Santhali Update'; (iii) entertainment content (movies, songs, etc.) on 'Santali song', 'juwanjumid.blogspot.com', 'joharsantal.blogspot.com', 'santalijagat.blogspot.com', 'santalmusic.blogspot.com', and 'santalijagat.blogspot.com'; (iv) informative sites for Santhal people, such as 'We- Santhals', 'Santhali talking dictionary', 'Santali Wiki', 'Khobor Kagoj', and dictionary app 'Glosbe'; (v) content for the regional languages, including Devanagari and Bengali; and (vi) technology sites, such as 'SantaliTech' and 'Sengel'. Technological skill is given prominence on sites that provide technical information about the Ol Chiki web tutorial, downloading Ol Chiki font for windows, blogging, web documentation, video documentation, and downloading. Nonetheless, the social networking platform for tribes, 'Tribehool', offers Santhals from all regions of India the opportunity to interact, post, react, and share. Here, the usage of hashtags is popular (e.g., #santal, #santhal, #santhali). To use digital space strategically, Santhals must engage themselves digitally and acquire digital skills and competence.

### *Digital inequality determinants and cultural tangents of digital practice*

Gender, ethnicity, and religion have all been considered immaterial indicators of identities with different cultural resources (Van Deursen et al., 2017). Santhals may utilize digital platforms or tools to participate in a society that lacks in physical spaces, but the Santhal community is intertwined with all the levels of inequality: first-level digital divide (material-based divide), second-level digital divide (skill), and third-level digital divide (usage outcome). There have been a variety of determinants of the digital divide: sociodemographic, economic, social, cultural, personal, material, and motivational (Scheerder et al., 2017). Access to smartphones among the Santhal tribe is disproportionate in terms of their parental educational qualification, economic status, and area of living. Internet skills differ due to multiple interconnected factors. A large number of the Santhal population reside in West Bengal and speak the Santhali language only at home as Bengali, Hindi, and English are the dominant workplace languages. Their practice of speaking their mother- tongue has been disrupted by the dominant language culture in the multicultural society. Thus, when a person stays out of the Santhal village within the non-Santhal environment, they become detached from the roots of their own culture.

The Santhal script, called Ol Chiki, received national recognition a few years back. It could be called a script in its childhood stage; hence, a chunk of the community is indifferent to the script and the practice of writing it, and thus they cannot teach it to their children. J. Besra lived in a Santhal village in her childhood and presently stays in an urban area near her workplace. She did not get the opportunity to learn the Santhali script as there was no option to study

it in school, and her parents did not know the script. Now, the Government has given importance to the Santhali language as an academic subject and medium of school learning. S. Tudu noted, "The next generation know Santhali writing as it is offered as a school subject. But no one of my generations got the chance" (S. Tudu, personal interview, March 3, 2022). The cultural bond is loosened when people become economically stable, live or marry outside the community, or leave the culture behind. Religious identity is another reason behind cultural change; many people have changed their religion for institutionalization. In semi-urban places, Christian Santhals use the Santhali language and community identity, but they don't follow the Santhal religion. Christian Santhals do not have religious attachment to their tribal culture. J. Besra, a Christian Santhal, doesn't post anything related to Santhal religious culture in her WhatsApp status or Facebook posts.

There is a lack of motivation to use digital devices due to difference in age, occupation, and educational qualification. P. Tudu, a female farmer, does not know how to use a phone and out of technophobia, she doesn't operate any device. S. Kisku, who uses Facebook and YouTube, doesn't have time to share any posts. He added to it saying that educated people who are members of Santhal WhatsApp groups could not participate in their language exchange because they write in either Bengali or English. The indigenous discourse theories consider cultural identity a crucial factor in human discourse; as noted by Shi-xu (2014a), in cultural or intercultural dialogic communication, some factors are basic. First, one must have knowledge about one's cultural membership and the cultural differences with others to establish a cultural coexistence and diversity. Second, one must understand and vocalize cultural identity in order to defend and re-create it. Third, one must understand the prerequisite of successful engagement in discourse that is intercultural sense. Therefore, the consequences of digital equality from the viewpoint of cultural identity could propagate cultural domination and inequality in economic and social spheres. The digital divide plays a major role in the reinforcement of existing social inequalities, resulting in digital inequality (Van Dijk, 2005).

### *Digital participation, skill, and tangible outcome*

Digital participation is activity by Santhal community members that enhances social relationships and status (cultural status as well as economic status) to fight power imbalances. The Santhal cultural identity could be spread through digital participation on any website or social networking site, from the perspective of the speakers (content creators) or listeners (audiences). WhatsApp, Facebook, and YouTube are very popular among Indians. The Santhal people also use those social platforms, but the social, economic, and especially cultural outcomes are limited. People who are distanced from Santhal culture did not make any Facebook posts in Santhali language. The person who knows Ol Chiki posts traditional rituals frequently on their WhatsApp status. They used to write Ol Chiki on tribal WhatsApp group chats and Facebook captions.

Those who don't know Ol Chiki give general WhatsApp status posts in Bengali if the content is related to Santhal culture; they used to write Santhali using Bengali script. As most people don't know the Santhali script, social media participation could not add value to their identity and cultural sustainability regarding language. There is a hesitation among them to post anything about their own culture. Young people make reels of Santhali songs on Instagram wearing traditional attire (traditional saree with sticks and flowers on a head bun), and those are often watched by non-Santhal. Here, audio-visual participation creates an intercultural harmony. Facebook participation is mostly confined to the consumption of the content. Most people scroll through the content and do not share or follow any pages while using Facebook. Young Santhal people use Facebook live for cultural purposes and entertainment. People in villages who are inclined to culture like the Facebook pages with Santhali content (e.g., 'Sar Sagun', 'Bharat Jakat Majhi Pargana Mahal', and 'Aadim Jumid'). Facebook pages, Facebook groups, and YouTube channels provide national news as well as Santhali community news. Most of the Santhal people don't have a subscription to any print media and don't know the name of any tribal television channel or content. Digital media is the way out of that situation because it provides a mobile means of knowing community information. WhatsApp serves the general purpose of young people who send documents, pictures, and chatting, and it is highly used for educational purposes, in addition to Google Classroom. The WhatsApp group 'Halong Gada Gharanjh' (Santhal Family), created by Santhal-educated people, is used to discuss the information regarding their community and well-being. Young people follow YouTube channels like 'Tribe TV' for information.

Hence, digital tools such as the internet, mobile phones, and social media are widely used in society to serve different purposes. These diverse tools inculcate tribal participation and tribal identity within digital discourse. The cultural outcome of participation has been demarcated for their less cultural knowledge and bond, in terms of language, ritual, or religion. Other types of outcomes, like economic and social, have been overshadowed by cultural identity and digital skills. Van Dijk and Van Deursen (2014) proposed six types of digital skills: operational skill (technical knowledge in digital usage), formal skill (navigation and browsing), information skill (search select and evaluate information), communication skill (emailing, chatting), content-creation skill (blogging, providing content on social media), and strategic goals (used to attain professional goals). Most young Santhals lack digital skills. S. Tudu, a graduated youth, doesn't know about the privacy settings of any social media platforms. A Santhali language teacher from the Santhali language department of a college doesn't know about Santhali online translation websites. M. Hembram, a teenager who knows how to post private status updates, said, "I used to check settings on my social media profile" (M. Hembram, personal interview, March 4, 2022). The school children know more about social media privacy and settings. N. Mandi (senior secondary student) added, "Many of my

villagers used to ask me about from where to install an application on Mobile" (N. Mandi, personal interview, March 4, 2022). If we talk about informational skills, young people read online news available on Google News but rarely search for content on Google. Many of them don't know about any Santali online portal. S. Kisku stated, "I receive administrative news from Facebook, news from Google news pop-ups on current affairs. There is an option for Santhali on Wikipedia but a maximum number of people can't read their language. The students who know Ol Chiki never read online news articles written in Ol Chiki; rather, they use Facebook and YouTube as sources of news" (S. Kisku, personal interview, March 3, 2022).

The educated people who are concerned about the declining Santhal culture use Facebook and YouTube to share their culture. Some young people are culturally conscious and know how to use social media to spread their culture in the form of festivals and rituals. S. Tudu said, "I take pictures from my village such as wall art. I upload photos on Instagram. My friends who are not from my village share those contents" (S. Tudu, personal interview, March 5, 2022). M. Hembram realized, "We should post our art, wall art so that others can know our culture" (M. Hembram, personal interview, March 4, 2022). K. Kisku stated, "I post our rituals over Facebook. My objective is to make people understand how we observe and exercise our rituals which is different from the dominant Bengali culture here. People do positive comments on my post"(K. Kisku, personal interview, March 4, 2022).

### *Experiencing obstruction*

Bourdieu's capital theory states that people's actions are shaped by the social space they live in, as defined by institutions, norms, and conventions (Scheerder et al., 2017). In West Bengal, tribal people are facing economic problems, and modernization has taken away forests, leading to a decline in their traditional occupation (Satpati & Sharma, 2021). Most college and senior secondary students own smartphones. In their case, inequality exists at the second (skill) and third (tangible outcome) levels. Language creates a barrier to understanding digital content. They can't understand English and also don't know how to change the language setting. Internet connectivity is a problem for villagers. Digital device usage and its ownership vary due to gender. In S. Tudu's village, which is not near the city, young males use smartphones, but young females use smartphones much less. Financial inequality is another problem, as many people are farmers. Village people lack the opportunity to learn computers as there are no educational institutions nearby. In most cases, parents of young Santhals use keypad phones. Mothers call on mobile phones once someone gives them a lesson on how to do so, but many don't know how to send a message. M. Hembram's father, a school teacher, uses a smartphone. He does work over WhatsApp or other online sites. He faced issues while working, but his daughter has helped him learn. She said, "I have given a lesson to my father on how to send a message on WhatsApp" (M. Hembram, personal interview,

March 4, 2022). Her mother has a smartphone, but she doesn't do much with the device; she mainly watches Bengali and Hindi serials.

In every village, young people use smartphones and teach others who want to use them. The elderly working people use smartphones but lack the basic skills of downloading, searching, and operating social media. If a lady owns a smartphone, she watches Santhali YouTube videos, Jatra (a form of folk theater), etc. Some young people own mobiles and are the only members of their household to do so. The use of Instagram is very rare here; only young people from educated backgrounds use Instagram. Listening to Santhali music on YouTube is very popular, irrespective of sociocultural status. Most of the Santhal people never read any blog, and they even lack knowledge on what exactly a blog is. In this particular setting, education cannot be considered a determinant factor of digital competence, likely because of the influence of social isolation. There are Santhal people who don't know about the Santhali keyboard; only those who can read Ol Chiki know about the keyboard.

L. Soren said, "If we want to change the social perception, we have to use technology. But the technological usage is mainly done by educated people, once a person gets the education, she/he forgets to promote our culture" (L. Soren, personal interview, March 6, 2022). A significant portion of the community struggles to take advantage of the potential benefits provided by social media due to prevailing societal norms that position minority cultures as marginalized and outdated. Technological obstacles exacerbate this issue, encompassing both technophobia and gaps in internet or digital skills. Many lack electricity, access to a network, or finances. Many of the young people are first-generation learners. The COVID-19 pandemic has empowered the Santhal community with digital skills and devices. Nearly all school students either bought or were given a mobile device for educational purposes. That allowed others in the family to be introduced to smartphones and the opportunities that it provides. In the 21st century, access to digital media can control the flow of development as the more access to digital resources, the more access toward development. Digital media provides a vast platform and opportunity for marginalized communities to raise their voices in a multicultural society. At the same time, disparity exists within Indian society because of the social hierarchy. Poverty due to poor occupational and educational opportunities (Gang et al., 2008) and infrastructural and institutional drawbacks (Sarkar et al., 2006) cause marginalization. Both tribal men and women suffer from vulnerability (Kasi & Saha, 2021).

## Conclusion

Among the Santhal tribe in West Bengal, determinants of digital inequality vary and include the following: sociodemographic – age, gender, living area (urban/rural), living environment; economic – income, employment status of parents, occupational status, educational level; social – the type of activity of messaging, type of activity on social networking sites (SNS), Facebook

interactions; cultural – cultural status, cultural possessions, ethnicity, internet use language, religion; personal – information seeking, entertainment, online news use, literacy, language skills, English skills; material – internet availability, internet access, access locations, number of devices; and motivational – internet motivation, internet use, digital skills.

As said by Chavez and Guido-DiBrito (1999), Phinney's model (1990) of ethnic identity is useful in identifying activators for consciousness and threats to ethnic identity. In line with Phinney, tribal communities, as a nondominant group, must be determined to resolve the stereotyping and prejudicial treatment of the dominant and the conflict created due to value systems between the dominant and nondominant groups. Unlike many minority cultures, the Santhals are somewhat conscious of conserving their ethnic identity. Their endangered cultural identity is represented on digital platforms, but these are beyond the reach of many tribal people. The penetration of mobile phones and the internet is low in areas with a denser tribal population. It begins with the first level of the digital divide, if we talk about the existing digital divide in India, and is anchored in the second and third levels as well. Tribal digital inequality needs urgent attention. Tribals suffer due to poverty, poor occupational and educational states (Gang et al., 2008), and infrastructural and institutional drawbacks (Sarkar et al., 2006), along with the national power relations manifested through an imbalance in political, social, economic, and technological spheres. Santhal youth in India are facing social and economic inequality in terms of education, employment, stigmatization, infrastructure and facilities, ecological constraints, and lack of proper awareness.

Digital exclusion from digital spaces and communication causes sluggish development. The Santhal community lack participation in mainstream digital discourse, and therefore the experience of cultural hegemony and marginalization remain constant. Thus, digital inequality is reinforcing cultural inequality in online spaces. Here, we assumed that the digital inequality and the tangible outcome of digital usage are the consequences of the cultural identity of the Santhal community in India. The empirical investigation proved it. Hence, digital exclusion reinforces the existing inequalities in Indian tribal society and also leads to digital inequality in its deepest form. The digital experience of the Santhal community helps us to understand tribal digital discourse (TDD), where historical experience has resulted in an uneven (inter)cultural exchange that is profoundly embedded in digital form. This chapter described the cultural evolution and deprivation of tribal communities, which is reinforced by digital inequality. Tribal digital discourse of the Santhal community endeavors to bring forward a non-Western method that talks about third-world marginalized sections and the indigenous community of India.

## Notes

1 See: Retrieved March 28, 2022, from http://adibasikalyan.gov.in/html/st.php.
2 See: Retrieved March 28, 2022, from http://adibasikalyan.gov.in/html/state-data-2011.php.

3 See: Retrieved March 28, 2022, from https://tribal.nic.in/Statistics.aspx.
4 See: Retrieved March 28, 2022, from https://tribal.nic.in/downloads/Livelihood/Resource%20and%20Publications/tribalFaces.pdf.
5 See: Retrieved March 28, 2022, from https://santhalimingle.blogspot.com/p/list-of-blog-post-in-santhali-mingle.html.
6 Retrieved March 28, 2022, from www.tribehool.com/.
7 Retrieved March 28, 2022, from www.hindustantimes.com/india-news/santhali-becomes-india-s-first-tribal-language-to-get-own-wikipedia-edition (*Hindustan Times*, April 8, 2022).
8 Retrieved March 28, 2022, from www.santhaledisom.com.

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# 4 Intersectional digital inequalities after the pandemic

## Tackling digital gender gaps in France and Italy

*Emiliana De Blasio and Donatella Selva*

### Introduction

By focusing on an intersectional lens, this chapter sheds light on the lines of continuity and the emerging trends in the cultural discourses surrounding the recovery after the pandemic. The chapter aims at comparing how France and Italy are tackling the digital divides in light of the recovery from the pandemic and how the structural inequalities lying at the heart of the digital divides might intercept with the gender gaps of the two societies. Our basic argument is that the idea of digitalization is used as a discursive dispositive, a "magical wand" that hides the dimensions of social conflict, and we use the gender gaps as a case in point.

Data about the digitalization and the gender gaps are confronted to draw the status of each country before and after the pandemic. The Global Gender Gap Report 2021 highlights that France is ranked 16th and Italy 63rd. Data coming from international indexes on digital readiness (namely the European Commission's DESI Index and the EIGE's report on Digitalisation in the world of work) show that Italy is lagging behind many other European countries: those data converge in underlining a situation of long-lasting social inequalities in Italy, expressed in terms of enduring digital divides and gender gaps. We take the case of France as a benchmark for comparing the Italian status since the two countries share many political, economic and cultural features, but they show very different outcomes.

The chapter reflects on the cultural resources mobilized and challenged through the National Plans for Recovery and Resilience (NPRRs). The French and Italian governments responsible for drafting the NPRRs are led by two technocrats, Emmanuel Macron and Mario Draghi, respectively; besides many differences, they both refer to and advocate for a neoliberal ideology. The chapter shows how those plans still privilege an "instrumental reasoning" on digitalization (i.e., aimed at reinforcing the enterprises' wiring and productive infrastructure) at the expense of cultural integration and social cohesion. Indeed, digitalisation has been at the centre of the neoliberal reforms for decades, especially during moments of crisis, such as after the Great Recession

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(Margetts & Dunleavy, 2013; De Blasio, 2018) and now in the face of the recovery from the COVID-19 pandemic.

We rely on the cultural discourse studies approach (Shi-xu, 2005; 2016) to analyse how the two plans for recovery and resilience address digital gender gaps, with reference to the infrastructural, cultural, political and economic dimensions of inequalities present in their respective countries. In particular, we choose to adopt a gender perspective to highlight how a traditionally excluded category (i.e., women) might be integrated in the design of the fully digitalized and "resilient" societies, in terms of both active decision-makers and recipients of the public policies. Against this backdrop, we analyse the NPRRs through a discourse analysis. We retrieve the dimensions of the structural inequalities addressed by the two, highlighting the keywords and the degree of relevance of each dimension in terms of occurrence; and we also identify the nodal points and the topoi that justify the provisions.

## Gendering digital divides

The cross-referencing of data on digital divides and gender gaps is done from a perspective that sees inequalities as closely intertwined with each other. Feminist reflection has taken this perspective further by calling it intersectional. From this point of view, the forms of discrimination historically suffered by women should be read in relation to other structures of domination, first and foremost race (Crenshaw, 1989) but also socio-economic status, age, geographical origin, sexual orientation and level of education (Hill-Collins & Bilge, 2016). Experiences of inequality and discrimination are not isolated from one another, but rather, they interact to create new and more compelling forms of exclusion: for instance, black women have been suffering from a situation of "excluded among the excluded" because, for decades, the liberal conceptualisation of women's forms of discrimination has taken race or class privilege for granted and refused to combat it (Crenshaw, 1991).

The theory of intersectionality has been translated into practice by means of policy actions and increasingly complex monitoring tools. The proliferation of dimensions for analysing inequality between men and women, for example, is evidence of this process of awareness raising. One of the most comprehensive international indices is the EU Gender Equality Index, which shows that Europe as a whole is seeing a slow improvement: in the five years between 2015 and 2020, the score increased from 65/100 to 67.9/100. The best performing dimensions are access to healthcare (88 points) and money (80.6), while the worst is power (53.8), which measures the presence of women in top positions in government, parliament and listed companies. However, a closer look reveals that the European average does not capture the major differences between countries. Taking France and Italy as examples, we can see that two of the most developed countries in the EU show similarities and differences in


*Figure 4.1* Comparing France and Italy's performances in the Gender Equality Index, 2020

*Source:* EIGE, Gender Equality Index, 2020; https://eige.europa.eu/gender-equality-index/2020.

terms of cultural background as it reverberates in different performances in the Gender Equality Index (Figure 4.1).

In dimensions such as knowledge and health, the two countries show strong similarities. The dimensions of work, money and time separate France from Italy by 4 and 8 points each. Such dimensions are all interrelated as they pertain to the unequal distribution of care and domestic work (time) that pushes women in a condition of labour segregation or inoccupation (work) and, ultimately, restricts access to economic resources (money). The power dimension is where the gap between France and Italy is most visible (31 points); however, Italy is catching up quickly thanks to the gender quotas in listed companies introduced by the Golfo-Mosca law.

Against this background, digital inequality is one of the forms of contemporary inequality that deserves an intersectional look (Ragnedda & Ruiu, 2020). Digital divides can be defined as borderlines between inclusion and exclusion from the digital society (Van Dijk, 2020; Ragnedda, 2018). They constitute one of the most relevant articulations of the social inequalities; this is even more important in the context of a platform society (van Dijck et al., 2018; Sorice, 2020). The pandemic has shown how digital divides replicate and reinforce social inequalities. In the context of a "forced digitalisation", those who were already equipped with devices and skills to use digital technologies had the chance to continue to participate to the social, political and economic processes; on the contrary, those who were not equally equipped experienced new forms of exclusion (Zheng & Walsham, 2021). Analyses on digital divides tend to be divided into three approaches depending on the actors involved: economic territories, individuals or specific social categories (such as women; Ben Youssef, 2004). Public policies follow this subdivision, and it is possible to verify how historically the focus on the development of territories and on infrastructure and wiring has been greater than the other two types of actors.

On the other hand, as with any other form of inequality, research questions can be divided into two groups: the one more focused on the diversity of digital divides (inequality of what?) and the other on the determinants of these divides (why inequality?; Ben Youssef, 2004).

As far as the first question is concerned, the digital divides are particularly sensitive to social structures, and gender constitutes one of the most compelling structures: in effect, according to international organizations, the gender gaps are in turn made up of an intertwining of cultural, political, economic and infrastructural dimensions of inequality (EU Commission, 1998; EIGE, 2020; WEF, 2021). Indeed, the digital divides are more accentuated in women than in men; it is not a coincidence that, among the various gender gaps that exist and are monitored, the digital gender gap is receiving more and more attention. The digital gender gap can be defined as differences between men and women in terms of digital access and use, thus including issues of property of digital tools and adequate training to effectively use such tools safely and for the wide range of activities they are designed for. For instance, some account for the emergence of a digital underclass, characterised by the use of digital media as mere entertainment tools (Napoli & Obar, 2014; Park, 2017); globally, the majority of women privilege the recreational (private) uses of the digital media, thus falling into this underclass. This is also true when comparing girls and boys under 18 years old, proving that younger generations are far from bridging this gap (Unicef, 2021). Moreover, some specific dimensions of the digital gender gap concern the distance between men and women in enrolling an ICT or STEM study course, in the use of ICTs for working activities and in occupation rates in the ICT sectors.

Against this backdrop, we propose a model to describe the dimensions of the digital gender gaps (Figure 4.2). The model stems from a literature review (including academic and non-academic sources) that points at the intersection of digital divides and gender gaps in contemporary societies. As the model shows, there are five dimensions in which digital gender gaps can be addressed, both in terms of policy-making issues and research objects: access, use, skills, work, and AI and algorithms. The model conceives those dimensions as a ladder in which the first is prodromic to the second one and so on; it is not only due to logical reasons but also to the fact that public policies and scholarly attention have referred to each dimension following this order over the decades.

The first two dimensions – access and use – derive from both academic and grey literature (UN Women, 2005; Williams et al., 2019) that focus on a global perspective on inequalities. The emphasis on skills and work is more recent and is driven by organisations such as the OECD (2018), the G20 (2018) and the European Union (Davaki, 2018), which connect digital inclusion to economic development. in this light, the digital gender gap is the measure of how much technological innovation potential is wasted in the developed world. Interestingly, the main reasons for this gap are found in cultural structures that affect women around the globe, such as the unequal distribution of care and

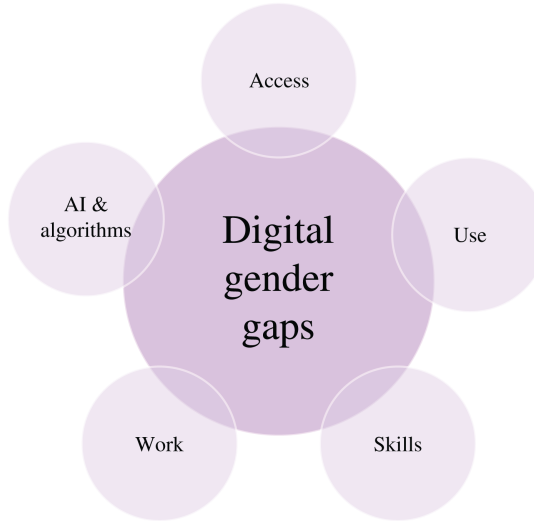


*Figure 4.2* Digital gender gap dimensions
*Source:* Our own elaboration.

domestic work (UN Women, 2018) and the persistence of gender stereotypes about social roles (Davaki, 2018; EU Commission, 2020a). Other causes, such as the scarce interest shown by women towards digital worlds (labelled as a sort of "technophobia") and the unaffordability of digital devices, are also connected with cultural bias that deprive girls and women of money and access to digital education (OECD, 2018). When the strictly technological barriers are overcome, the intersectionality of the digital divide emerges (Davaki, 2018). In this way, it is clear that digital gender gaps are not directly linked to gender differences but to the whole complex of inequalities, stereotypes and practices of discrimination experienced by women and girls as they interface with the education system and the world of work.

The fifth dimension of the digital gender gap addresses the role of AI and algorithms in fostering gender inequality. It can be subdivided into two sub-dimensions: (1) the extent to which AI systems and algorithms are designed to reproduce stereotypical representations and gender discrimination; and (2) women's involvement in programming AI systems and algorithms on (at least) an equal footing with men. Of course, the two sub-dimensions appear interrelated to each other. The first sub-dimension (algorithmic discrimination) is a major concern for activists, non-governmental organisations and institutions alike (EU Commission, 2020b; Gutierrez, 2021). The second sub-dimension actually identifies a specific work sector in which women should be given more space; it goes without saying that the greater presence of women in the fields of programming and algorithm design may lead to less discrimination, following a gender quota mechanism.

Addressing the digital gender gaps is a key priority of the current Gender Equality Strategy 2020–2025 drafted by the EU Commission (2020a), and the pandemic has augmented the need of the Digital Education Action Plan 2021–2027 (2021); in particular, the Action 13 aims at fostering women's involvement in STEM studies and careers. The Women in Digital (WiD) scoreboard accompanies the Digital Economy and Society Index (DESI) to breakdown data along the gender dimension. It measures the performance of EU Member States in three areas: use of internet, internet user skills, and specialist skills and employment. With the same logic in mind but extending this index, in 2020, the EIGE also measured the gender gap in digitalisation in the world of work, shifting the attention from internet use to skills and employment. It is based on three areas of assessment: (1) use and development of digital skills and technologies; (2) digital transformation of the jobs done by women; and (3) impact of digitalisation on women's quality of life (i.e., respect of human rights, violence against women and caring activities). The data are outlined in Table 4.1 and in Figure 4.3.

First, in the area of digital skills, France is much closer to the European average than Italy, which is lagging far behind. Second, with regard to female segregation in digital education and the labour market, Italy has a (slightly) higher rate of female ICT graduates than both the European and the French average (20.9% against 20.1% and 19.5%, respectively) but far less female ICT specialists than the other two (14.8% against 17.7% and 21.2%). Both France and Italy are above the European average in terms of female scientists and

*Table 4.1* Digitalisation in the world of work: gender gaps in Europe, France and Italy

| | *EU average* | *France* | *Italy* |
|---|---|---|---|
| ***Digital skills*** | | | |
| • *Internet daily users* | 78% of women (–2 than men) | 77% (–1 than men) | 71% of women (–4 than men) |
| • *Above basic digital skills* | 31% (–5) | 30% (–2) | 19% (–6) |
| • *Training to improve digital skills* | 18% (–4) | 14% (–4) | 10% (–2) |
| ***Segregation in digital education and labour market*** | | | |
| • *ICT graduates* | 20.1% (–59.9) | 19.5% (–61) | 20.9% (–58.2) |
| • *ICT specialists* | 17.7% (–64.6) | 21.2% (–57.6) | 14.8% (–70.4) |
| • *Scientists and engineers in high-technology sectors* | 20% (–60) | 23.1% (–53.9) | 22.8% (–54.4) |
| ***Working in ICTs*** | | | |
| • *ICT at work and activities performed* | 37% (–5) | 39% (–4) | 27% (–10) |
| • *Part-time in ICT* | 16.5% (+11.1) | 13.2% (+9.4) | 18% (+13.2) |
| • *Gender pay gap in ICT* | 11.1% | 2.1% | 14.6% |

*Source:* EIGE, Digitalisation in the world of work, 2020; https://eige.europa.eu/gender-equality-index/thematic-focus/digitalisation/country/EU.

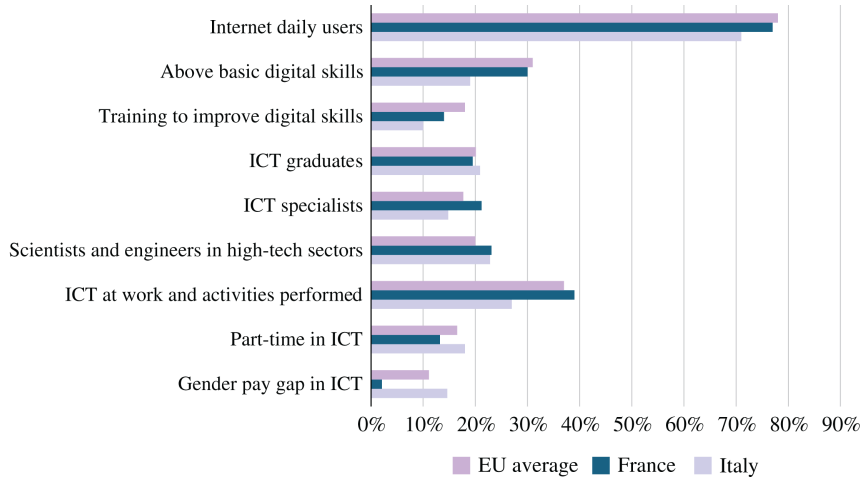


*Figure 4.3* Digitalisation in the world of work: comparison among EU average, France and Italy

*Source:* Our own elaboration from EIGE, Digitalisation in the world of work, 2020; https://eige.europa.eu/gender-equality-index/thematic-focus/digitalisation/country/EU.

engineers in high-technology sectors. Third, in the area of ICT work, France is slightly better than the European average in terms of digital activities carried out by women at work (39% against 37%) and in the distribution of part-time contracts (+9.4% compared to men in France against a European average of +11.1%). At the same time, however, France is much better equipped to deal with the gender pay gap in the ICT sector than Italy and Europe as a whole: the French gap is only 2.1%, while in Europe it is 11.1% and in Italy 14.6%.

This type of monitoring carried out by European institutions adopts a narrow definition of intersectionality, focusing on the interaction between gender, socio-economic status and educational background; other dimensions of inequality, including age, race and ethnicity, are neglected. However, it has the merit of providing a knowledge base for policies targeting digital gender gaps. As we see in the next section, this kind of knowledge and the willingness expressed by the European Union do not find adequate counterparts in the recovery and resilience plans issued by France and Italy.

## Cultural discourses for recovery and resilience

According to critical policy studies (Fischer et al., 2015), the analysis should not cover only the "apparent inputs and outputs" of policy-making but also "the interests, values and normative assumptions – political and social – that shape and inform these processes" (Fischer et al., 2015, p. 1). Public policies can be analysed as pieces of ideology that contain normative ideals of good and bad, justice, democracy and development. In this context, the discursive approach to public policies is pivotal because it links policy-making processes

with the imaginative and ideological efforts needed to legitimise their results (Schmidt, 2015). This strand of studies brings with it an interpretative methodological approach that is indebted to the studies of Gramsci, Foucault, Laclau and Mouffe, among others.

In this chapter we turn to this strand of research to analyse post–COVID-19 responses to the problem of digital gender gaps. Our initial corpus was restricted to the two NPRRs, but during the analysis, we realised how under-estimated and poorly framed the problem still is. We therefore extended the corpus to integrate all policies addressing the digital gender gaps in France and Italy. This is an important indication, in our opinion, of how scarcely hegemonic the discourse on women's inclusion is, crushed by more urgent (and certainly significant) issues such as combating climate change and digitalisation. In particular, separating the discourse on digitalisation from that on women's inclusion is an ideological choice that is not without consequences. The introduction of digital technologies still follows an uncritical view, unable to assess their consequences and recognise the impact on new and old inequalities.

For all documents, we have proceeded in three steps of analysis. First, we have isolated the nodal points behind the word "women", identifying the most relevant problems to address. The concept of nodal points is rooted in Laclau and Mouffe's (1985) discourse theory: with this term, the authors refer to the major ideas, words or signs to which a meaning is assigned, which are frequently disputed and which are occasionally reimagined over time. Hence, the concept opens to the definition of discourse in terms of a power struggle. In theory, nodal points can emerge from any discourse in different formats; in origins, nodal points could be "floating" or "empty" signifiers indicating many meanings (they are polysemic) and referring to a broader "field of discursivity". Terms such as "women", for instance, are frequently used by opposite factions with vastly different meanings. A famous quote from de Beauvoir (1949) points out that "one is not born but becomes a woman", in the sense that the life path by which one comes to define the meaning of the word "woman" is personal and open to infinite possibilities, changing through the history. At the end of a power struggle, the dominant meaning is temporarily fixed, but the door is open for further resemantisation. With all this in mind, we performed a simple textual search to identify occurrences of the term "woman/women" possibly also declined as female worker(s), entrepreneur(s), girl(s) and student(s). These words were treated as nodal points, and the text segments in which those occurred were subjected to discourse analysis.

Second, from these nodal points, we have reconstructed what the two plans project as a general profile of women, their position in society and the role of the State in ensuring their inclusion. We have highlighted the different connotations assigned to the role of women in the two societal projects designed by the NPRRs. The starting point is that such societal projects are structurally rooted in the socio-economic and cultural fabric of the two countries under consideration; this necessarily reverberates on the panorama of possibilities for social (and digital) inclusion that the plans highlight. Indeed, in the cultural discourse studies approach, the polysemy of the nodal points is rooted in

different cultural contexts and traditions (Shi-xu, 2005; 2016). According to this perspective, the power struggles that are fought through discursive and semiotic practices are not only dependent on structures of domination and resistance within each national community but also among different nations and continents. For the purposes of this chapter, a cultural differentialist approach to discourse analysis shows what meaning is assigned to words such as *development*, *inclusion*, *resilience* and *digitalisation* at the heart of European policies, with particular reference to France and Italy. Despite their differences, the two countries reveal the boundaries of the fields of discursivity that have been delineated for the post-pandemic restart in Europe. In this sense, these fields are open and questionable, ready to be compared with other non-Western models. In particular, the analysis will shed light on two critical aspects of recovery and resilience strategies: first, the absence of a clear commitment to reducing gender inequalities in the context of policies that call for the digitisation of the economy, public administration and society; second, the lack of an intersectional view of women's identity, which is essentially linked to their care roles in the domestic context.

Third, we created a catalogue of policy instruments to tackle gender gaps in the post-pandemic recovery. Another part of the study was aimed at identifying the tools provided by the two plans. This is a purely compilative work with two objectives: the first is to describe and compare the instruments used by the two countries, with a view to extending the comparison to others; the second is to understand whether, beyond the programmatic and value statements, the two plans provide adequate economic, organisational and ideational resources to mitigate the digital gender gaps.

The French NPRR aims to use European funds to lead the country through the dual process of ecological and digital transition. While the ecological transition is a priority, to which 50% of the available financial resources are allocated (against the European minimum threshold of 37%), the digital transition is at the service of competitiveness and mainly concerns the strengthening of technological sovereignty and resilience (from a cyber-security perspective), and the digitalisation of the State, of territories and enterprises. This is perfectly in line with the European Digital Agenda, which in 2010 had inaugurated the long season of the entrepreneurial State (Mazzucato, 2013): according to this economic policy and public doctrine, the State should have borne the costs of experimentation and innovation on behalf of the entire community, providing incentives to businesses on the path to digitalisation and creating internal demand through a process of profound reorganisation of its services. Concretely, e-Government was used as a lever for economic development in the aftermath of the Great Recession, building on the concept of platform-State (De Blasio, 2018). In this renewed, post-pandemic version of the doctrine, financing the digital transition takes on the significance of levelling out digital inequalities since these have prevented the full enjoyment of public services during the lockdowns of 2020–2021. This also connects with the third priority, which is cohesion and is mainly aimed at groups such as young people, the

handicapped and workers, as well as territorial cohesion (especially from the point of view of health service provision, which has become even more important during the pandemic).

In such a framework, it is significant that the competitiveness and digital equality targeted by the French NPRR do not rely on women's development: women mostly appear in relation to cohesion, in their role as service-providers within the health sector and public administration (Table 4.2).

The principle of gender equality and its implementation in the public sector is aimed at the "dissemination of public service values in society" (French Plan de Relance, p. 465) and thus strengthening the cohesion between citizens and the State. In the framework of an inclusion strategy, the French NPRR portrays women as vulnerable subjects that must be protected and accompanied in education, training and occupation (together with youth and disabled people). The pandemic has further worsened this situation:

> The massive investments and reforms to strengthen the health system and health care infrastructure will promote gender equality between women and men, support women's economic empowerment and address precarious conditions in a key sector in which women make up the majority of workers.
>
> (French Plan de Relance, p. 40)

Hence, women are mainly workers and professionals, most of all in the public sector and in the health care sector, who are subject to conditions of inequality and precarity; women employed in the private sector face problems such as the gender pay gap, economic emancipation and lack of professional training.

Actually, the French Senate has criticised the NPRR for not giving enough importance to digital inclusion (2020). According to the Senate, digital inclusion should be declared a national priority and a service of general economic interest, and €1 billion should be allocated to the fight against digital illiteracy

*Table 4.2* French recovery: visions of women

| **French NPRR** www.economie.gouv.fr/files/files/directions_services/plan-de-relance/PNRR%20Francais.pdf | |
|---|---|
| Equality between women and men (generic) | 11 |
| Equality in the public sector | 5 |
| Gender pay gap | 3 |
| Equality in access to health care | 2 |
| Tackling the precarity of the female labour force in the health care sector (as women are the majority of workers) | 2 |
| Economic emancipation of women | 2 |
| Professional training for women | 1 |
| Equality in the cultural industries | 1 |
| Total | 27 |

through media education programs beginning in middle school, four times more than what is foreseen by the recovery plan (Lucas, 2020).

The Italian NPRR intervenes in a situation in which women are largely unemployed: Eurostat data from 2018 warns that only 53 women out of 100 work (Eurostat, 2020), and this rate drops even more if you look at the South, where just 1 woman out of 3 is employed. This structural situation in the Italian economy is compounded by concern about the consequences of the pandemic since Italy is described as being "hit first and hardest" from both a health and economic perspective (Italian Plan for Recovery and Resilience, p. 2). Youth and women are those that have been particularly affected: the axis of inclusion is unrolled in a triple perspective of gender, generation and territory. According to the diagnosis set out in the preamble to the NPRR, the problems of productivity lagging behind its European partners are due to digital divides. They affect first infrastructure (access dimension) and second businesses and the public sector (skills and usage dimensions). In turn, these delays are attributed to a lack of investment over the last 20 years.

Digital transition drains 27% of resources and ecological transition 40%. The plan's six missions are as follows: digitalisation, innovation, competitiveness, culture and tourism; green revolution and ecological transition; infrastructure for sustainable mobility; education and research; inclusion and cohesion; and health. Four contextual reforms – public administration, justice, simplification of legislation and promotion of competition – are also designed. Overall, 40% of the funds are earmarked for the South, as it is a specific category of subjects, together with youth, women and the disabled, who suffer from historical/structural inequalities.

The Italian NPRR shows a greater focus on women, with a total of 72 occurrences compared to 27 in the French NPRR (Table 4.3).

However, almost half of the occurrences relate to the need to encourage female employment (31), which according to the plan is slowed down by

*Table 4.3* Italian recovery: visions of women

| **Italian NPRR**<br>www.governo.it/sites/governo.it/files/PNRR.pdf | |
|---|---|
| Women at work (to be incentivised) | 31 |
| Women mothers and involved in care activities | 15 |
| Women entrepreneurs (to be incentivised) | 9 |
| Training women in STEM | 4 |
| Women victims of historical inequalities | 3 |
| Gender pay gap | 2 |
| Women victims of sexism and violence | 2 |
| Emancipation of women | 2 |
| Women hit by the pandemic | 1 |
| Digital training for women | 1 |
| Precarity of female labour force | 1 |
| Gender-based medicine | 1 |
| Total | 72 |

cultural habits that see women engaged in caring for children, the elderly and the sick. As women are victims of historical inequalities, and have been particularly hit by the pandemic, the phenomenon becomes a social and economic emergency.

> The mobilisation of women's energies, with a view to equal opportunities, is fundamental for Italy's recovery. This requires action on the multiple dimensions of discrimination against women. . . . As highlighted in the European Commission's Italy 2020 Country Report, the inactivity rate of women due to caring responsibilities is continuously increasing since 2010 (35.7 per cent against 31.8 per cent of the EU average), also due to the lack of adequate and equal care services.
>
> (Italian Plan for Recovery and Resilience, p. 35)

The concrete measure to pursue this goal is to compensate for this lack of care services: "The lack of childcare services, combined with the unequal distribution of family distribution of family workloads, negatively affects the labour supply of women and reduces the labour market participation rate of women" (Italian Plan for Recovery and Resilience, p. 171).

The centrality of kindergarten in the discourse on gender equality in Italy is nothing new: the NPRR again affirms a model of reasoning whereby the greater availability of childcare services (and not only) will correspond to a natural entry of women into the labour market. In this context, the plan aims at elaborating a Family Act that reforms the system of incentives for childbirth, motherhood and the restoration of greater equity in childcare (e.g., through parental leave for both parents). What is new is the desire to "recognise the social value of care activities", in the sense of encouraging them as economic sectors in which women can be employed, by virtue of their skills acquired over the centuries:

> The Plan's decision to allocate significant resources to social infrastructures for the implementation of policies to support families, minors, people with serious disabilities and the non-self-sufficient elderly. . . . Recognising the social value of care activities can achieve the twofold objective of lightening the burdens traditionally carried by women in the family sphere and stimulating their increased participation in the labour market. Increasing personal services also means strengthening a sector in which women are more highly employed.
>
> (Italian Plan for Recovery and Resilience, p. 199)

Another significant theme is that of women entrepreneurs. Women's businesses are incentivised through tax breaks, training programmes and also through greater digital infrastructure in the country. It is precisely on this issue that the discourse on the gender digital divide comes in. "Investments in broadband and high-speed connections . . . facilitate the creation of the

technological infrastructure needed to provide entrepreneurs in general, and female entrepreneurs in particular, with the tools to expand their market" (Italian Plan for Recovery and Resilience, p. 36). However, there is a saving conception of the digital technology, which will be able to act as a driving force for women's businesses: the subtext is that of a greater propensity of digital enterprises to promote work–life balance, which is obviously necessary in a situation of strong occupational segregation like in Italy. In a very minority, several passages state the need to promote women's access to STEM fields of study from high school onwards, but this is not matched by details of measures.

Predictably, the policy instruments used to combat gender gaps are more numerous in Italy than in France. However, the French instruments are more binding on companies, which are required to be transparent about the salaries of women and men employees and to report on activities undertaken to pursue gender equality in order to access public funding. Italy introduces a more generic certification of gender equality without suggesting further constraints. At the same time, Italy is acting mainly on four fronts: the first and most important one is the introduction of a Family Act that will restructure all the aid schemes for birth, parenthood and childcare. The second is the elaboration of a National Strategy for Gender Equality 2021–2026 (the contents of which are not outlined in the plan). The third is the financing of social inclusion projects (such as social housing or community health services) and support for care activities for children (kindergarten), the elderly and the sick. Finally, the fourth is fiscal and financial support for women's enterprises.

It is easy to see that there are no specific provisions for digital gender gaps in the two plans. Indirectly, the attention to entrepreneurship and digital infrastructure of enterprises in Italy is associated with the will to promote women's enterprises, which is going to affect the dimension of access and work, but no forms of skills acquisition are promoted. On the contrary, in France, the main dimension of digital gender gaps that is underlined is that of vocational training and the acquisition of digital skills by women. A closer look at specific policies related to women in digital can help clarify this point.

As early as 2018, France launched a National Strategy for Inclusive Digital.[1] Through its Digital Society mission, the French government has launched a digital literacy programme distributed throughout the territories, with the help of specially trained figures to guide the most disadvantaged in their approach to the digital world. Although the strategy does not explicitly address the digital gender gaps, it is oriented to the acquisition of digital skills through three axes, outlined as follows:

1) Equipping and training carers (social workers, volunteers, public service agents, etc.) who support those who do not want to and cannot become autonomous with digital tools and provide answers to digital emergencies (declaring income to the CAF before the deadline, registering one's child at the canteen, etc.);

*Table 4.4* Comparison between policy instruments to tackle gender gaps in France and Italy's recovery plans

| *France* | *Italy* |
|---|---|
| Obligation to adopt a gender equality perspective in the extra-financial performance declaration of organisations wishing to benefit from public funds foreseen for the year 2021 | National certification system for gender equality in private companies |
| Obligation of transparency on pay gap between men and women within organisations wishing to benefit from public funds under the plan | Economic support for women's enterprises (Woman Enterprise Fund) |
| Gender equality plan in the public sector (to increase by 3 points the presence of women in the top management) | Investment in care infrastructure for the elderly, disabled and children to alleviate women's domestic work and create demand for women's labour |
| Bill to decrease the gender pay gap | Active labour policies and tax relief for companies hiring women |
| Public aids to professional training initiatives | Social housing projects to tackle domestic violence |
| | Family Act – introducing the universal allowance cheque to strengthen birth support measures; education and childcare contributions; economic support for families with specific learning disorders and for documented expenses for the purchase of textbooks for secondary school, for educational trips, for enrolment or subscription to sports associations and attendance of foreign language, art and music courses; reorganising the rules on parental leave and paternity leave; tax relief for expenses for domestic service workers or carers of family members with reduced autonomy; measures aimed at gradual modulation of workers' pay during days when their children are off sick; bonus measures for employers who implement policies that promote full work–life balance, such as flexible working, agile working and teleworking |
| | Community houses to enhance care services locally distributed |
| | National strategy for gender equality 2021–2026 |
| | Relaunching the tourism and culture sectors, where women are most employed |

2) Offering people who are able and willing to take training courses with referenced professionals in their vicinity by funding these courses and supporting the proliferation of places offering this type of activity (digital public spaces, third places, France Services, libraries, social centres, etc.);

3) Supporting the initiatives of local and regional authorities, which are the right level for implementing coherent and coordinated actions in favour of the inhabitants and adapted to their needs.

The Italian plan goes hand in hand with the Italy Digital Strategy 2026,[2] which outlines how 27% of European funds will be spent. In particular, they will be allocated to the digitalisation of public administration and, particularly, the justice, health and tourism sectors; to promoting the digitalisation of businesses; and to training in basic and advanced digital skills. The acquisition of digital skills is one of the five specific objectives of the strategy, together with the creation of a digital identity infrastructure, the enhancement of public administration cloud services, online public services and the deployment of ultra-speed networks. Italy wants at least 70% of the population to be digitally capable by 2026, but nothing is said about the digital gender gap. The Strategy follows the same path as France, with the idea of distributing the opportunities for digital literacy across the territory and establishing support figures for the population groups that are most in difficulty.

Neither France nor Italy have specific strategies to promote the participation of girls and women in STEM disciplines, but France is adopting an action plan by the end of 2021. Furthermore, the focus on access, skills and occupation restricts the range of digital gender gaps that are addressed. In particular, the reflection on possible gender discrimination arising from AI and algorithms is completely absent.

## Conclusion

A critical-culturalist approach to discourses of post-pandemic recovery and resilience shows what issues nations are focusing on and how they are interpreting their role in designing the future. In spite of the premises and data on the performance of the two countries in the key dimensions of the digital gender gaps, the two national plans do not systematically address the problem of digital gender gaps. Although both are focused on responding to the European Commission's urging to integrate a digital and gender perspective into the post-pandemic development plan, this objective is not fully achieved. Indeed, our analysis shows considerable resistance to integrating an intersectional perspective in the design of the digital society, a resistance that will show its consequences in the coming years. As more and more activities and services will be carried out online, attention to gender inequalities should be turned to design an equal opportunity digital society; instead, it is interesting to note that both France and Italy are still coming to terms with historical inequalities, determined by pre-digital structures of power distribution. Somehow, the message that emerges is that it is not possible to design a more connected and digital society without first addressing gender equality issues in the work context. Technologies, in this framework, represent an opportunity for economic growth and specialisation that can help women to get out of conditions of

segregation (especially in Italy) or discrimination (especially in France); their role in enhancing existing inequalities and creating new ones is unquestioned.

In this respect, there is a disconnection between the agenda of the European Union and that of the two countries under review. Once again, the European institutions act as a driving force for the activation and definition of discursive fields that are then interpreted by nations in a restrictive sense, according to a mechanism of policy diffusion from the centre to the various peripheries of the EU. The European Union is focused on ecology, digital and inclusion; France and Italy, while taking these concepts as constitutive elements of the post-pandemic discursive field, rework them and adapt them to their own internal agendas.

It is interesting to note that the two countries have different visions of the figure and role of women in the society they intend to reconstruct. In France, gender equality is mainly expressed in terms of women employed in the public sector, particularly in the health sector. On the contrary, in Italy women appear to be outside the labour market, engaged in domestic care activities or (digital) entrepreneurs. This has important consequences also on the type of instruments that are outlined by the two plans to respond to the problem of women's inclusion. From an intersectional point of view, gender inequality is never linked to other forms of inequality: women appear alongside young people and people with disabilities as categories of specific vulnerability who need to be helped into employment. Neither social class nor race are taken into account in the two plans. In Italy, the dimension that most aggravates the condition of inequality of women is that of residing in the South; however, the reason for this is not to be found in the socio-economic disadvantage between the regions of the South with respect to those of the Centre-North but in the cultural background still dominant in the South, which forces women into markedly traditional gender roles. The subtext, it is clear, concerns an alleged cultural backwardness with respect to the economic opportunities arising from the entry of women into the world of work, making this one of the signs of progress and civilization. The absence of class and race reasoning is even more evident in France, where ethnic and cultural differences are more pronounced. Apart from a few small references to equal access to health services in the territory, the French NPRR does not give adequate space to the articulations of gender discrimination at the intersections of race, class and age.

The analysis presented in these pages reckons with an absence rather than evidence. Through the approach of cultural discourse studies, an attempt has been made to reconstruct the meanings implicit in the way the future of European societies is being outlined, taking France and Italy as reference points because of their geographical and cultural proximity. However, the analysis of secondary data on gender equality and women in ICT showed strong divergences between the two countries. These divergences reverberate in the different agendas expressed in the two NPRRs. Despite the diversity of approaches and tools, however, both France and Italy suffer from a similar limitation of perspective. Both countries have not yet adopted an intersectional perspective

in imagining the figure of women in the digital society before us, nor in outlining the most effective tools to level out the digital gender gaps. This leads to a misalignment with the policies of the European Union (as well as of several other member states) and to a substantial ineffectiveness of the policies, which are overwhelmed by contingent and short-sighted problems.

The structuring of an increasingly interdisciplinary and complex reflection on the digital gender gaps, both in the academic sphere and in international organisations, will be crucial in guiding the policies on digital inclusion in the coming years. This chapter intends to offer a contribution in this direction.

## Notes

1 https://societenumerique.gouv.fr/wp-content/uploads/2018/09/DP_SNNIV-DEF2.pdf.
2 https://innovazione.gov.it/dipartimento/focus/italia-digitale-2026/.

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# 5 Do-it-yourself-teaching during the pandemic

## When educators transcend digital inequalities

*Carolina Escudero and Ivaylo Yoshkov*

### Introduction

The COVID-19 pandemic has brought dramatic changes to all spheres of life, and the education field has not been an exception but a scenario that deserves to be analyzed. These changes triggered an immediate response from the governments and institutions at a time of uncertainty in which it was necessary to continue adapting educational plans to the pandemic.

We emphasize the changes that have arisen in the educational field since the exceptional situation forced schools to implement different tools to ensure distance education or online learning and provide e-learning spaces, correspondence education, external studies and flexible learning.

Likewise, depending on the country, the type of connectivity, resources and previous knowledge characterized the type of experience acquired in each institution and class. As suggested by Rasmitadila et al. (2020), the online learning emphasizes Internet-based courses offered synchronously and asynchronously, whereas synchronous learning is a form of learning with direct interactions between students and teachers while simultaneously using online forms such as conferences and online chat. Students have access to the teacher synchronously, asynchronously, or both (Hunter & St. Pierre, 2016; Inoue, 2007; Escudero et al., 2022).

During the pandemic and lockdown we were witnesses to an overwhelming body of research emerging on the adverse impact of COVID-19 on world health, economy and education, among others. In the educational field, there were significant concerns regarding the loss of learning for children worldwide as a result of school closures (Bao, 2020; OECD 2020 in O'Keeffe & McNally, 2021; Buchanan et al., 2022). School closures are also likely to impact young children's social and emotional development (UNESCO, 2020; Escudero et al., 2022; Hanley et al., 2022). In that sense, it is important to take into account that the indirect impact of the virus is not under-estimated: children have experienced significant disruptions in their daily routines across home and family life as well as early childhood education and care (Barlett et al., 2020).

In this scenario posed by COVID-19, the new challenge has revealed well the new aspects of the digital divide in global and national contexts (Van

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Deursen & Van Dijk, 2015; Mutsvairo & Ragnedda, 2019; Vartanova & Gladkova, 2019), as we develop later.

## Background information

The digital divide is an important part of the public agenda, both in Bulgaria and in Spain. In Spain, almost half (45.3%) of adults (16–74 years) do not have any type of digital competence or ability, or their level is very low. Meanwhile, in Bulgaria, only 28% of adults have at least basic digital skills, and 11% have above average skills (EC, 2020). Spain and Bulgaria are placed more than 50 points below the EU average and considered as "a common comparison in digital matters" (UGT, 2020). The annual Media Literacy Index, compiled by the European Policy Initiative and the Open Society Institute, also shows worrying trends for both countries – Spain ranks 16th out of 35 countries in Europe, while Bulgaria is near the bottom of the list, ranking 30th. The authors recommend improving the quality of education as the best approach for raising media literacy levels.

By taking in consideration Pérez-Tornero's holistic approach, digital literacy is the "acquisition of the technical competence for using information and communication technologies, understood in a broad sense, in addition to the acquisition of the basic practical and intellectual capacities for individuals to completely develop themselves in the Information Society" (2004, p. 29). Information and media literacy (IML) is crucial for an individual's ability to function in modern society. According to Bolter (1991) and Wilhelm (2000), technology and the ability to use it are invariably associated with being literate. Bolter emphasizes that the inability to use technology makes them not only unprepared for the future but also unprepared for the present. And while in 1991 an indicator of this was the use of hypermedia, today it is social media, semantic networks and many other achievements of modern online communication.

In addition, the "Spain Digital 2025" plan seeks to guarantee adequate digital connectivity for 100% of the population, promoting the disappearance of the digital gap between rural and urban areas (goal 2025: 100% of the population with 100 Mbps coverage). In terms of digital literacy and inclusion, this plan highlights as a main point the reinforcement of the digital skills of workers and of citizens as a whole – the goal for 2025: 80% of people with basic digital skills, of which 50% will be women (Spanish Government, 2021a).

Another program launched by the Spanish government is the National Plan of Digital Competences, which aims to accelerate the digital transformation of the country economy and society. To do this, it commits 29% of the almost 70,000 million euros budgeted for the 2021–2023 period; among the strategic projects is that of promoting the training and digital inclusion of persons. Its purpose is for 80% of the Spanish population to reach at least a basic digital skills level (Spanish Government, 2021b).

Similar measures have been taken in Bulgaria. The National Strategic Framework for the Development of Education in the period 2020–2030 notes the improvement of digital skills and digital media literacy of students as a priority for the development of education in the country. The plan is to create a network of innovative schools for the exchange of experience and the application of innovative approaches in teaching. In this regard, the need to improve the qualifications of teachers in the field of ICT was taken into account.

The national strategic framework also takes into account social and cultural differences between different groups of students. Measures are being implemented to promote and implement the process of educational desegregation, which together with measures for the formation of tolerance and skills for intercultural dialogue, have a positive impact on equal access to quality education for all children and students. Despite the efforts made, the inclusion and educational integration of children and students from vulnerable groups, including the Roma, remains a challenge that requires sustained efforts by the state and stakeholders over the next 10 years.

The development of digital literacy in Spain and Bulgaria presented by DigCompEdu reference framework (in Tejedor et al., 2020), in which six dimensions are established that teachers must promote for the development of adequate digital literacy with a series of sub-dimensions, is shown here:

- Dimension 1. Professional engagement, integrating organizational communication, professional collaboration, reflective practice and digital continuous professional development
- Dimension 2. Digital Sources resources, including the following sub-dimensions: selecting, creating and modifying; and managing, protecting and sharing
- Dimension 3. Teaching and learning, guidance, collaborative learning, self-regulated learning
- Dimension 4. Assessment within assessment strategies, analyzing evidence, and feedback and planning
- Dimension 5. Empowering learners, embracing accessibility and inclusion, differentiation and personalization, and actively engaging learners
- Dimension 6. Facilitating learners' digital competence, which includes five sub-dimensions: information and media literacy, communication, content creation, responsible use, and problem solving

(Tejedor et al., 2020, p. 4)

This recommendation comes against the backdrop of a double crisis caused by the COVID-19 pandemic. The massive shift to remote (online) work and education further outlines the digital divide and the need to improve digital literacy levels by improving the educational systems in both countries.

In Spain, all educational centers were closed due to the declaration of the State of Alarm on March 14. Since then, 10.3 million students have followed the training process through the Internet. In that context, according to the

report of the Health Alerts and Emergencies Coordination Centre, 3,524,077 people have been infected and 78,216 people have died (April 2021).

According to the National Institute of Statistics, in Spain there are almost 7,800,000 minors of school age [under 16 years: Infant education (0–6), Primary (6–12) and Secondary (12–16)] divided into just over 4,600,000 households. Of these, 100,000 families do not have access to the network, and to these must be added another 235,000 households whose only form of connection is through mobile phones. In total, there were about half a million children who could not continue, or not in the best way, their educational training at a distance.

In the last 10 years, the percentage of Spanish households without a good quality Internet connection has dropped from 40% to 5%, according to data from the National Institute of Statistics (INE). Homes without a computer available have gone from 30% to 19%, while in 99.5% of them there is at least one mobile phone, five points more than in 2011. In addition, in 2020, 22% of Spaniards have not searched for information on the Internet, 24% have not sent or received emails and 38% have not used electronic banking (INE, 2020).

Confinement due to the spread of the coronavirus has been a challenge for the Spanish educational system, like that of so many other countries. In Spain, the nearly 900,000 professors of the different educational stages, from kindergarten to university, have had to adapt the learning system in a context that changes by the minute.

During the lockdown experience, even though schools were able to keep education going using digital resources, important structural problems were also revealed concerning inequality (Díez Gutiérrez & Gajardo Espinoza, 2020; Cabrera et al., 2020), learning (Díez Gutiérrez & Gajardo Espinoza, 2020), technology (Cabrera, 2020; Koutska, 2023) and students' well-being (Muharom & Fikriyati, 2022). Also during the pandemic, the Ministry of Education and Vocational Training (MEFP in Spanish) launched a new website, "I learn at home" (Aprendo en casa), offering ready-to-use online resources: materials, training courses, platforms, tools, etc. (La Vanguardia, 2020).

In other words, the evolution of the 2020–2021 academic year was entrusted, basically, to face-to-face teaching and efficient implementation of the safety measures dictated by the central and regional governments (Trujillo-Sáez, 2021, p. 9). Also, mobility and contact between students and teachers was limited or even avoided in classrooms. This provoked in some schools an important restriction for specialist teachers (music, physical education), who have seen their normal presence in different groups reduced to prevent mobility, or their role at the school changed to be in charge of a group of students as a tutor. Those are part of the lessons learned during the lockdown (Aznar Sala, 2020), which contributed to raising the level of digital competence of teachers, students and families (Trujillo-Sáez, 2021, pp. 11, 12).

According to Quoestudio 2020, a global study that reports the educational habits of children, the most successful educational applications that became the top 10 in Spain were as follows: Google Classroom (34%), Photomath (21%), Duolingo (16%), Kahoot! (11%), Edmodo (5%), Smartick (4%), BlinkLearning (2%), U-Dictonary (1%), Quizlet (1%) and Application of the Bible for children (0.5%) (Amat, 2020).

Poor economic conditions and accelerating depopulation of regions in Bulgaria (Tsekov, 2017; Yankov, 2016; NSI, 2020) are also leading to a gap in education. For the first 17 years of the 21st century, according to official data, more than 1,000 schools have been closed in the country. This concentrates educational institutions in cities – in some villages, primary schools continue to operate but with an acute shortage of students and teachers, while secondary schools are concentrated in cities and universities only in some of the largest cities.

This educational gap explains why, at the start of the COVID-19 pandemic (the first measures to combat the virus, including the cessation of in-person training, were put into force on 13 March 2020), only 54% of schools were ready for online learning, while 34% were totally unprepared (IRE, 2021). In addition to the insufficient technical preparation for online teaching, we must also pay attention to the poor preparation of teachers. Only 23% of Bulgarian teachers considered their digital skills to be very good, while 31% considered themselves completely unprepared. We can attribute this to the lack of vision on the part of the Ministry of Education. In the first months of the pandemic, the decisions of the Ministry of Education actually followed the decisions that teachers had made themselves and were rather of a recommendatory nature.

Most schools used different platforms and apps for teaching – Zoom, MS Teams, Google Meet, Viber, Messenger, Whatsapp, etc. Most teachers needed a period of just one to two days for the transition to online teaching, while 36% needed a period of three to five days. However, half of Bulgarian teachers managed to do this using their own ICT devices since only 50% of teachers claimed that the schools provided them with some ICT devices.

Students appeared to be better provided technically for online learning. At home, more than 90% have access to a computer, and 46% and 71% to a tablet PC and a smartphone, respectively. In fact, these figures are very high, especially if we keep in mind that access to ICT devices at school is very limited – an average of 14 students use 1 computer in primary schools and 17 in secondary schools. At the beginning of the pandemic, however, this disparity between school learning to use ICT devices and access to them at home became particularly visible – about 30% of students experienced technical difficulties in using ICT learning devices and adapted much more slowly to the new conditions. These percentages correspond to the claims of the Second Wave of researchers of the digital divide, according to which, in order to understand digital inequality, we need to take into consideration not only the reasons for using or not digital devices and Internet access but also the ease, efficiency and quality of their employ, as well as the outcomes of their use (Adam Smith:

EDTECH, 2011). Other indicators by which we can confirm the existence of digital inequality among students are the difference in access to ICT devices at home in large cities and villages, respectively 80% and 66%, and between students from different ethnic groups – 82% of students from Bulgarian ethnic groups have access to ICT devices at home, while the percentage of students from Turkish and Roma ethnic groups is 65% and 50%, respectively.

Despite all this, 95% of the students in Bulgaria received online training during the pandemic, and most of them spent an average of five hours a day in online learning. However, maintaining the traditional curriculum, the structure of lessons and the transfer of teaching online without adaptation fail to maintain the expected high level of education. Only 36% of Bulgarian teachers consider online teaching to be completely equivalent to traditional teaching. Almost the same percentage of students say that they have not been able to learn the material well, while only 15% are satisfied with what they have learned.

## Literature review

The digital divide has been studied extensively in the scientific literature around the world. Many authors have created definitions of the digital divide, most of which differ mainly in terminology and in emphasizing various aspects of the phenomenon, such as media literacy, digital skills, digital inclusion, digital inequalities, etc. The main approach to formulating the digital divide is to answer the following questions (Hilbert, 2011):

- Who? (e.g., divide between individuals, groups, countries, etc.)
- With what characteristics? (e.g., income, education, geography, age, etc.)
- Connects how? (e.g., Access or effective adoption)
- Why?
- To what? (e.g., phones, Internet, digital TV, etc.)

This approach is used by many authors like Van Dijk (2005), Kyriakidou et al. (2011), Kinal and Palak (2019) and others.

Two waves of research in the field of the digital divide could be distinguished – the first offers rather technical explanations of the phenomenon, and the second takes into account various socio-cultural aspects. First-wave researchers describe the digital divide as a matter of infrastructure development, technology adoption and the cost of both Internet access and ICT devices. Martin Hilbert, for example, describes the digital divide as the gap between those that have access to digital technologies and those that do not (Hilbert, 2011). Authors like Monge González and Chacón (2002) state that the digital divide "refers to the different access that people have to information and communication technologies, and the ability to use such tools, the current use made of them and the impact that they have on wellbeing".

The Diffusion of Innovation Theory is particularly important for earlier explanations of the digital divide (Hilbert, 2011). Although known before, the

theory was formulated by Everett Rogers in 1962 and describes the process by which a particular innovation is communicated through certain channels over time among the members of a particular social system (Rogers, 2003). Rogers divides members of the social structure into innovators, early adopters, early majority, late majority and laggards. An important part of this approach is the analysis of the social network. The speed of the spread of innovation largely depends on the location of innovators in the network. They are not always at its center (Hilbert, 2011), so they do not always have enough connections to "infect" early adopters with innovation. In these cases, the diffusion may be slow until it reaches opinion leaders, after which the "infection" accelerates. A new delay in the spread occurs with the laggards – members of the social network, located on the periphery or detached parts of the network.

The early spread of ICT largely follows the pattern of diffusion of innovation when innovators are located close to the center of the social network. ICT is beginning to develop in science centers and big cities, where opinion leaders are rapidly spreading technical innovation. People in remote settlements – small towns, villages, and so forth, that is, in the periphery of the social network, gain access to these innovations much later. Globally, according to UN Deputy Secretary-General Amina Mohammed, as of April 2021, half of the world's population is still offline (UN, 2021; Nidhal, 2021). In fact, this process continues to this day, and the pandemic seems to have widened the digital divide based on insufficient access to the Internet and ICT (UWB, 2021). This has a great impact on learning. As of December 2020, about 12 million US students still do not have access to ICT devices or a stable Internet connection or both (Tate, 2021). The same is observed in the East – for example, in India, only 8.3% of students have access to the Internet (Nidhal, 2021).

Researchers from the second wave of digital divide research, however, argue that framing the digital divide as a technological problem and as a matter of adoption means to ignore other variables, such as the overall socio-cultural, economical, educational and political background (Ragnedda, 2020; Vartanova & Gladkova, 2019). DiMaggio and Hargittai (2001) have defined five levels of digital divide. The top level represents social context, education, age and other characteristics of the users, which define different experiences and patterns of ICT usage (Torres-Diaz & Duart, 2015). This approach provides detailed and focused information, which allows reasonable conclusions to be drawn on the reasons for deepening the digital divide. The second wave of researchers of the digital division adopt anthropological approaches to the study of the phenomenon by analyzing the social status and individual characteristics and capabilities of different users that make the use of Internet and ICT devices successful or not (Vartanova & Gladkova, 2019).

The study of these characteristics leads to the conclusion that already existing divides and gaps affect the digital divide (Trappel, 2019). According to Trappel, "economic market imperfections favouring wealth over talent can be observed in the media and communication realm" (2019, p. 13). Economic

gaps can easily be proven to widen the digital divide. Lower income groups are less represented in Internet communication and are more likely to cut their connection to the global network due to financial issues. Since the beginning of the pandemic in the United States, there has been a clear tendency that Native American, Black, Hispanic and Latinx households are twice as likely to be forced by financial circumstances to give up the use of the Internet or ICT devices as compared to White households (UWB, 2021). According to Bray (2021) the difference in ICT use between White households and all other races is more than 10%. Thus, in addition to the economic gap, a racial gap in the use of Internet and ICT is emerging (Bray, 2021).

The economic and racial gaps are not only defined as a question of economics, access or usage of ICT. In the era of Web 2.0, they both became a gap of representation. As Trappel points out, "algorithmic selection, surveillance, big data and the Internet of Things are creating new forms of inequality that follow the traditional patterns of class, gender, wealth and education" (Trappel, 2019). There are many other examples of social gaps that transform to online gaps and widen the digital divide – gender gap (Cheema, 2019), disability gap (Fox, 2011), age gap (Vidal, 2019) and so on.

Bray (2021) also points out that virtual learning is hampered precisely by the lack of Internet connection, or its low speed if a connection is available, as well as the incomplete or intermittent access to a computer at home, reported by many students from small or remote areas. Bray also emphasizes that this deepens the digital divide because these students had access to the Internet and ICT devices on the university campus before the pandemic began. However, the digital divide in education was present long before the beginning of the COVID-19 pandemic, and unexpectedly, there are two divergent trends.

While most parents use ICT devices to cheaply entertain their children, the first time children really need to use ICT is when they go to school. According to Mclaughlin (2016), 70% of teachers in the United States assign homework that requires broadband Internet access, while parents need the Internet to connect to teachers in order to stay informed about their children's performance. This widened the digital divide between rich and poor families in terms of education at home.

However, schools are also failing to reduce the digital divide. As Nidhal (2021) mentions, "smart classrooms are a common sight in private schools while it still is a luxury for the public schools in India". The same trend can be observed in Bulgaria. According to a study by the Institute for Research in Education (IRE, 2021), in 2021, more than twice as many students (14 elementary school students and 19 secondary school students) used one computer at school compared to the EU average (7 elementary school students and 8 secondary school students). This proves the existence of a digital divide between rich and poor countries, described by Trappel (2019).

We also must bear in mind that access to ICT is not the only variable for determining the levels of digital divide. Even if students have the same access possibilities both at home and at school/university, they use them in different

ways, thus gaining differently from ICT (Torres-Diaz & Duart, 2015). According to DiMaggio et al. (2003) and Graham (2008), higher income users are able to have access to more devices and to spend more time online creating content. However, Graham notes that education is also an important variable, and well-educated people use ICT more often and to greater advantage than people with lower levels of education.

The digital divide caused by the educational gap, both between students and teachers, as well as the lack of management vision on the platforms used and the adaptation of teaching methods to the online environment, put teachers and students at the beginning of the pandemic in need of self-study with ICT devices. Learning by trial and error could be a very useful method of developing digital skills, especially when using the Internet at home, presumably leaving considerable room for exploration and experimentation (Kuhlemeier & Hemker, 2007; Kerawalla & Crook, 2002).

Rancière (1991) analyzed the experience of Joseph Jacotot (2008), whom he calls the "ignorant schoolmaster". Jacotot (1770–1840) is the university professor who Rancière (1991) presents in *The Ignorant Schoolmaster*. Jacotot was a French revolutionary who was forced into exile in Belgium at the end the Second Bourbon Restoration. In 1818, he was appointed by the University of Louvain to teach French. Because of the fact that Jacotot did not know the mother tongue of his students, he asked them to read a bilingual edition of *Les Aventures de Télémaque*, by Fénelon. At this point, the students managed to learn the French language, without their professor's explanations. This event allowed Jacotot to recognize a new teaching method. What happened to Jacotot is in contrast with the thesis that a professor should provide explanations to students. Jacotot's (2008) experience revealed the positive combination of ignorance and emancipation in the learning process. Based on Jacotot's experience, Rancière (1991) pointed out that ignorance and emancipation require students to learn what the professor does not know. More specifically, only if the latter is emancipated will they be able to free their student so that the student can learn beyond the professor's knowledge. In that sense, Rancière argues that "one can teach what one doesn't know if the student is emancipated, that is to say, if he is obliged to use his own intelligence" (1991, p. 15).

The ignorance school master experience is based on three aspects that were also present during the pandemic: an unprecedent situation, ignorance (where DIY will become as a part of that experience) and emancipation. As Morelli points out, "When the materiality of the classroom disappears, we, as professors, must redefine our teaching identities"(2021, p. 3).

According to Rancière, before being the act of the pedagogue, explication is the myth of pedagogy. The author argues that explanation is not necessary to remedy an incapacity to understand. "On the contrary, that very incapacity provides the structuring fiction of the explicative conception of the world. It is the explicator who needs the incapable and not the other way around; it is he who constitutes the incapable as such" (1991, p. 6).

In that sense, Rancière's argument is that only emancipated professors allow the emancipation of their students. When an unprecedented event arises, the "ignorant schoolmasters" do not remain paralyzed; they take action. And in this trial and error of DIY, they produce and reproduce new forms of learning, knowledge and connection with students beyond the digital divide. This capacity for transcendence, as can be seen, has been present in both Spanish and Bulgarian's teachers. Jacotot (2008) had to experience exile, and this experience also brought with it the acceptance of not knowing as a possibility of emancipation and action. During the pandemic, many teachers experienced in a certain way an exile, from the classroom to the online classes where their lack of knowledge about Technologies, Information, and Communication Studies (TICS) placed them in the need to take action and experiment with new tools.

In addition, this capacity to transcend the ignorance and difficulties can be in accordance with the learning by trial-and-error presented by different scholars, which could be a very useful method for developing digital skills, especially when Internet usage takes place at home (the pandemic and the lockdown were a perfect scenario for that), which presumably leaves considerable room for exploration and experimentation (Kuhlemeier & Hemker, 2007; Kerawalla & Crook, 2002, in Matzat & Sadowski, 2012).

For Van Dijk (2005), this type of learning is associated with the do-it-yourself (DIY) that allows users to develop digital skills by working through various paths in which they encounter difficulties and finding a way to transcend them. According to Van Dijk, some researchers claim that the do-it-yourself approach is beneficial for one's digital skills and that self-learning is of special value to those users with fewer digital skills (Matzat & Sadowski, 2012).

## Methods and materials

The case study section contains examples of innovative teaching methods created by Spanish and Bulgarian teachers in the period from the beginning of the COVID-19 pandemic in March 2020 to May 2021. Examples of innovative teaching methods were collected through unstructured interviews conducted among five Spanish and five Bulgarian teachers, as well as from media publications.

The method of the unstructured interview was chosen because of its compatibility with the research topic. Using a predefined list of questions would place significant limitations on the work. The use of open-ended questions allows them to be modified according to the specifics of each interview, which allows the interviews to resemble a natural conversation while the interviewer retains his guiding function (McLeod, 2014). In this way, qualitative information is generated. Respondents can speak more deeply and descriptively, which allows the interviewer to better understand their understanding of the topic. The interviewer may ask for clarification by going into the depth of the topic, which gives increased validity to the results.

This part of the study also adopts the content analysis method. Content analysis was established as a tool for the study of mass communication

in the mid-20th century by Lasswell (1948) and Berelson (1952). According to them, the main features of the analysis are its objective and systematic approach, conditioned by the quantitative description of the content of the communication.

There are two approaches to content analysis – quantitative and qualitative. According to Klaus Krippendorff (2004), the first approach is very accurate from a statistical point of view, and the results can hardly be challenged. Siegfried Kracauer (1952) on the other hand, criticizes it for the high degree of simplification of the language, which turns the content analysis into a word count but does not provide an insight into the semiotics of the text. The second approach is more impressionistic and pays more attention to the latent meanings and speech patterns, which can construct different meanings, but its results are less reliable. It is accepted that the first approach is useful if the research starts with hypothesis, while the second is more suitable for open-question research. Both Krippendorff and Kracauer agree that the quantitative approach and the qualitative approach often overlap, and there is no definitive conclusion on which one is better. This combined approach was also adopted in this research.

As most of the teachers asked not to mention their names, for the purposes of the study, they will be mentioned as follows:

**Bulgaria**

- BG1 – Secondary school in the capital, teaches literature
- BG2 – Secondary school in the capital, teaches philosophy
- BG3 – Primary school in a regional city, teaches mathematics
- BG4 – Primary school in the capital, teaches physical education
- BG5 – Primary school in a village, teaches several subjects

**Spain**

- SP1 – Secondary school in a regional city, teaches music
- SP2 – Secondary school in a regional city, teaches English
- SP3 – Primary school, in a village, teaches physical education
- SP4 – Primary school, in a regional city, teaches English
- SP5 – Primary school, in a regional city, teaches several subjects

**Discussion**

***Bulgaria***

The first days of anti-pandemic measures in Bulgaria were filled with chaos, both in education and in almost all other areas of public life. On March 16, 2020, online training was introduced for all students as an anti-pandemic measure. By this time, the school year had already been interrupted twice

in some areas due to a seasonal flu epidemic. In these cases, the training was simply stopped and not transferred to any distance form. These interruptions created a risk of inability to implement the curriculum, which in turn could lead to cancelation of the school year.

The daily "Sega" seeks the opinion of teachers, quoting the chairman of the Union of Employers in the system of public education Diyan Stamatov:

> There is no one to tell you how (to teach online)! It is good for each of us to organize this process ourselves. There are many questions, but that is why we are a large group in which to give our own answers. Do not look for regulations.

On the other hand, the principal of a primary school in the town of Shumen expressed concern that the facilities in the villages in the region were inadequate, the Internet connection was weak and most of the teachers were over 60 years old and "do not know how to turn on a computer".

Two weeks after the start of the pandemic, the Mediapool news agency proved that fears about the organization and opportunities for online education were not unreasonable. A publication titled "E-learning in Roma neighborhoods – all learn together – children, mom, dad, grandparents" from March 31, 2020, notes that of about 1,000 schools working mainly with children from ethnic minorities in Bulgaria, 24% managed to include less than 50% of students in online education. In six of the schools, between 10% and 25% of the students participated in the online classes, and in seven schools – less than 10%. As further evidence of the extent of the digital divide between ethnic minorities, the publication states that 180 of the schools and 6,600 of the students need equipment donations to continue the school year.

All five interviewed Bulgarian teachers point out that at the beginning of the pandemic, they were not well prepared to teach online. According to them, the lack of a unified online teaching system was one of the big problems. "We were left to fend for ourselves", says teacher BG2.

> We didn't have pre-selected platforms and everyone had to choose. After a short experience with Skype, I came to the conclusion that it's more convenient to use Zoom because there's the ability to mute participants and give the floor to a particular participant, thus students can't talk and create chaos at the same time.

The other teachers also claim that before the pandemic they were familiar mainly with applications such as Skype, Viber and Facebook Messenger. Although not intended for teaching, they were useful in the early days because they were most common among students. Teacher BG1 started teaching online using Skype and Zoom, but in the end, he chose the free application Google Meet because it allows long lessons. For the same reason, the application was chosen by teacher BG3, who combined it with Google Sheets, Google Slides and other free applications. At a later stage, some schools provided access to

the Google Classroom, and the Ministry of Education provided teachers with Microsoft Team accounts free of charge.

All five teachers claim that they had to use personal ICT devices for online teaching as well as their own Internet connection. Teacher BG2, who received a netbook from his school, said the following:

> In the beginning I worked on my personal laptop, but it turned out that I needed an additional screen for a better presentation. The school gave me an old used netbook, which was very slow, but it helped me a bit.

Teacher BG5, who was teaching in a rural school, did not receive anything.

> For years, I have been providing my own equipment so that I can print a variety of materials, as well as help students whose parents cannot buy all the textbooks. In the early days of the pandemic, it turned out that most of my students simply had no connection to Internet.

Teachers BG1, BG2 and BG3 organize their classes in the traditional way, using more multimedia. According to them, the lack of electronic textbooks made work very difficult because watching an online presentation and a paper textbook at the same time distracts the attention, especially of younger students. While Teachers BG1 and BG2 could easily compensate for this with the many online materials on literature and philosophy available, Teacher BG3 found that students do not understand math well enough if they just look at pre-written formulas:

> To avoid static material, I decided to try teaching with the help of a graphics tablet. For one weekend, I learned the basic functions. It turned out that the students understood everything much better when I started drawing the graphics in real time.

It was a particularly big challenge for teachers to keep students focused and engaged. The lack of live contact made it very difficult to work with young students, so teachers came up with innovative techniques to hold attention. Teacher BG3 began organizing short math competitions between students, using a survey platform where students can mark the correct answers. Winners received virtual prizes. Teacher BG1 decided to improve the digital skills of his students by organizing extracurricular online meetings, during which students created their own newspaper, using programs for text and multimedia processing.

The case of teacher BG4 is especially curious. While at the beginning of the pandemic, most schools held physical education classes rather fictitiously, in the form of group online viewing of a basketball game or other sport, teacher BG4 decided to keep his students in shape.

> I'm an athlete and at first I didn't know much about online platforms other than the ones I used to communicate with friends and relatives.

> However, I quickly found that most students don't do the exercises I give them, they used to just sit out of camera range.

The teacher convinced the parents to place a joint order to buy a cheap brand of fitness bracelets, which could connect to an online system and show the physical activity of the students. Subsequently, this proved to be a useful investment because the teacher was able to inform the parents of three students about the potential heart disease of their children, which he discovered while reviewing the data in the online system.

At the beginning of the pandemic, teacher BG5 worked in a completely different way than all other teachers. His students were scattered in eight neighboring villages, and the teacher had to travel every day in his personal car to distribute the teaching materials on paper. In order to maintain the students' engagement, teacher BG5 started giving tasks to prepare various projects, with materials that most students have. The teacher showed the best projects to all students and then made an exhibition with them at school.

All teachers note that all the time they tried to keep their students in a good mood, using humor and making as close contact as possible. All of them offered after-school counseling opportunities, receiving calls from students and parents at any time of the day. They claim that this has greatly increased the volume of their work but has contributed to the learning of the material by the students, which was initially hampered by the lack of preparation.

### *Spain*

In mid-March 2020, in Spain, classes began to be suspended at all educational levels, from infant to university education, with the consequent readjustment of the educational model. From that moment, everything was a challenge and, at the same time, an opportunity to implement new educational formats. In that country, education is transferred to the Autonomous Communities, so the guidelines that have been transferred from the Ministry of Education have had to be adapted and specified by the different Territorial Councils (García Garrido, 1993). By taking into account these characteristics, during the lockdown, the government announced that the contents of the third quarter had to be relaxed and leave the most essential aspects to be dispersed throughout the 2020–2021 academic year (Farreras, 2020).

Due to the pandemic, schools and educational institutions were closed for 25 weeks (CGD, 2021); faced with this, the country recognized what the National Institute of Statistics (INE in Spanish) would end up confirming: the existence of a digital divide. In that sense, it is important to take into account the Spanish General Telecommunications Law of 2014 that established a universal service that guarantees Internet connection at 1 MB per second. But that speed is outdated and does not allow for sophisticated work or even Netflix viewing. According to INE data, 91% of the population has Internet access in Spain, a percentage that rises to 97% among families with children, so we

can see that it is true that there is some stabilization and increase. However, it can be noted that this distancing and the gap widens in more rural areas or in families with lower cultural capital, a fact that further polarizes society. In this sense, Cabrera indicates the following:

> The casuistry is such that it is not easy to determine how, where and who is most affected by this school closure and this change from face-to-face teaching to virtual teaching. However, we believe we can show that although all students and their families are affected negatively due to the closure of educational centers, almost a million or more are even more so due to their personal conditions and relatives.
>
> (2020, p. 116)

In addition, throughout the pandemic in Spain, it was confirmed that young people who have a father and mother with high levels of instruction have not only more electronic resources but also "more options to continue teaching telematics with the help of their parents" (Rogero, 2020, p. 26). On the other hand, there are also difficulties around digital literacy, as shown by academics who argue that some families do not have sufficient computer knowledge to be able to empower their children. Moreno et al. (2020) noted the following:

> It also affects part of the teaching staff, especially those more veteran teachers who are not digitally up to date and therefore they have had to do training to acquire new skills and tools that allow them to work online. The lack of knowledge of the teachers it entails an extra workload for them in adapting the educational curriculum.
>
> (p. 187)

This context of pandemic and distance education has been reflected through the results of a study conducted by the Rey Juan Carlos University of Madrid in which the general perceptions of Spanish teachers during and after confinement were analyzed. This investigation concludes that the teachers finished the courses after the pandemic "burned-out" and "more united". Thus, they agreed that "the individualized treatment of teachers to their students has increased and has made possible a greater connection between families and the faculty" (El Confidencial, 2021). In this line, SP5, a primary school teacher, argues the following:

> At the beginning of the quarantine, what we were most interested in making clear was that each student and family were respected in their adaptation time; those who could connected, some did it later and others did not connect although later they sent us an email with the activities or reactions to any of the exercises.

For Rancière (1991), the schoolmaster experiments by playing with the inequality of intelligences. During the pandemic, many teachers also played

with the digital inequalities as adaptation to the circumstances, a DIY action, combined with emancipation was also a part of the experience. SP3, a physical education teacher of primary education, noted the following:

> I started using the platform that was recommended to us at school but then I adapted to the needs of each class. I created a WhatsApp group because there were families who found it easier to send me the material there. Not in every home every child had access to a computer or tablet all the time, and the important thing was to make them feel that it did not matter. That we could continue to connect and receive their videos with the exercises, audios and reactions.

Spanish media also reflected the impacts COVID-19 had on teachers' daily lives: "We are all focused on the most vulnerable students. Providing tasks by mobile, sending photos by WhatsApp, making calls to find out how they are. Whatever it takes to alleviate this digital divide", highlights Sonia García Gómez, infant teacher and spokesperson for ANPE (National Association of Teaching Professionals) (RTVE, October 2020). In the same line, the primary English teacher, SP4, still remembers when he read this news and argues that keeping the humor was one of his priorities:

> Singing, laughing, reading stories that could inspire children, asking them to put on hats . . . disguise yourself. The class had to recover a color, a different tone from the reality that surrounded us; to the news that was not very positive. Some children became very frustrated, and disconnected, then began to understand the new dynamic.

It is in this new scenario where this virtual modality represented challenges for students and professors such as SP1, a music teacher in high school. It was necessary to try various tools to connect with the largest number of students:

> Confinement for adolescents represented a great challenge. For them it is very important to see each other, to socialize. They had to start finding, together with their reference group, new spaces that would identify them and keeping their attention in the online classes was also a challenge for us teachers. It also helped us to feel closer, to interrupt some classes and talk about how we felt.

The COVID-19 pandemic was an exceptional event that highlights the knowledge, lack of knowledge of the teachers about TICS and, depending on the cases, that DIY and creativity were the instinctive ways to connect with the students. In that sense, for SP2, an English teacher in high school, the use of applications allowed her to keep the class motivated and challenged:

> We have worked a lot with Kahoot and although there are usually different levels in the same class, each one was taking advantage of the use of

applications. It was challenging at the beginning, but we gradually found a way to make it more attractive.

The five teachers interviewed – SP1, SP2, Sp3, Sp4 and SP5 – have mentioned a clear need to adapt classes in the best way in line with the need to feel emotionally connected with the students. Although, according to SP1 and SP2, they had to figure out how to make classes attractive or understand when it was a good moment to interrupt the topic and just talk. Rancière points out the following: "They didn't know how before, and now they knew how. Therefore, Jacotot had taught them something. And yet he had communicated nothing to them of his science" (1991, p. 12).

## Conclusion

This study provides evidence of a shared vision – from Bulgarian and Spanish teachers – of prioritizing students' needs and platform adaptations during the pandemic. It contributes important evidence about the presence of the digital divide in the teaching sphere in balance with the teachers' strategies to transcend difficulties and ensure education.

The research had several limitations, including the number of teachers interviewed and the lack of previous studies taking into consideration both counties. To the best of our knowledge, this is the only study to capture both countries' teachers' views on the potential of DIY due to the COVID-19 crisis.

The teachers from Bulgaria and Spain interviewed recognized, at the beginning, feeling challenged and lacking all the tools and knowledge needed to adapt their education into the online platforms. Also, teachers from both countries reported the use of their imagination, closely related to our hypothesis regarding do-it-yourself and the ignorant master, to transcend difficulties and find solutions adapted to the needs that were presented to them at the time.

An emphasis on paying attention to the emotional aspect of the class was observed in all the teachers as a part of the new situation and in accordance to their culture and the pandemic scenario.

In that sense, the cultural discourse studies paradigm can be in this way a sort of thread bringing together these topics within one theoretical framework. Following Shi-xu, we argue that culture is an integral part of the life practice of a social community in relation to others (in that case teachers and students), complex and dynamic (during the pandemic), rather than fixed to people, place or time (presented as a time of uncertainty) (Shi-xu, 2016).

However, limited data is currently available on the teachers' experiences during the pandemic and the digital divide in the context of educational plans for exceptional situations.

In doing so, the findings highlight an important aspect of DIY and the ignorant master characteristics that underline the need to provide more research in these types of studies. It also demonstrates the similar problems with digital education during the pandemic in Bulgaria and Spain and the

similar innovative solutions introduced by teachers in both countries to solve them, despite the different economic and social environment.

In addition, this study demonstrates that in the new digital environment, ICTs and Internet studies are no longer limited to the technology domain but also cover important topics related to education, discourse and cultural studies. In that sense, with new digital cultures appearing interconnected with new digital means, enables us to "identify, characterize, explain, interpret and appraise culturally divergent, productive or competing discourses" (Shi-xu, 2016, p. 3).

Finally, the findings also emphasize the impending urgency for policymakers across the globe to plan new strategies to train teachers with tools and materials for online education, which will reduce the teaching gap and decrease the extensive disruption of the pandemic in education.

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# 6 Effects of the digital divide on cultural and development space

## An analysis of Balochistan's case from an intrastate perspective of cultural discourse studies

*Fahad Mahmood*

### Introduction

This chapter is based on the theory of cultural discourse studies (CDS). This approach describes and explains discourse approach of hegemony at global level. It is also skeptic to ethnocentrism of West-centric approaches to discourse studies that ignore cultural diversity and historical nature of discourses. In this study, I have argued that this CDS approach is also applicable to the human conditions at a nation state-level, describing hegemony within nation states (Alatas, 2006; Anastassov, 2018; Salskov-Iversen et al., 2000).

It is argued that the same discursive ethnocentrism that scholars of CDS find at the global level between first-, second-, third- and fourth-world countries is also present within nation states of third and fourth worlds where administrative units/communities/groups face a similar kind of marginalization, encroachment to autonomy and neo-state colonialism (Rüsen, 2004). Therefore, the goals of CDS can only be fulfilled when all possible discourses related to its central theoretical strands are found, analyzed, explained and presented at multiple levels (Shi-xu, 2009a, 2016).

This chapter begins by explaining the CDS approach and argues that it fits well in explaining human conditions within the nation-state level for local communities/groups/administrative units that are experiencing the same ethnocentrism and hegemony from powerful central units of states as in the case of domination present at the global level. Then, it establishes linkages of CDS to the digital divide that can be used to understand the digital divide present at the intra-state level (Haffner, 2017; Light, 2001). For this study, the Pakistani province of Balochistan is investigated as it faces ethno-political unrest from the last several decades because of local, regional and global strategic reasons. It is a strategically located province that shares its border with Iran, Afghanistan and the Arabian Sea. Balochistan is a multicultural and multiethnic area with three main roots, that is, Balochi, Pashtoon and Brahui, and twenty-seven main tribes. The prolonged tenures of dictatorship, Pakistan's partnership with the United States in the Afghan war and the War Against

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Terrorism (WAT), the political structure, the economic model used to run the country and regional tensions are main causes that have fueled unrest in Balochistan. It is estimated that more than 65 percent of the province does not have internet coverage (Hashmi, 2015; PTA, 2021; Qadir, 2016).

A digital divide that explains accessibility, use, effects and policies related to digital technology creates twofold effects. It not only denies the affected communities the opportunity to share their identities and ideas with the world but also deprives the world from knowing about those affected communities. Therefore, a cultural hiatus is created that could have existential, economic, cultural and political consequences (Gladkova et al., 2020; Helsper & Eynon, 2013; Vartanova, 2014). The failure to get one fair share in the symbolic environment through proper cultural representations leads to diministed political participation in formal and informal public spaces (Sylvester & McGlynn, 2010). This diminished political participation further impacts the ability of affected communities to surpass the digital divide. Therefore, the affected community is stuck in a ripple effect that is characterized by lower self-representation, economic disadvantage, political marginalization and technological backwardness. These deleterious effects can cause social unrest in the affected community that might get exacerbated into ethnic/political/social protests/movements/conflicts.

I have argued that the case of Balochistan allows us to understand the digital divide from CDS theory and method to uncover the ethnocentric, dominating and hegemonic treatment that its citizens claim they are receiving. Therefore, this study tries to explain the digital divide for the population affected by ethnic-o-political conflicts by describing CDS categories presented as SIMHC for the affected community. In addition, this study also finds reciprocity of representation of a community in the context of the digital divide as explained by CDS from the narratives of community natives.

## Research questions

Following are the research questions for the study:

RQ1: How does CDS explain the digital divide for the population affected by ethnic-o-political conflicts by describing categories of subject, intent, medium, history and culture (SIMHC) for the affected community?

RQ2: How does CDS explain reciprocity of representation of a community from the discourses of native population in the context of digital divide?

## CDS in explaining human conditions for local communities/ groups

CDS is a cultural and historically oriented paradigm that tends to accommodate marginalized approaches to discourse studies and facilitate construction of an approach for discourse studies that could enable human coexistence, peace

and development (Chen, 2006; Shi-xu, 2014). CDS has three basic tenants; first, it counters globalism and west centrism; second, it encourages development of local-global approaches to discourse studies; and third, it rediscovers divergent human discourses that could remain repressed otherwise if not highlighted consciously (Miike, 2007; Pardo, 2010; Shi-xu, 2009a; Urban, 1991).

Culture is a central concept in CDS with its historical, social, political, ethnic, global and economic connectivity (Robertson, 1992; Shi-xu, 2005; Tomlinson, 1997). CDS helps in understanding and explaining dominated cultural practices and its relations to resistant and counter cultural practices, relations and effects. Although in doing so, CDS reified the divisions, such as West, East and Chinese, but these concepts are already present in counter discourses in the world and scholarship (Said, 1994; Waisbord & Mellado, 2014). CDS places human communication holistically and dialectically, thus encouraging transdisciplinary and multicultural perspectives. It puts local and native cultural and scholarly knowledge along with global perspectives at the same time. The goals of CDS are cultural harmony, prosperity and development. In advancing scholarship, CDS is eclectic in the use of research methods (Chu, 1986; Shi-xu, 2009a, 2009b; Vartanova & Gladkova, 2020).

Communication and media space available to any community is linked to its development. Ideas presented in the theoretical notion of cultural discourse studies are both macro and micro. Hegemony, dependency, post-colonialism, anti-development notions that explain conditions of human sufferings and deprivation at Global South and developing countries can be applied to explain the conditions of populations within Global South and developing countries (Vartanova & Gladkova, 2020; Van Dijk, 2012).

Within the nation's states, there are population segments, federation units and ethnic groups who experience the same set of dependency, hegemony and exploitation as faced by nations at the global level (De Cleen & Stavrakakis, 2017). Emerging debates on cultural consciousness, participation of research from marginalized populations and locally grounded ideas/frameworks to explain and solve the issues can be applied at the various levels to understand, explain and improve the human conditions.

The Pakistani province of Balochistan has been struggling for peace, coexistence and development with its historicity and cultural uniqueness since 1947. The Baloch population's motivation to grow economically and politically is deeply rooted in its culture. The case of Balochistan is dependent on recognizing the local voices (discourses) that are long neglected in political, cultural and economic domains. For instance, in their administrative and political structure, Baloch wants their tribal identity, including the Jirga system, to remain effective along with the modern system of arbitration (Hashmi, 2015).

The CDS goals to enhance human cultural coexistence, harmony and prosperity (Shi-xu, 2005) are universally important, and there is always a need to ensure these at the level of local communities. These goals should be traced both at the global and nation-state level from upward to downward. There exists a chain of effects of domination that travels from the global level to

reach the nation state, and then it transfers it to their administrative units. Thus, discriminatory and exploitation discourses are present at all levels. It indicates toward structural imperialism by Galtung (1971) that explains the world consists of developed center and underdeveloped periphery states and both have core and periphery with the flow of benefits, communication and interests between them. Although Galtung's ideas explains how domination works at the global and local levels that offers relevancy to the argument that this chapter is trying to make. However, methodological eclecticism, historicity and counter West centric stance of CDS make it a preferred approach for this study (Alatas, 2006; Roach, 1997; Straubhaar, 1991).

CDS also offers criticism on critical discourse analysis (CDA) because of the fact that CDA inherently carries Western values and embodies them so as to blockade any possibility of other approaches to discourse studies that could possibly communicate ethos of truth that were not possible otherwise. The spirit of social and human sciences asserts that local and traditional approaches to knowledge and human understandings must be flourished (Halloran, 1998; Scheurich, 1993; Scheurich & Young, 1997). The goal is to come out of West-centric and also nation-centric or dominating discourses that are ethnocentric in nature and impending the possibilities of knowledge creation and sharing beyond the specific set of mechanisms (Bhabha, 1994).

CDS explains that discourse communicated in the domains of globalization and development are largely dominated by the United States globally. Conflicts provide an opportunity to hegemonic regimes to propagate their ideas and maintain dominance. US-led discourses to deal with terrorism and fundamentalism were disseminated with more force in post–9/11 scenarios as compared to the years before that tragedy (Stager, 2005). In the case of administrative units maintained by any nation-state, the presence of conflicts creates the same opportunity for the regimes to dominate the discursive space and marginalize the local expressions (Baumann, 1996; DiMaggio, 2009; Long, 1999). Balochistan experiences a similar situation.

Maintaining the balance of power between nations/communities/groups is important to get a fair share in the world economy and the resources available. This balance consequently is related to discursive space, too, either acting as a consequent or antecedent. If a fair share in discursive space is lost, then the share in physical and man-made resources is also lost or deprived. These effects lead to violence, threats of sovereignty, encroachment of national autonomy and neo-colonialism (Kalyango & Kopytowska, 2014; Shi, 2016).

An increasing influence of dominating discourses creates what can be called suffocating discursive space, and it results in an increase in the resistance to violence, threats of sovereignty, encroachment of national autonomy and neo-colonialism. This is true in the case of the digital divide, too. When nations/communities/groups find them at the downside of the digital divide, they start raising their voices against encroachments of their rights, peace and autonomy (Helsper, 2012; Norris, 2001; Steyaert, 2002; Thompson, 2004). In the case of Balochistan, this is true as blackout of digital and other forms

of communication entice the population to stage protests against those whom they consider culprits and responsible for their political and communication deprivations (HRCP, 2019).

## The digital divide and conflicts

*Digital* is a buzz word in an environment where technology is the most potent driving force for politics, economy and socio-cultural development in societies. In the new world, digital accessibility, availability and competence define what role any nation will play globally and locally. This digital capacity operates at multiple layers and offers analysis at global, regional and local levels. Availability, accessibility and consequences of digital technology are not enough at the country level, but an analysis at the micro level involving individuals/groups/communities is equally important to assess the digital divide situation (Dolnicar et al., 2004; Norris, 2001; Zillien & Hargittai, 2009).

There are several definitions (conceptual and working) of *digital divide*, an assimilation of which gives us the following idea: the digital divide is a concept that describes accessibility of digital technology for the available telecommunication infrastructure (manufacturing and distribution of mobile phones, computers/laptop, internet) at the macro level, and availability and affordability of digital technology by individuals, groups and corporations at the micro level; skill levels of the population to use digital technology for communication (i.e., information, education and entertainment); usage of digital technology (political, economic, socio-cultural); and consequences (better lifestyle, and politic-o-socio and economic uplift) of digital technology usage by the population. It also explains policy issues related to digital technology (Dolnicar et al., 2004; Norris, 2001; Noll et al., 2000; Peacock, 2019; Pierce, 2019; Ragnedda, 2018; Roach, 1997; Stevenson, 2009; Van Dijk, 2006).

Literature on the digital divide discusses the issue from different angles, but very little description is available from the perspectives involving conflicts and development. There exist areas within second and third worlds that are denied access to technology, either having no access or very little. Coincidentally, these areas are also victims of conflicts and unrest (Brush, 2004).

Therefore, these areas are deprived of dividends of digital technology, including political stability, opportunities for an enhanced socio-cultural participation and narrowing of race-, religion- and ethnicity-driven gaps. It has proved that granting these benefits to the communities have resulted in a better lifestyle, more development, prevalence of peace, enhanced political participation and cultural richness among them. Alongside these benefits, digital technology has also provided more opportunities for surveillance, control and exploitation of already marginalized or lesser developed communities (Helsper, 2012; Ye & Yang, 2020). This is especially true for the continents of Africa and Asia where gaps between gender, development, literacy, political participation and cultural richness are already present. For example, the Ethiopian government has used low-level penetration of the internet as a strategy to

consolidate its power in post-war satiation to avoid criticism (Gagliardone & Stremlau, 2011). These facts indicate a need to investigate the role of the digital divide in ethno-political conflicts from new perspectives.

## Understanding tension in Balochistan

Baloch is one of the oldest tribes in the world. Balochis are an ethnic entity living in an area located in Balochistan province of Pakistan and also in Iran and Afghanistan. The British deprived the Balochi population from opportunities in education and economic, social and cultural fields after their rule in the 1870s. It maintained its hold by providing Balochi sardars with guns and money and aggravating the conflicts between them (Tate, 2003; Malik, 2013).

During the partition of India in 1947, the majority of Balochistan Shahi Jirga members favored becoming a part of Pakistan. The Khan of state of Kalat reluctantly signed accession to Pakistan later on 30 March 1948. The first Balch unrest happened in 1948 when some Baloch factions not in favor of this act created unrest, and that was dealt by Pakistan armed forces. The second unrest happened during 1958–1969 when Balochistan, with other provinces of the west, was merged as one political unit in 1955. This caused feelings of marginalization and neglect to grow deeper and caused a lot of turbulence in Baloch areas.

The third unrest in Balochistan occurred during the period of 1973–1977. Events occurred after the general elections of 1970, and the becoming of East Pakistan as Bangladesh led to an armed fight between Baloch Guerillas and Pakistan armed forces that caused death casualties on both sides. The recent unrest in Balochistan began in 2000 after a gap of three decades. Major events that led to this include the killing of Justice Nawaz Marri of Balochistan High Court and the arrest of Nawab Khair Baksh Marri and later events such as the murder of three Chinese engineers in Gwadar, the attack on Chief Minister convoy in Sui, the Dr. Shazia killing case and, later, the most significant was the death of Nawab Akber Bugti on 26 August 2006 in a bomb blast (Ahmed, 2017; Devasher, 2019; Malik, 2013; PIPS, 2012; Qadir; 201).

A deeper security, political, economic, ethnic and socio-o-cultural analysis of ongoing unrest in Balochistan shows that the situation is complex and multifaceted with different strategic layers and players both locally and internationally. The expansion of Chinese economic and strategic interests in Pakistan and CPEC has also made US unhappy with China (Ahmed, 2017; Tate, 2003). Pakistani government officials have claimed that they have evidence of Indian involvement in Balochistan unrest. Irrespective of the veracity of such claims, an analysis of region geo-politics in an international context reveals that India has been using Balochistan against Pakistan to divert the attention of Indian acts of violating human rights in Indian-held Kashmir that are obvious to the international community (Hashmi, 2015; Qadir, 2016).

In the post–9/11 scenario, the strategic importance of areas adjacent to Afghanistan increased, and Balochistan's geo-strategic location also created

problems for the population living there. Several incidents of terror attacks happened in Balochistan, and hundreds of innocent civilians lost their lives. The sectarian element in Baloch unrest surfaced with more intensity when a Hazara community belonging to the Shia sect of Islam living in Quetta was targeted. It is reported that more than 2000 Hazara ethnic persons have been killed throughout the last sixteen years of terrorist attacks (NCHR, 2018). Balochistan is also facing the human rights issue of missing persons. According to the Human Rights Commission of Pakistan, 47,000 Baloch and around 35,000 Pashtuns are missing (HRCP, 2019).

## The digital divide and Balochistan

Pakistan is a developing country that sees a potential to progress due to its young population segment making more than 27 percent (age 15–29 years) out of a total population of 215.25 million (PTA, 2021). It can only capitalize on the potential of youth if they are trained with the latest on-demand skills, especially in digital media. Successive governments in Pakistan over the last twenty years have planned and executed many programs to implement the plans to digitize Pakistan. Despite some serious efforts, access to digital technology is not as widespread as it could be. Despite the tall claims of the government, international agencies show a different picture. According to International Telecommunication Union (2015) data, Pakistan falls among the lowest-access countries of the world for digital technology access with a score of 2.20 where the highest score is 8.80 of South Korea (The World Bank, 2021). Similarly, Pakistan stands at position seventy-five among seventy-nine countries ranked by Global Connectivity Index (CGI) for ICT investment, ICT maturity and digital economic performance (Huwei.com, 2021). In Pakistan, there is a lot of difference in the data when it comes to digital access. According to the Pakistan Telecommunication Authority (PTA), there were 172.3 million mobile phone users by Oct 2020, and by Jan 2020, 94.51 million (i.e., 41.6% of population) were internet users.

In Balochistan, 37.26 percent of the population have mobile phones, whereas in other provinces, this percentage is higher (e.g., Punjab 46.2%, Sindh 45.56%, Khyber Pakhtunkhwa (KPK) 44.68%), and Pakistan's average is 45.3 percent (PTA, 2021). According to the Pakistan Bureau of Statistics (PBS) Report on Pakistan Social and Living Standard Measurement Survey (PSLM) from 2019–2020, there is a clear digital divide in Balochistan (see Table 6.1). Table 6.1 shows availability of computers or laptops, mobile and internet in terms of percentage of households (PBS, 2021).

The data clearly indicates Balochistan's situation in digital space is at the lower level compared to other provinces and the average available digital technology in Pakistan. In Pakistan, the digital divide is present at several levels. It is not only driven by economic factors and socio-cultural background but also by politics. A marked difference in digital availability in different provinces shows that Punjab and Sindh enjoy better access than others. This is because

*Table 6.1* Households in four provinces of Pakistan with computer/laptop, mobile and internet as shown in PSLM 2019–20 by PBS (2021)

| *Area* | *Computer/laptop* | *Mobile* | *Internet* |
|---|---|---|---|
| Pakistan | 12% | 93% | 33% |
| Punjab | 13% | 94% | 34% |
| Sindh | 10% | 91% | 32% |
| KPK | 12% | 95% | 33% |
| Balochistan | 06% | 92% | 21% |

these provinces have lesser strategic significance compared to Balochistan and KPK, which have remained centers of strategic interests during the last two decades due to border areas with Afghanistan and Pakistan's involvement in the WAT. Moreover, Balochistan has been facing unrest and tension due to its disagreements with the federal government, and there are reports of involvement of foreign miscreants, too, in that unrest has created a reason for government in the federal capital to keep digital technology under control to discourage the narratives that they consider dangerous to the federation of Pakistan.

There are several reasons that can be attributed to the digital underdevelopment of Pakistan. These include political instability, historical legacy of control on communication means by governments, inconsistent policies on digital technologies, flaws in higher education systems where high impact research is nonexistent, economic difficulties, involvement in the WAT and conflicts with neighboring countries, especially with India, and the traditional cultural mindset of the population.

## Method

Data for the study was collected through semi-structured in-depth interviews. A total of twelve interviews were conducted from individuals belonging to six districts (two from each) of the provinces of Kalat, Makran, Nasirabad, Quetta, Sibi and Zhob. Interviews were conducted between June 2021 to August 2021.

Interviews were conducted from the age group of twenty-five to forty having a minimum of sixteen years of education and being actively involved in social welfare and political activities in the communities over the last five years. Both face-to-face and telephonic means were used. Data was either noted or recorded as per the consent of interviewees. The data was transcribed and discursive events were analyzed by applying SIMPHC (Subject, Intent, Medium, Purpose, History and Culture) categories for CDS analysis technique as described by Shi-xu (2014).

Subjects are analyzed for speaking/hearing actors, real or potential, who are (not) speaking/listening, in what social position and in what capacity.

Intent/form/relation was analyzed for verbal as well as nonverbal actions and their constituted social relations; what is (not) said/done and how; how it is responded to; and what kind of social relationship emerges. Medium was analyzed for the use (or unuse) of communicative mediums, channels, time and place and how they are coordinated. Purpose/effect is analyzed for goals, effects and consequences of communicative action; motives, reasons, causes of the interaction and its result; and social, cultural, political, economic purposes and effects of communication events. Culture is analyzed for concepts, principles, rules, norms, representations and strategies; artifacts of a community and relations in terms of power with communities; identities and characteristics of a community; and collaborative and/or competing relations with other communities. History is analyzed for processes, relations, directions of changes of discourses in all the categories noted earlier (Shi-xu, 2014). Analysis is done from the perspective of CDS for the digital divide in Balochistan.

## Analysis and discussion

Following is the analysis and discussion for the research questions on the data collected. This section explains data according to Subject, Intent, Medium, Purpose, History and Culture (SIMPHC) categories.

### *Subject*

The situation of digital accessibility in terms of mobile networks, internet and telecommunication infrastructure in Balochistan has affected the construction of true Balochi subjects in discourses. It has produced a narrow, limited and stereotyped Baloch identity that is only concerned with their peculiar ethnic mindset. This sort of subject position is more common at higher institutional hierarchies in politics and administration. In a scenario created by the digital divide, fake actors who do not have a substantive geographical or ethnic base usually emerge and tend to dominate the discursive space. As the Balochistan case of the digital divide is also due to a tussle between power elites in the country, more fake subject positions are created for dummy actors who do not share ethos with the land of Balochistan. CDS also draws attention toward the absence of real subjects in discourses (Chen, 2013, 2001; Warshauer, 2004).

These fake subjects have also occupied the mainstream media in Pakistan. An interviewee states, 'Balochi people must use digital technologies and make their presence visible on social media, otherwise, their true self will be lost'. This 'dummy actors' phenomenon is also important for external players who want to use the Balochistan situation for their vested interests in the pursuit of their regional hegemony. It is found that fake actors are also creating negative subject positions for Balochi people. They are using different maneuvers to suppress real Baloch identity that tries to emerge in digital discursive spaces. To achieve that goal, efforts are also made to create hindrances in the development of infrastructure for digital technology.

The positive aspect of this complex situation was narrated by one of the interviewees: 'power of digital technology lies in its ability to empower any individual who has something to share; and for those, who could share reality through this, the power is manifold'. Balochi youth are potential actors who have so much to say, and they are gradually using digital spaces for that purpose. They are using it for both getting their rights and creating awareness of their suffering, thus creating subjects known as 'informed and aware', 'resilient and activist' as well as 'angry and dissatisfied'. When digital inaccessibility in terms of infrastructure, gadgets and skills is created, then every individual and group involved becomes deaf to the situation. The real, true and authentic representation of 'who' and 'what' is missing. Interviewees state that there is a serious lack in knowing who real Balochis are, what they are aspiring for and 'how they share commonalities with the modern world with their unique identity'.

The digital divide has created silence in the Baloch population, especially for those who are well aware of their rights and know about the exploitation they are facing from local Balochi tribal elites, federal government and other factors. Marginalization and hegemony created in the discursive space by any means, that is, by restricting the availability of internet and other digital infrastructure, not providing required skills for digital technology, and so forth, are creating an absence of real Balochi subjects from the digital discursive space. It means a Baloch person who is as Pakistani as any other person and who deserves all the rights to create his/her identity; who believes in diversity, tolerance, inclusivity, modernity and patriotism; and who has the potential to excel in his/her life economically, culturally and politically is found missing. In these subjects, the majority are from the young segment of the population. One interviewee said, 'females live in silence in Pakistan and Baloch females live it two times; being Pakistani and being Balochi'. The non-listeners for the Balochi ethos include stakeholders in Pakistan's federal system, people living in other provinces and individuals and groups having power to affect policymaking.

The digital divide has mostly affected the individuals living in places other than big cities, such as Quetta, Turbat, Khuzdar, Hub, Chaman, Gawadar and Dera Murad Jamali. Low digital availability affects the population in a uniform manner. Any privilege in socioeconomic status or influence on local politics and education becomes irrelevant when it comes to the digital divide in Balochistan. One interviewee states, 'if mobile signals are not available or you are facing no or low internet connectivity then it makes no difference if you own an expensive iPhone or you are not having any mobile at all'. Digital inaccessibility is causing others to hold a short-sighted image of Baloch people; others' misunderstandings about them are affecting their political, economic and social progress. The unavailability of digital access is also linked to the political ideology of individuals and groups.

The movement and congregation of Balochi groups who have grievances with state of Pakistan is also affecting digital access in those geographical areas

where they emigrate and where quality of service was better before their relocation. This aspect creates a condition for digital divide where whole territory is affected irrespective to the difference in its status of infrastructure facilitating internet connectivity. Therefore, it creates a similar status for all divide.

An analysis of the data shows that the reduction of digital space has created opportunities for many fake representatives of the people of Balochistan province to step forward and create false claims and do propaganda. These individuals and groups have no empathy to the natives.

This position also affects the role of natives in times of any unrest and conflict. The possible resolution of conflicts requires a proactive role by real representatives who are present on the ground and in various discursive spaces. The lack of digital access has made those representatives vanish from the scene.

***Intent***

The emerging situation of the digital divide in Balochistan has given birth to new forms of social relations that are driven by movements of dissent, protest and political struggle (violent and nonviolent) and a deep sense of deprivation that can only be overcome if Balochi voices are listened to with empathy and seriousness. Analysis of data shows that dominance created by directing discourses enforced through power mechanisms gives birth to oppressive sociology where a desire to transcend and transform the existing social and political condition is the most powerful binding factor between different groups. This is evident in Baloch society, too, where a deep sense of collective deprivation has caused them to forget many of their differences on one hand and has also given birth to new fault lines in their society on the other hand. The case of bridging differences between the Balochi and Pashtun ethnic rivalry needs special attention. The collective political struggle to get their rights has caused them to move forward. The use of social media and other digital spaces have also played a role. The Hayat Baloch incident is a clear example of the effects of the use of digital technology for new social relations and purposes. One interviewee stated the following:

> Hayat was from Kech district and enrolled in University of Karachi. He was killed by security forces as a suspect of blast. The campaign on social media with #JusticeForHayatBaloch played an important role in creating awareness on the issue and finally Hayat's family got justice.

There has been an increase in the exposure of Balochi youth toward the world outside their native areas due to their admission to higher-degree institutions across the country. Other than experiencing a much advanced higher educational environment, they have also experienced a digitally enriched environment where mobile phone service is the best in the country, internet speed is either 3G or 4G and a vast set of opportunities are available to get trained in advanced digital skills. The same youth, when they visit their native areas in

Balochistan, become disconnected to the world, to their peers and mentors. The exposure of this digital dividend has enabled them to critically analyze and compare the digital accessibility situation in Balochistan and other provinces along with its reasons and consequences.

In the recent COVID-19 pandemic, when all educational institutions across the country were closed and education was shifted to online mode, Balochi students faced the toughest situation in their studies as they had very poor access to internet and digital resources to continue their education online. It was widely reported, too (Rehman, 2020). One interviewee stated the following:

> Many protests were staged by students against online education during the pandemic because of poorly developed telecommunication infrastructure and internet connectivity. In that context a letter was also written by senator Mir Kabeer Ahmed Muhammad Shahi on June 12, 2020 to the chairman Senate of Pakistan demanding to restore internet services in various districts of Balochistan.

A detailed analysis of historical events in Balochistan shows the use of power in dealing with unrest and conflicts. Officials attribute this use of force to dealing with the involvement of foreign elements in creating unrest and instability in the country, but interviewees were very cautious while making any reference to these historical facts. Respondents also mentioned the surveillance and monitoring of digital spaces, And they were skeptical while discussing the true reasons for that. During the interviews, they also expressed a sense of gratitude for having an opportunity to narrate what was closer to their hearts. They found feelings of empathy in telling their stories on the digital divide and discursive spaces available and unavailable to them.

### *Medium*

The choice of words by the respondents indicates a combination of opposing sentiments, including anger, complaints, pessimism, optimism, resistance, confidence, frustration and patience. They used phrases like the following: 'situation is same for many years'; 'they know the opportunities available to them when they use internet'; 'no one listens to youngsters'; 'we are struggling'; 'there are some developments in recent years', 'but the pace is slow'; 'we understand our land is vast and it's difficult to provide proper infrastructure'; 'we have faith that Balochistan will rise and shine'.

### *Purpose/effect*

Respondents shared their insights on the situation of digital technology availability to the Balochi population and their representations in digital space. They were eager to share their concerns, complaints and achievements, too. It was obvious that they found this research as a means to share their insights

with the local and international community at a larger level. A majority of the interviewees declared the situation as dismal and described federal and provincial governments, bureaucracy and security officials (known as establishment), sardari system (tribal system) and involvement of international actors in the region as a main cause of their sufferings due to lack of digital infrastructure. This aspect is related to the CDS concern with the role of globalization factors for causing suppression in discourses and the existential condition of communities (Destradi, 2010; Shi-xu, 2009a).

Some interviewees also mentioned the vast terrain of Balochistan, geographical difficulties and the low density of the population per square km as the reasons for not getting the rightful share in digital technology. As the interview progressed, interviewees use of words and sentences became comparatively optimistic, and one could find a resolve that they would be able to get their share in the dividends of digital technology in near future. Phrases like 'we are resilient', 'we know that we have to raise our voice to get our rights' and 'we are making efforts peacefully' are found frequently. It is revealed that Baloch's efforts to get their rightful share in digital technology and infrastructure is for all possible purposes, including political, social, ethnic, cultural and economic, and it is reflected in their discourse.

Economy emerges as an important variable from the data. An analysis of the current situation and historicity of different factors shows that all political events have caused economic suffering for Balochis. The geo-strategic location of the province makes it the most vulnerable to any change in US foreign policy. This is due to US strategic maneuvering with China, India, Iran, Afghanistan and Russia and Pakistan's strategic partnership with the US since the Cold War. This aspect of findings is directly related to assumptions of cultural discourse theory that mention the colonial, hegemonic and imperialistic natures of discourse that tend to create perpetual dependency (Anastassov, 2018; Shi-xu, 2014).

Interviewees state that many youngsters have utilized the availability of digital technology for their economic benefits, too. There are online e-commerce stores and websites from where these young Balochi are working. It is revealed that youngsters are unhappy that there are limited opportunities available to them to learn digital skills in Balochistan. Computer science is not taught in many colleges at the higher secondary school level. One interviewee lamented the following:

> There are shortcomings from the youngster's side too. Majority is only taking it as a means of communication to their families and friends and for entertainment purposes. They are not realizing that this technology can improve their economic conditions as well as empower them to take their political rights.

Digital technology has created awareness for the Balochi culture. It enjoys immense tourism potential due to its beautiful geographical terrain and cultural richness. One interviewee stated, 'we have the most beautiful beaches in the world, but their potential is wasted just like human resources living here'.

He continued, 'There are many efforts being made by the governments in recent years to utilize the potential of Omara, Pasni and other beaches as well as Gwadar port, but the discourses related to security tend to hamper all'. Cultural discourse theory also posits that dominating and manipulative discourses tend to affect development potential of the affected population (Shi-xu, 2005). Analysis shows the word *security* as a compass to direct thoughts, discourses and actions of the majority of people in Balochistan. Fear is a direct product of this that gives birth to either resistance or submissiveness. Politics is a central concept in the lives of Balochi people. They want a change in political structure, either by political struggle, armed resistance or by discursive means. The deprivations they are facing in the availability of digital technology and suffering caused by it also create political activism in them. Cultural discourse theory also draws attention toward the political nature of hegemonic discourses dominating the nation's political, social, cultural economic and communication systems around the world (Shi-xu, 2005).

### *History*

The issue of the digital divide in Balochistan cannot be fully understood without historical context. Pakistan has seen several years of dictatorship. The jolts to democratic political setups started just after the six years of its independence in 1953 and continued in 1958, 1971, 1977 and in 1999, which collectively covers more than thirty-three years of its seventy-four years of history after independence. Other than direct military rule, there have been democratic regimes that are considered rulers in a civilian garb but fundamentally run by army establishments (Ahmed, 2017). These autocratic governments have kept the Pakistani citizens deprived of their fundamental right to freedom of speech. Media in every dictatorial regime was badly affected. Rulers used a variety of tactics, mechanisms and laws to curb freedom of speech. This situation has given birth to a mindset in Pakistan that dislikes civil liberties and likes control. This historical progression has also affected the growth and availability of media platforms in Pakistan (Ali & Khalid, 2012).

British colonialism has taught the local rulers that a situation created because of deprivation can be best dealt with by creating fake subject positions that pretend to represent the affected groups in two possible ways: one, to assume a leadership role for the community but advancing the discourses and agendas of the dominating class and consequently creating more deprivation for the community; and two, by creating negative labels for the subjects that exclude them from community. Both techniques are practiced by ruling elites in Pakistan for Balochistan issue. The results are obvious: there is a sense of alienation present among the population, especially youngsters, and they declare a dearth of opportunities to communicate their feelings is a major reason for that. One interviewee stated the following:

> We are familiar and have an understanding of global connectivity available through digital technology. This experience of sharing yourself, your

> culture, your potential and achievements to all those who can relate is the essence of global connectivity available through digital technology that youth in Balochistan is missing.

CDS also draws attention toward these aspects of discourses. One important reason for the underdeveloped digital space in Balochistan is the traditional tribal and Sardari system. The majority of the sardars see digital technology and social media as a threat to their power. These sardars also enjoy political power in provincial and federal governments. They pose a hurdle in making policies aimed at developing digital infrastructure in Balochistan. It was surprising to know that the majority of the young generation of these sardars have the same mindset. This mindset can be considered a historical continuation of events that led to unrest in Balochistan after independence in 1947 when Khan of Kalat triggered the unrest. Findings reveal an interesting connection between the digital divide and the historicity of an undemocratic mindset when analyzed from the lens of colonialism (Pardo, 2010; Van Dijk, 2005).

Analysis of data also reveals an important connection between sectarian conflicts, economy, violence and digital spaces in Balochistan. The Hazara community of Quetta has remained the worst affected by sectarian violence in recent years. A historical analysis reveals the Soviet Afghan war in the 1980s, the war against terrorism in the 2000s and manipulation by external players who want to use that for destabilizing Pakistan and creating propaganda against it played an important role in it. In the case of the Hazara community, the economy is also considered an important factor as they used to have a major share in the trade of Quetta that was affected due to sectarian violence. The limited digital space available to people deprived them with an opportunity to ease out unrest and resolve the situation by creating and disseminating the discourses that could portray a real situation and create empathy for the Hazara community, but a weak and limited digital space was the real hurdle. This aspect is linked to the assumption that digital exclusion creates and aggravates violent conflicts (Khan et al., 2010).

### *Culture*

Balochistan is not present in digital spaces the way it deserves. There is a gap in understanding who Balochi people are and why they are caught in multiple conflicts. It is found that Balochi youth want to be connected with the world. Data shows that there is an inherent motivation among the youth to show to the world that their intellect and abilities are not lesser than anyone else. They feel that Baloch identity is stereotyped and they are being represented either as 'rebel' or 'traitor' or 'conservative' or 'traditionalist'. Their representation shows them as different from other Pakistanis. This is because they have lesser resources and digital availability to show who they are. Their representation is controlled by dominating classes in the country who have more control and access to means of communication, including digital space (Ahmed, 2017). Similarly, their representation shows them as highly ethnocentric and biased

individuals and groups who are resistant to change, innovation and development. One interviewee stated the following:

> Although pessimism and frustration among youth is rising when they experience that nothing is changing and whatever is changing that is too at a very slow pace. Connectivity drives success and that is not available to us because we are being controlled not only by dominating discourses but also through infrastructure and facilities.

Interviewees also drew attention toward monitoring of digital space in Balochistan. One stated the following:

> It feels as if we are under observation and this feeling increases when we use mobile phones or internet. The monitoring and breach to privacy is a permanent phenomenon in Balochistan especially for those who are living in the areas that have more security and political tensions.

Availability of the internet has affected power dynamics in Balochistan from every possible angle. This is a main reason why development of digital infrastructure is low in the province. The development of YouTube channels, Facebook pages and WhatsApp groups has created new stakeholders in power structures in the province. This has made establishment, sardars, international players and local elites worried. One interviewee stated the following:

> In digital space the power is enjoyed by those whose discourses connect to the audiences. Therefore, locals who are telling the stories on digital media that share ethos of communities for their highlights and lowlights and represent the true Baloch identity enjoy more belonging to the natives.

The use of digital technology has created a new identity for youth where they want to transcend the historicity linked to them. This global perspective to Baloch identity is a hallmark that is made possible due to digital technology. One respondent stated the following:

> Earlier there were only limited opportunities available to be connected, to be known by others and to know others, but now the scale of opportunities has increased. . . . there is a fundamental difference when we use traditional means of communication and use of digital technology; here we have more power to tell what we want to and what our culture is.

On the other hand, when digital technology becomes available, they show who they are. One participant stated, 'fame of 14 years old Balochi singer Arooj Baloch and rap music sensation Abid Brohi are examples of Balochi talent in arts and culture that represent the modern face of the soil'.

The same characteristics of digital technology that are empowering to any repressive community are also proving to be disempowering and creating opportunities for control over them. One respondent stated the following:

> There are many fake pages on Facebook, Instagram and twitter accounts that try to project an unrealistic picture of the Balochistan situation. These unreal and fake representations of culture tend to deprive the opportunity for audiences living in other provinces of Pakistan as well as internationally. If digital space will not show the problems, deprivations, sentiments and aspirations of underdeveloped communities then the chances to solve them will be minimized.

It is found that relations of Balochistan with other communities have strengthened. Discourses need material, organic and tangible connections to be connected with other communities. To elaborate this point one respondent explained the following:

> The image and recognition of Baloch identity, culture, structure and systems are best understood when Balochi youth got opportunities to study in different Universities in other provinces. It created a dialogue between youth of different ethnicities. That dialogue challenged hegemonic and dominating discourses and mindset. The role of digital technology was facilitating that objective. That dialogue created new opportunities for new discourses of identity, anti-hegemony and pro-development to emerge.

It is found that these processes were impeded when those youngsters had to return to Balochistan after the completion of their education because of low resources for the internet and other digital technology available to them at their native places. The experience of unavailability of digital technology has given birth to a new adversarial relationship of Balochi youth with multinational companies in the telecommunication sector. Youth generally believe that, despite the fact these telecommunication multinational corporations (MNCs) operate in capitalistic mode and make profit from subscribers, in the case of Balochistan, they are following strategic guidelines of keeping the development of telecommunication infrastructure low only to please the elites in policymaking and implementation at federal and provincial governments, bureaucracy and establishment. This is because these telecommunication companies cannot operate without government facilitation. Therefore, a complex web of interests between politicians and bureaucracy is formed that tends to dominate material and discursive resources in the peripheries or marginalized areas and population (Stager, 2005; Van Deursen & Van Dijk, 2014). This dominance of material and discursive resources by elites creates sentiments of resentment, anger and frustration that are reflected through the discourses of the deprived population. Consequently, the relationship is adversarial.

## Conclusion

This study finds that the approach of cultural discourse studies (CDS) provides an essential theoretical lens to understand and analyze the conditions of dominance experienced by communities within nation-states. CDS is effective in understanding and explaining the status of dominance for the communities at both the global and local (nation-state) levels. This study has described the case of Balochistan to develop an understanding of the role of the digital divide from a CDS lens in explaining the conditions of dominance and marginalization.

The digital divide deprives communities the opportunity to represent themselves in their true essence, resulting in a condition of suppression for them. This effect is more prevalent for the communities already suffering from ethnic and political unrest. This study finds that the digital divide is affecting the potential of the Balochi population to break down stereotypes attached to their identity. In the absence of required digital technology, it becomes easier by dominating forces to create dummy actors to alter the discourses. The historicity of events and identities play their role in perpetuating dominance if not countered by active community engagement, and digital technology can play an important role in it. Cultural artifacts are also manipulated by the forces of domination due to the inability created by lack of access for natives to participate actively in digital discourses. Construction of true Balochi subjects is compromised. Therefore, Balochis are misrepresented due to their lack of control of digital resources. Many identities are obscured and hidden, and those that are highlighted represent fake actors for the marginalized community. Marginalization factors, including gender and geographical remoteness, exaggerate the identity crisis.

In Balochistan, a sociology of dissent has emerged over the years that has bridged the decades-old ethnic rivalry between Pashtun and Balochi factions and created new fault lines on the political and administrative fronts. One finds visible elements of resilience in the discursive constructions of affected communities. New relations of an adversarial nature are emerging between various sections of natives in Balochistan as well as between natives and forces of domination. It explains an evolving nature of exploitation and dominance wherein discourses take on different shapes with the progression of diminishing discursive spaces if required digital resources are unavailable.

In the case of Balochistan, the tangible and intangible resources are not available for the discourses to develop connection with other communities. Therefore, representation of its people is in the control of dominant groups that stereotype them according to their vested interests. It is also found that communities feel optimism and are motivated when they are connected to the wider political, social and cultural discourses due to use of digital technology. The solution to the problems faced by the Balochi population is to open up digital discursive space for all communities, let their ideas be nurtured and let the youth find opportunities to engage with the political, economic, social and cultural domains.

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# 7 Digital inequality in Africa's ethnic minorities

## A case study of Zimbabwe's Shangaan and Tonga marginalised communities

*Lungile Tshuma and Trust Matsilele*

### Introduction and background

DiMaggio and Hargittai (2001) argue that, as internet penetration increases, students with unequal access to the new information technologies should shift their attention from the "digital divide" – inequality between "haves" and "have-nots" – to digital inequality, by which we refer not just to differences in access but also to inequality among persons with formal access to the internet. Digital inequality research has established that people from less privileged societal positions are less likely to be internet users, and when they do go online, they tend to partake in fewer capital-enhancing activities than their more privileged counterparts, a finding that has been consistent across several national contexts (Tshuma et al., 2022a; Hargittai & Dobransky, 2017). Digital inequality emerges on a worldwide scale due to differences in access to and use of information and communication technologies (ICTs). As Liu et al. (2017) argue, digital inequality, which is a new phenomenon in the current information era, will widen the gap between developed and developing countries/regions. For most countries in the Global South facing acute economic and political challenges, the divide is even more pronounced. In this seminal work, we look at digital inequalities among two of Zimbabwe's ethnic minorities – Shangaan and Tonga marginalised communities.

The past two decades have witnessed a rapid growth in the proliferation of ICTs. This acceleration is in part being informed by global policymakers and targets such as the Sustainable Development Goals (SDGs). However, societies are experiencing different forms of digital inequalities or divides which are in turn affecting the levels of appropriations (Tshuma et al., 2022b; Msimanga et al., 2022; Mututwa and Matsilele, 2024; Nkoala and Matsilele, 2023). As the World Bank (2021, p. 5) report opined, countries like Zimbabwe are "currently capturing only a fraction of this growth potential and need to strategically invest in the foundational elements of their digital economy to keep pace and avoid being left behind". This is even more pronounced when one looks at communities often marginalised due to cultural, language and geographic reasons. This study looks at the digital inequalities among marginalised

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communities in Zimbabwe, often characterised as *ethnic minorities*. Writing on this, Ndhlovu (2007, p. 131) noted the following:

> The notion of ethnic minorities is a highly contested subject that cannot be fully explained in terms of demographic facts alone as it is indexically linked to struggles over sociopolitical power, cultural domination, and control. Ethnic minorities must be conceptualised as fluid and transitory phenomena mediated and reconstituted by various forms of discursive practices.

For this study, we selected Zimbabwe's two ethnic minorities: the Shangaan/Tsonga and Tonga ethnic groups. As (Fought, 2006, p. 4) advances, "ethnicity is a socially constructed identity, which is constantly defined and redefined". Agreeing with Fought's view, Thondhlana (2014, p. 1) intimates that, "the question of 'group identity' is often complicated by a number of concepts that are involved in explaining it . . . human beings find comfort in belonging". However, for most ethnic minorities, group identity comes with isolation from national resources and power (Tshuma & Sibanda, 2024; Ndlovu et al., 2019). In this study, we argue that, for Zimbabwe's ethnic Tonga and Shangaan groups, successive governments have done little to ensure ethnic minorities have the benefit of full citizenship rights. Digital inequalities are one of the challenges facing ethnic minorities.

Mutula (2005) argues that the concept of the digital divide has been defined in different ways by different authorities. The digital divide is a phenomenon linked not only to the topic of access to the internet but also to the one of usage, internet penetration and usage benefit (Fuchs & Horak, 2008, p. 99). Reporting on internet penetration, the international rights watchdog Freedom House (2021, n.p.) observed that "in March 2021, the Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) reported an internet penetration rate of 60.9 percent, an improvement from the rate of 59.9 percent reported in December 2020". While on paper these numbers look promising, the challenge of access presents a challenge for a country battling exorbitant internet costs in an economy where 60 percent of the citizens as of 2022 are facing acute food insecurity (IMF, 2022).

Commenting on the same issue, Dube (2021, p. 11) argues that "although the term 'digital divide' was usually used to describe differences in ICT haves and have nots, its use has been expanded to include the inequalities in the use of and outcomes from ICTs". Spectar (2000) agrees, postulating "digital divide" in terms of inequitable access to ICTs, such as PCs, internet, telephones, cable, and other internet-related technologies, by individuals or groups of people in a country or between countries. This view is given weight by Ishaq (2001, p. 44), who opined the following:

> The Digital and information revolution presents a historic opportunity for developing countries to take a quantum leap forward, develop their

> own productive and creative capacities, and become integrated into the global virtual economy. However, Internet density (users as a percentage of population) is still much higher in industrial countries, as well as in affluent and educated communities in every country, than elsewhere. The Internet threatens to magnify the existing socioeconomic disparities, between those with access and those without, to levels unseen and untenable.

Discussing the concept of the digital divide, Van Dijk (2002) observed four areas of access that needed more focus: (1) lack of elementary digital experience caused by lack of interest, computer anxiety and unattractiveness of the new technology ('mental access'); (2) no possession of computers and network connections ('material access'); (3) lack of digital skills caused by insufficient user-friendliness and inadequate education or social support ('skills access'); and (4) lack of significant usage opportunities or unequal distribution of them ('usage access'). The model he developed from these four elements is presented later for easy illustration.

To help curb the potential excesses of the digital divide, the United Nations has been pushing for more digital access and inclusion. The UN Conference on Trade and Development (UNCTAD) released a report in 2019, finding that "concerted global efforts are required" to better distribute gains from the digital economy and minimise the digital divide. The report recommends increasing assistance to support countries that are lagging, building capacities in the public and private sectors and strengthening the enabling environment for value creation. The same report (UNCTAD, 2019, p. xvi) observes that "the expansion of the digital economy creates many new economic opportunities. Digital data can be used for development purposes and for solving societal problems, including those related to the SDGs".

Countries that are lagging on digital access and density also suffer loss of potential benefits presented by the digital economy. The digital economy has recently come to mean "the way digital technologies, services, products, techniques and skills are diffusing across economies" (UNCTAD, 2019, p. 4). This process is often referred to as digitalisation, defined as the transition of businesses using digital technologies, products and services (Ragnedda & Gladkova, 2020). A report titled the 'Digital Economy Report 2019' finds that the digital economy is highly concentrated in the United States and China, while the rest of the world is "trailing considerably far behind", especially countries in Africa and Latin America. In the least-developed countries (LDCs), one in five people use the internet, compared with four out of five people in developed countries. The United States and China account for 90 percent of the market capitalisation value of the world's 70 largest digital platforms, more than 75 percent of the cloud computing market, 75 percent of all patents related to blockchain technologies and 50 percent of global spending on the Internet of Things (IoT). Under current regulations and policies, the report

predicts that this trajectory is likely to continue, contributing to increasing inequality.

## Digitisation in Zimbabwe: what do the numbers tell us?

The internet and other ICTs are argued to be transforming society, improving mutual understanding, eliminating power differentials, realising a truly free and democratic world society and providing other benefits. Digitisation is being strained by issues of access, the quality of connection and issues related to literacy. These aspects contribute to the level and pace of digitisation. In Zimbabwe, for example, out of a population size of just more than 17 million people, only 8 million people are described by the Internet World Stats as "internet users", demonstrating the challenges with the digital divide. This leaves the other half unconnected or connected by not fitting the category of internet users. This means, even with the rapid pace of digitisation being advocated for globally, the country's other half is set to be excluded from the information flow of the future because of the reasons mentioned previously but worth repeating here: access, affordability and literacy. This view stands opposite to what Ishaq (2001, p. 45) argued: "Today, there is virtually no technological constraint preventing access; even a remote village or a faraway hamlet lacking both telephones and electricity can be connected to the Internet using a satellite dish and solar power". This was in 2001, and in Zimbabwe, issues of access to electricity, for example, remain existential challenges when it comes to digitisation two decades later.

A review of the sector performance in the internet space demonstrates the challenges Zimbabwe is facing. As of January 2022, there were 4.65 million internet users in Zimbabwe, demonstrating an increase by 265,000 (+6.0 percent) between 2021 and 2022 (Data Reportal, 2022, n.p.). For perspective, these user figures reveal that 10.56 million people in Zimbabwe did not use the internet at the start of 2022, meaning that 69.4 percent of the population remained offline at the beginning of the year. This figure alone shows that while the country is registering signs of growth in internet usage, there are also some regressions in areas like internet penetration.

The rapid drive on digitisation is underpinned by the fact that ICTs are increasingly becoming more of an essential need as they become increasingly crucial to the provision of basic services such as health care and education, which are essential to maintaining sufficient living standards. This was confirmed by Zimbabwe's then Information Minister, Monica Mutsvangwa, who told Zimbabwe's broadcaster the following:

> The way we are pushing for the digitalisation agenda is our commitment to complement and support all your efforts (ZBC staffers). We are confident that we will soon manage to procure the remaining digital transmitters and set-top boxes and complete the value chain.

This view was also supported by Zimbabwe's then ICT and Cyber Security Minister, Kazembe Kazembe, who told the International gathering of ITU the following:

> With regards to the Vision 2020 targets, we are doing our best in fostering growth in the ICT sector where we have witnessed unprecedented growth in the use of internet bandwidth: achieving 86% of the 3G population coverage. In our quest for an inclusive information society, we are using our Universal Service Fund to roll out Community Information Centres in all corners of the country, connecting schools and health centres mostly in rural and remote areas. On the demand side of things, we have deliberately directed our efforts on reducing cost of services by maintaining a cost-based tariff regime, mandating passive infrastructure sharing and establishing a National Internet Exchange Point, which will double up as a Regional Internet Exchange Point. We have also embarked on massive training, education and awareness programmes for broadband consumers targeting the remote areas to build confidence and security in the use of ICTs. On the innovation front, we have started disbursing funds for start-ups following the successful launch of the Innovation fund in March 2018.

However, submissions by Kazembe seem to be blind to other realities ordinary Zimbabweans face when it comes to digital access. Writing on challenges Zimbabweans face, Ndlovu (2009, p. 1) concedes the following:

> Zimbabwe just like most African countries basically faces several hurdles to roll out effective computing technologies to the general population. Rollout issues and challenges do include but not limited to; – cost of computers and equipment – inadequate access technologies (data & voice) – inadequate electricity – poor national & international bandwidth – regulation and licensing – Censorship and control – brain drain & lack skilled manpower & I.T. certifications – poorly designed and optimised websites – egov.

**Cultural discourse studies**

This chapter is informed by Shi-xu's (2005) research program titled Cultural Approach to Discourse, or CAD. According to Shi-xu (2005, p. 4), CAD is "an 'interrelated research system' with its own epistemological, theoretical, and methodological principles as well as a set of empirical commitments". The theory was developed following criticism of the Critical discourses analysis, which is regarded as "universalistic" and not culture specific (Scollo, 2011, p. 2). As such, CAD takes knowledge and reality as social, symbolic and cultural constructions (Shi-xu, 2005, p. 4). Theoretically, CAD is open to multiple viewpoints. CAD positions itself "between cultures", examining power

relations between discourses "from a global-and-local position and views discourse as a diversity of 'language games' in competition with each other" (Shi-xu, 2005, p. 5). Therefore, this approach helps us understand inequalities that exist within a given context or society.

Thus, a study that is informed by cultural discourse studies "strives to undermine culturally repressive discourses, that is, those discourses that dominate, exclude or discriminate against groups and communities on the ground of 'cultural difference', be it historical, geographical, ideological, racial, ethnic, or linguistic" (Shi-xu, 2005, p. 8; Scollo, 2011, p. 4). Hence, the aim of researchers should be to create and practise a form of discourse research that is locally grounded (viz. exhibiting cultural identity and usefulness) and globally minded (viz. capable of engaging in international dialogue and showing global, human concerns) (see Scollo, 2011). Three key issues inform the application of this theory, and these are "the oft obscured cultural nature of discourse scholarship; the actual cultural diversity and division of human discourses; and the achievements, resources and conditions favorable for the construction of CDS". Hence, the inequalities that exist in Zimbabwe can only be understood and meaningful within the socio-economic and political dynamics in the country. Considering that these chosen communities have been marginalised by the nation-state which does not dedicate or channel resources to equip them, the CDA approach will help to unpack the challenges which these communities are facing. Through our work, we also hope to advance the understanding of discourse and endeavour to create and advocate new or alternative discourses that are inclusive, non-hegemonic and collaborative about cultural "others". I shall call it a transformational strategy (Shi-xu, 2005, p. 68).

## Methodological consideration

This chapter examines the digital inequalities amongst the marginalised communities through conducted interviews with selected participants. We used purposive sampling where we selected individuals we knew were going to give "detailed exploration and understanding of the central themes" (Ritchie & Lewis, 2003, p. 78). In-depth interviews were conducted with opinion leaders. Selected participants included traditional leaders, government officials, civil society organisations and activists. Our data was composed of 10 participants from each selected group – Shangaan and Tonga. Owing to COVID-19 travel restrictions, some of the questions were conducted online. For data analysis, this chapter used thematic analysis to analyse interviews conducted with respondents. According to Braun and Clarke (2006, p. 82), thematic analysis is "a method of identifying, analysing and reporting patterns and themes within data". Thematic analysis can be semantic and latent. The former involves detecting themes at "the surface or semantic appearance", and the researcher will not be looking for anything beyond what is captured by the text (Bryman, 2016). The latter requires going from description to a deeper meaning of what the data is all about, and it is through this form that a theory

can be developed based on patterns that might have emerged (Braun & Clarke, 2006). Braun and Clarke (2006, p. 79) further note that this method "tends to provide less a rich description of the data overall, and more a detailed analysis of some aspect of the data". In this study, the interview data was collected into themes and analysed. This then helped us to see and make sense of collective or shared meanings and experiences of Zimbabwean journalists in their use of surveillance strategies in reporting. In the next section, we look at the findings and analysis of the study.

## Discussion

This study focused on two ethnic minority regions: the Shangaan group found in the Chikombedzi area of the Chiredzi district of Zimbabwe and the Tonga ethnic group in Binga district, Matabeleland North province.

Shangaan, also called Tsonga in South Africa and Changana or Hlengwe in Mozambique, is categorised in the Zimbabwe Education Act 1987 as a minority language because of its number of speakers (Mabaso, 2007, p. 317). Hachipola (1998) notes that the term *Shangani* is a generic name used to refer to the followers of Soshangana, who was one of Zwide's military leaders. Soshangana, a Tsonga himself, migrated northward and settled in present-day Zimbabwe. The Shangaan people are a minority ethnic group concentrated in southeastern Zimbabwe. They are found in the southern districts of Masvingo Province, mainly Chiredzi South and Mwenezi. There are also very few numbers of them in other districts like Zaka, Masvingo South and Mberengwa. Shangani-speaking communities also reside in Southern African countries like Mozambique, South Africa and Swaziland.

The Tonga people are found in the Binga district, the biggest in the Matabeleland North province with a population of 139,092 people as captured by the country's last census report. Binga is located south of Lake Kariba and along the Zambezi escarpment with Zambia being across the lake. The district has plenty of water from the Zambezi River, but it's perpetually in a drought. Since independence, the district has remained underdeveloped. While the district has one of the country's attractive hot springs, the district hasn't benefited from its revenue. One of the biggest challenges in Binga is poor road network and infrastructural development, the neglect of which the district has consistently been complaining about. As a result, the school has one of the highest dropout percentages as children must walk close to 20 km to access a nearby school (Tshuma & Ndlovu, 2022). To date, most of the children learn under trees as the district is yet to have proper learning facilities (Tshuma & Ndlovu, 2022). Mumpande and Barnes (2019) observe that the valley Tonga are the third ethnic group in Zimbabwe and some of the most marginalised people in the country. On the literacy rate, the Zimbabwe Human Development Report (2009) in the Human Development Index by province in Zimbabwe indicated that "out of a total of 83 districts surveyed in Zimbabwe, Binga recorded the lowest adult literacy rate of 63.4 percent, whereas average years of schooling were pegged at 3.5 percent". On internet connectivity, Moyo-Nyede and

Ndoma (2020) note that only 7 percent of people in rural areas have access to computers, while 63 percent of the rural population "never" go online.

Chikombedzi district is one of those remote areas that are still lagging due to underdevelopment (AllAfrica.com, 2018). Chikombedzi is located about 120 kilometres southeast of Chiredzi town in southeast Zimbabwe. It is hot and dry and in natural region five, which receives low annual rainfall totals of around 600 mm (Nhandara, 1989, p. 38). The area has surface water scarcity with a few large and seasonal rivers, which flow through Chiredzi South. Ground water is abundant, but salty. However, the area is good for ranching and has heavy clay soils, which are suitable for crop production, for example, in the small-scale commercial farms and communal farms around Chikombedzi District Service Centre. Its dryness has also made available land for wildlife management in Gonarezhou National Park. On communication, the place has been cut off the grid as the major parts in the district do not have access to communication, and there is poor infrastructure. In 2010, the communication problem was eased when ECONET and NET ONE constructed cellular phone communication systems. Per every eight people, two are connected to NET ONE Cellular phone network and four are connected to ECONET Cellular phone network, as illustrated previously.

**Digital participation vs. education levels**

The communities under study are in remote areas where governments give limited attention to development and social issues. The interviews demonstrated that, for various reasons, these communities are marginalised. While the world has gone digital, marginalised communities remain under development as they have no access to the internet while communication gadgets remain a preserve for the elite. An official in the Binga Rural District Council said they have, for many years, been marginalised. He stated the following:

> To start with, our road network is very bad and for such, telecommunications have not been invested in our area. To be honest with you, we are not part of the digital world because of such neglect. The only people who are within the grid are those that are close to Hwange while the rest are still in the dark and yet to own cellphones.

Similar sentiments were expressed by the respondents from Chikombedzi in Chiredzi South District.

> Our area is one of the most neglected by the successive Zimbabwe administrations. We do not even have a reliable transport network which is road and rail, what more internet and digital connectivity? Most of our young people who succeed in crossing borders to either Mozambique or South Africa are the one who end up bringing back cellular lines from those countries which are more reliable when it comes to connectivity.

One of the challenges these rural communities face emanates from the failed government policy which in most cases affects those at the margins the most. These were the views of another interviewee who responded, indicating that the aspect of digital technologies should be understood within a broader government development policy. The interviewee said the government has "neglected marginalised communities because they are not part of the power matrix. Our neglect is tribal because we are seen as an inferior tribe. As a result, we are orphans in our own backyard".

Respondents further indicated that their neglect, which is rooted within their culture, has resulted in their communities being left behind educationally. For such reasons, their schools are underdeveloped, which impacts how they adopt technology. A traditional leader in Binga said the following:

> We have heard of WhatsApp which other people are using but for us it's a challenge because we don't have access to the internet. There are no schools here and that's a challenge because schools teach our children how to use computers.

In Zimbabwe, the Tonga-speaking community is one of the few communities that are yet to have proper schools. Pupils travel long distances to access schools and are still learning under trees as the government hasn't invested in infrastructure in the said communities (Mupa, 2015). To add more, Matabeleland North province is one of the poorest provinces in the country with the least number of schools. To date, the province remains the only province yet to get a teacher training institution. In Binga, where this study is located, "most children rarely proceed to secondary education due to distance and lack of food as most resources are diverted towards meeting household food insecurity" (Tshuma & Ndlovu, 2022, p. 2). The earlier discussion demonstrates that one of the key causes of such inequalities is due to the marginalisation of 'minority cultures' and based on "geographical", "racial, ethnic or linguistic" (Shi-xu, 2005, p. 8). In Zimbabwe, political power, which also feeds into economic power, has largely been reserved for Zezuru-, Karanga- and Ndebele-speaking people (Ndlovu & Tshuma, 2021). While the Tonga ethnic group are regarded as part of the Ndebele-speaking population in Matabeleland province, they are seen as less important when compared to other ethnic groups.

A similar trend is observable in Chikombedzi, a community that as recently as 2021 was targeted by the government for forced relocation to give way to one of the President's friends, a businessman who owns Dendairy (Ncube, 2021). The Zimbabwe government gazetted the Statutory Instrument 50/2021 which sought to evict more 12 000 Chilonga villagers to set up a lucerne farming project by Dendairy.

> The Tsonga people of Zimbabwe do not wield any form of power in this country. They are treated like foreigners which in part explains the broader government neglect. This neglect is reflected through targeted attacks on

> the community like the recent failed plan to evict from our ancestral lands to give way to grass farming. It is only tribes that enjoy political dominance that are taken seriously in this country. Therefore, we don't have schools and the few we have are understaffed which lead to many dropouts and cross border jumping to either Mozambique or South Africa.

The Chikombedzi area shares a border with South Africa and Mozambique. These border regions of the two countries are also dominated by Tsonga people, which can be explained through the prism of migrations of the early 19th century and the Mfecane wars (Matsilele et al., 2023; Chauke et al., 2021, Bill, 1984; Gump, 1980; Wright, 2006). As Makondo (2012, p. 1) rightly observes, "in a multicultural society such as those of Zimbabwe, South Africa, Nigeria, the Democratic Republic of Congo, the USA and others, language diversity exerts a powerful influence on the content, methods of instruction and outcome of school". Due to competition over resources, the Tsonga people of Zimbabwe, among other minority languages, have been disenfranchised when it comes to education as they were 'forced' to study not in their native languages but in Shona, the dominant ethnic language in Zimbabwe, as primary language and English. This, as Makondo (2012) points out, contributes to the rate of performance by Tsonga students and, subsequently, also impacts the rate of school dropout. These were the sentiments expressed by another interviewee:

> When people are uneducated or inadequately educated, they fail to participate in the digital world as it requires some level of education. This means, most of our people who were denied education, structurally, or due to economic pressures have no way of being digital citizens and therefore don't participate in the benefits of this digital economy.

**Participation**

In the digital world, citizens connect via the web and participate in decision-making. The outbreak of COVID-19 witnessed growth in the use of communication technologies owing to the need for social distance. Due to digital inequalities, marginalised communities are being excluded from participating in discussions that involve their well-being. In this study, we argue that digital inequalities have led to a further marginalisation of ethnic minorities. We further argue that their marginalisation should be understood within Zimbabwe's cultural and socio-economic environment. A senior government official based in Matabeleland North province indicated that while the world has gone digital, his province is yet to get connected. He noted the following:

> Participation is key in any community. Budget consultations are being held online. However, our case is different in that most of the province has no electricity. Children don't know what a computer looks like.

> There is no access to the network, and all this shows that our people are being left behind.

This view was equally shared by a respondent from Chikombedzi who mentioned that participation required not only digital tools but connectivity as well. The last census conducted in Zimbabwe established that the proportion of households occupying dwelling units without electricity ranged between 80 percent in Chiredzi Rural, an area with our case study, Chikombedzi (ZimStat, 2012). Electricity is a crucial element when it comes to digital participation. An interviewee had this to say confirming challenges faced by people in this area:

> People in our district struggle to connect to any of our available networks. This means, most of the stakeholders' engagements that had to resort to the virtual sphere due to the pandemic have had to be moderated via third party or through our representations. This therefore means that our people are excluded from actively participating in our democratic culture.

There has been considerable scholarship (Gladkova & Jamil, 2021; Matsilele et al., 2021) that has sought to understand the extent of inequalities that ethnic minorities face in the Global South. Scholars in the Global South argue that digital technologies are empowering marginalised groups to articulate their issues through forming 'imagined communities' (Matsilele et al., 2021; Mpofu & Matsilele, 2020). However, due to the inequalities that marginalised groups are facing in Zimbabwe, their participation has been thwarted, and this shows that these groups have had their democratic rights crippled. In this milieu, some of the respondents indicated that they want to have access to the internet in order to promote their culture and be part of the digital society.

One of the respondents said the following:

> We are not part of this society [digital]. To be part of this society we will need a holistic understanding of the issues at hand. These include a government that recognizes our culture, investment in technology, infrastructural development and investment in primary and secondary education.

Another respondent added the following:

> Ours is a fight for recognition. Are we part of Zimbabwe, or we belong to a country next to our border? Our exclusion is historical, cultural, and political. It will take ages for us to be part of the digital world.

The same concern was raised in Chikombedzi where a Tsonga interviewee mentioned that the treatment they have received from the government was illustrative of what successive administrations think of minorities:

> We are now used to being strangers in our country of birth, in part because we are a small minority group with little influence when it comes

> to national politics. The approach by the government requires a revisit if we are to fully contribute as Zimbabweans. However, as it stands, we are treated as lesser citizens which is why the government can continue with public engagements mediated through the internet without consideration of those who are not digital natives.

The findings noted earlier confirm the validity of the cultural discourse studies where local structural inequalities determine the nature in which one must understand the differences and inequalities that exist within a given cultural society. For such reasons, this study supports the view that action should be taken "to unlearn, deconstruct and decolonize the universalizing (but in fact West-centric) ways of thinking, speaking and practicing discourse research" (Shi-xu, 2012, p. 497). As such, digital inequalities, in this study, are due to the local structural issues where the state is not investing in marginalised communities. While the government, through the telecommunication parastatal company NetOne, has the duty to serve the entire community, the result on the ground shows that marginalised communities have been neglected. In sum, digital inequalities that exist in Zimbabwe have led to lack of participation in various governance issues.

**Literacy level and inequality**

Closely tied to discussions on digital inequalities is literacy. While Zimbabwe is one of the African countries with a high literacy rate, marginalised communities have lower literacy levels. To begin with, the lack of proper schools and poor road networks have resulted in communities not receiving proper education. Digital literacy is about individuals having the skill and know-how to exist in an environment dominated by digital communication and technological advancement. According to the Afrobarometer report of 2020, 45 percent of people in Zimbabwe live in places outside the electricity grid. Digital inequality is worsened by the fact that internet usage in rural areas remains very low at 11 percent as opposed to the urban areas, which stand at 49 percent. More so, Masvingo province is one of the provinces with least access to telecommunication gadgets at 7 percent, while Matabeleland North performs better with 17 percent of the population. Against this background, one of the respondents indicated that their community faces several challenges that have seen them failing to "have skills to connect to the digital world":

> People don't have knowledge of how to use computers. There are primary and secondary schools in other rural areas that teach computers. For us, it's a different story. Our children grow up to become adults without seeing a computer. We are lagging and it's very sad.

Another respondent added the following:

> People understand better when they are taught using their own language. In our cases, our students learn using IsiNdebele which is not

> their language. Such linguistic issues which are part of our culture are important in being part of the digital world.

Similar sentiments were expressed in the Chikombedzi area, which has high illiteracy levels. A census conducted in 2012, the last one done in Zimbabwe, demonstrated that the Chikombedzi area under Chiredzi Rural had the highest illiteracy levels in Masvingo province. In the ZimStat (2012) census, a district comparison shows that, of the population which had never been to school, the highest proportion was in Chiredzi Rural and Mwenezi district (54 percent). This percentage, a decade old, shows more than half of the residents in Chiredzi Rural had never been to school, which also means there's a high probability of less to no participation in the digital world. An interviewee had this to say:

> We have very high illiteracy levels in our district, in part due to under-investment in education in our area. We also have a secondary challenge which is language policy. Our people are instructed in Shona and English, which are foreign languages, and, in most cases, they never encountered them until they went to school. This means most who end up dropping out would have struggled to cope with basic comprehension issues.

For decades, marginalised communities have been calling on the government to prioritise their culture. However, the government has started prioritising local languages by introducing public examinations and offering them during primary education.

As shown in the previous discussion, digital inequality is being enhanced by the government's failure to invest in primary education. More so, one of the causes of these digital inequalities is the mere fact that these digital technologies are using English as a medium of communication. For such reasons, this chapter supports the key tenets of CAD, especially the transformational strategy, which "endeavors to create and advocate new or alternative discourses that are inclusive, non-hegemonic and collaborative with regard to cultural 'others' " (Shi-xu, 2005, p. 68). For such, digital inequalities in Zimbabwe are due to various hegemonic forces that perpetuate dominant discourses.

## Conclusion

This study looked at digital inequalities among ethnic minorities in Zimbabwe. Findings demonstrate that the Shangaan and Tonga marginalised communities have lower literacy levels owing to poor infrastructural developments. Like most ethnic minorities globally, the ethnic minorities of Zimbabwe face reduced resource investment and marginalisation when it comes to social infrastructure, and often they are lumped together with hegemonic groups (Hlungwani & Matsilele, 2023). Writing on the Khoi ethnic group

of Botswana, which applies to these groups of Zimbabwe, Chebanne (2010, p. 87) observed the following:

> they (the Khoi) are generally marginalized, and their ethnic and social identity is completely eclipsed because in Botswana they are lumped together in cultural and language development with the main society, and this has only exacerbated their plight as they are reeling under assimilation and marginalization.

The resultant impact of such cases is that these marginalised communities fail to participate in decision-making and communication with their fellow citizens in the virtual space. While Western theories have largely looked at digital inequality as caused by several economical forces, the study confirms the CAD view that inequalities that exist can best be explained using local political, religious and social contexts. This chapter demonstrated that the Western understanding of discourse does not hold as inequalities are culture-specific and can best be resolved through local solutions. Therefore, this chapter supports the CAD approach as it allows us to fully understand the inequalities that exist in Zimbabwe. Key to our findings is that ethnic challenges, especially the marginalised Tsonga- and Tonga-speaking communities, are left to 'die' as the government has not invested in their respective areas, confirming a finding from an earlier study by Matsilele et al. (2021). Hence, their marginalisation is the biggest contributor to their failure to fully grasp or adopt technological advancement. The CAD reminds us that inequalities are culture-specific as opposed to the Western model which is universal (Scollo, 2011; Shi-xu, 2005). In this milieu, we argue that access to technology cannot solve the inequalities that exist; instead, there is a need to eradicate socio-economic stigmas and the marginalisation that results from the alienation of these ethnic groups from the rest of the society (see Tshuma, 2022).

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# 8 Cultural discourse analysis and digital inequalities in a multicultural context

## A case study of Manipur in India

*Padma Rani and Gracy Samjetsabam*

### Introduction

This chapter looks at the complex nature of digital inequality prevalent through the use of digital media or platforms in the multicultural, multi-ethnic, and multilingual state of Manipur in India. Intracultural and intercultural exchanges happen in digital mediums, especially through social media platforms, and influence both traditional and popular culture. It brings about an overall cultural shift in the people. The social constructs that are exchanged and shared through intracultural and intercultural communications contribute to gradual as well as rapid shifts. Digital media plays a big role in the emerging and newer trends that have moved into the lives of a multicultural society. Using a cultural discourse studies framework, this chapter studies the type of digital gap evident or prevalent, along with a cultural shift in the multicultural context in the small state of Manipur, that is locally relevant and may well be relatable and comparable in other parts of the country or the world. The chapter aims to delve into the nature of the digital divide in terms of gender, social, and access and the experiences that bring them to the crossroads of cultural exchanges, influences, and social change manifested in their representations as participants in digital platforms.

India has 28 states and 8 Union Territories, and the Northeast Region (NER) is a term given to the region in India that covers the small eight states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and Sikkim with "location, cultural and historical uniqueness" which is 8% of India's total geographical area and just 3.76% of India's total population (NCERT, 2017). Manipur is a small state with a multicultural society in India, a multicultural nation. According to Census 2011, Manipur is a tiny Northeast state with 16 districts in India with a population of 2,855,794 approximately. A model state in Prime Minister Modi's Digital India initiative to strengthen e-governance, in 2019, Manipur was awarded the Best Performing State in Northeast India in eProcurement for the financial year 2017–2018 (NIC, 2020). Also, the compulsion to increase digital media users during the COVID-19 pandemic and its impact on the multicultural, multi-ethnic, and multilingual state of Manipur makes it a compelling selection for the study.

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In a population of about 2.8 million, the state accommodates 58.9% of it as the valley population and 41.1% as the hill population. Several ethnic groups speaking the Tibeto-Burman language groups inhabit the state with the Meitei or Manipuri language being the dominant group and, along with English, the dominant language used in the state. More than 30 other tribes fall within the Naga or the Kuki tribes, which constitute the next biggest ethnic groups in the state. Situated in the easternmost part of India, Manipur shares a national boundary with Assam, Mizoram, and Nagaland and an international boundary with Myanmar, and it is close to the borders of Bangladesh, China, and Bhutan. Its location along with its social, economic, and demographic features are vital to understanding intercultural encounters in all quarters, including the digital space of the people in the state. Intercultural and intracultural communications that function within ethnic groups in changing times influence culture and social change.

## Review of literature

### *Digital divide*

In the 1990s, the phrase *digital divide* was made popular among researchers and policymakers to distinguish people "who do not have access to information and communication technologies (ICT)" (Van Deursen & Van Dijk, 2020). Van Dijk (2005) hinted at the ambiguity and drawbacks of the metaphor with more advancement in the access and usage of ICTs. The emphasis is shifting to new dimensions, which are inequalities of skills and usage. Mason and Hacker (2003) also implied that access and usage that work on presence or absence, closure or widening, are the main focus of digital divide research.

In a multicultural India, diversity is vastly ranged on the lines of ethnicity, language, religion, social identity, rural/urban, literate/illiterate, and so on. India faces a huge challenge in "maintaining language vitality in the context of the digital divide and the path ahead to bridge the divide" (Mallikarjun, 2004). Mallikarjun (2003) also observed that there seems to be an increasing demand for English and computer literacy in the formal sector, which automatically calls for a fallout in the mother tongue. James W. Neuliep (2017), in his book *Intercultural Communication: A Contextual Approach*, presented a strong contextual model in a series of concentric circles to help examine communication within cultural, micro-cultural, environmental, socio-relational, and perceptual contexts. Yi'an and Kulich (2014) elaborated on intercultural communication as a tool for understanding cultural and intercultural communication through the lenses of the social scientific, interpretivism, critical, and dialogic paradigms.

Gladkova et al. (2020) studied "Digital divide and digital capital in multi-ethnic Russian society" to note that in terms of digital capital, those "belonging to the main ethnic group" and "living in the big cities" have a greater digital advantage than the others in Russia. The study looked at the

relevance of ethnicity in the context of the local and cultural in examining digital capital from a cultural discourse studies (CDS) perspective to contribute to communication research and discourses (Shi-xu, 2016). Ragnedda (2017) in an earlier study stressed the connection between digital and social inequalities. The study called upon scholars and policymakers to jointly take an interest in the digital divide and emphasised that in multi-ethnic and multicultural Russia, democracy, freedom, and development can be enhanced with efficient internet, ICT information, digital skills, and literacy. Further, Vartanova and Gladkova (2020) probed into the thematic issue of multicultural discourses in "Emerging States" and discussed communication challenges in the digital age. Their study looked at digital communication as "soft power" in emerging states and how digital communication and media policies in these states support social, linguistic, and cultural group online and offline activities. These, in turn, support intercultural communication and social transformation and, ultimately, influence cross-cultural communication and identities of people from a CDS perspective.

A report in *The Sangai Express* (Jun 29, 2019) noted efforts of the government of Manipur to strengthen digital infrastructure projects, such as Common Service Centres (CSCs), State Wide Area Network (SWAN), State Data Centre (SDC), and e-District on the follow-up of the Digital India flagship programme of the Government of India.

A report by Hanghal (2020) pointed out the severe impact on internet outreach in Manipur due to the lack of possession of smartphones and poor connectivity during the ongoing COVID-19 pandemic crisis. Hanghal (2019) in another report analysed how, during elections, a social media campaign was a hit with the incumbent ruling party Bharatiya Janata Party (BJP), thus hinting towards efficient social media influence on the population of Manipur, although with digital gaps that weigh more on the female gender.

The Telecom Regulatory Authority of India (TRAI) report titled "The Indian Telecom Services Performance Indicators, October – December 2019" painted a pessimistic picture of a wide digital divide between the "urban and the rural areas" of digital access in the Northeastern states of India. Digital Northeast 2022 also emphasised bringing "transformation" with inclusive and sustainable growth in the lives of the people in the Northeast through leveraging digital technologies. The report also established a connection between the low connectivity and internet access in the rural areas of the region as a handicap in bringing fruitful results in the nationwide telecom project "Bharatnet" in the Northeast (*Sentinel Digital Desk*, 2020), indicating urgency for the state and central governments to take up innovative and multiple approaches or alternative solutions to bridging the digital divide before it moves into hampering the progress of the nation.

Digital access is a major concern in studying the relationship between people and information and communication technology (ICT). Policies are making way for an efficient digital India in a digital world. Globally, the United Nations Sustainable Goals 2030 has a number of goals that target and upgrade

the knowledge and skills required to promote sustainable development, for example, Goals 4, 5, and 9 (The General Assembly, 21 Oct 2015). The Whitaker Peace and Development Initiative (WPDI) observed that "many places, people and communities cannot access computers or the Internet" (UN.org, 2017). Nationally, the Ministry of Electronics and Information Technology (MeitY), Government of India (GoI), is in charge of policy matters related to information technology, electronics, and the internet. A report by Amit Kapoor and Deepti Mathur (2016) on bridging the digital divide for progress in India expressed the imperative to increase ICT access for enabling greater social progress globally.

***Cultural discourse studies***

> Cultural discourse analysis (CuDA) is an approach to communication which explores culturally distinctive communication practices as these occur in their everyday contexts, the meanings participants activate in those practices, as well as cross-cultural analyses of those everyday practices and their meanings.
>
> (Carbaugh & Cerulli, 2017)

Cultural discourse analysis (CDA) aids in generating meaning through the involvement of localised means of expression in communication. It focuses on the five aspects of identity, action, relations, feelings, and dwelling in nature. The methods that come into play in CDA include a combination of descriptive, interpretative, comparative, and critical studies. Further, a study of ICT in a multicultural context can be linked to the ethnography of communication (EC) approach that focuses on language and social interaction and moves into seeking to discover cultural particularities and general principles of communication. According to Carbaugh and Boromisza-Habash (2015),

> The approach foregrounds locally situated means and meanings of communication as its primary analytical concern. There are four philosophical assumptions in EC about communication, language, and social interaction: (1) communication is what people have made of it; (2) communication exhibits systemic social organization; (3) communication, language and social interaction are deeply and radically cultural; (4) and communication is formative of social and cultural lives. The approach is traced from Dell Hymes's and John Gumperz's pioneering works using a field-based methodology to more recent developments such as the theory of cultural communication, speech code theory, and cultural discourse analysis.

Thus, the approach highlights how the language and social interactions used in the means and meanings of communication in the local can be looked at to study cultural particularities of people and places in varied ways.

Syed Farid Alatas (2006) acknowledged various critiques of the state of the social sciences in Asia and critically called for alternative ways of studying the Asia-centric social sciences that go beyond the Eurocentric approaches to help better appreciate Asian realities and problems in the Asian surroundings so that research could continue to inspire, affirm, and legitimise scholarship. Shi-xu (2016) defined "Cultural discourse studies as an emerging paradigm of discourse and communication studies that is characterized by a profound concern with human cultural diversity, division, and development". Shi-xu reflected on the two-faced concerns: firstly, related to globalism in society and ethnocentrism in scholarship, and secondly, non-Western realities and knowledge to translate the lens into a multicultural paradigm under the assumption that contemporary human communication "is a site of cultural contestation, co-operation, and transformation". Thus, prioritising the furthering of philosophies; theoretical, methodological, and tropical levels of discourse; and communication studies.

Vartanova and Gladkova (2020) observed that "emerging states" that include countries like Russia, Brazil, India, China, South Africa, Argentina, Australia, Colombia, Iran, Saudi Arabia, Nigeria, and others are increasingly gaining attention in the world stage. Their historical, political, and territorial shifts; change in political regimes; and growing presence across the globe in culture and communication, besides making progress in economy and politics, have made it a fascinating time to make each a case study. A need to highlight cross-cultural communications in these "emerging countries" is discussed in the light of alternative ways of looking at communication systems through a cultural discourse studies perspective as one seen by Shi-xu (2016), or the impact on identity in nuanced ways. Bikhu Parekh (2006) defined identity as "how we understand and define ourselves", thus bringing out the dynamic and fluidity of the term. It enables us to see the identity of the self that emerges at that time or during that part of history under discussion. Liddicoat (2015) examined the aspect of "Interculturality" in a study that examines the importance of understanding cultures through the use of language rather than just as an encounter between "cultures".

The review of the literature revealed that various aspects contribute to the digital divide in multicultural India, but India has issues that are unique to itself. A small multicultural state within a country like Manipur can be studied by applying a CDA to present a case of the gap.

## Methodology

An exploratory preliminary study was performed among 123 participants who reside in various districts in Manipur. A qualitative study was carried out, wherein cultural discourse analysis was employed post-data collection through a questionnaire survey using a purposive sampling method. After which, telephonic in-depth interviews were conducted over a week in October 2021. All the participants were young adults belonging to the age group 20–40 years.

The participants belonged to multiple ethnicities, religions, and cultures and were multilingual; each were at least bilingual in any mode of communication they used. The participants were students, unemployed, or employed during the study. Further, the survey and voice call intensive interviews yielded results and discussion that enabled a better understanding of the nature of the digital gap prevalent in the state within the selected age group of the population. The findings are charted and further discussed within the framework of cultural discourse studies and interculturality to better understand the newer nuances of the digital divide that exist in a multicultural context. Consent was taken in the record from the participants before filling out the questionnaires and beginning the interviews.

## Findings

A mixed method approach is applied, and the findings of the study are divided into two sections: first, based on a preliminary questionnaire study, and second, an in-depth interview. The data collection was conducted from the purposive sampling made for the study within the age group of 20 to 40 years of age across cultures in multi-ethnic Manipur. The first section engaged with the basic details of ICT user, access, and experience; the section made a closer examination of the factors that brought out the complex nature of digital inequality as it encompassed influence and impact, both on the personal side and the society at large. The pattern in which the digital gap existed in the present scenario at the personal and local level in Manipur state, in a small region in Northeast India, could be of a small community or locale, but the globality of the nature of the digital gap that could be felt in various corners of the world is worthwhile. ICT plays a huge role in bringing changes in development, and we no longer can ignore the cultural influences it provides in intracultural and intercultural communication in various aspects of a person's life.

### *Findings based on the questionnaire study*

A total of 123 responses were received. A majority of the respondents with digital access were from the age of young people who were in their 20s with a maximum of 18% who were in the age group within 23 years. The age group was spread from 20 to 40 years of age to all participants across the multiple communities and tribes in Manipur.

The respondents variedly preferred to identify their community.

On the "Place of stay," most of the respondents were from different parts of the state across all the districts. Figure 8.1 shows the possession of laptops in the youth respondents with an alarming 37.7% still not having access to a laptop. Figure 8.2 shows a good number with 83.63% having access to the internet through mobile phones.

Figure 8.3 shows that 52.9% multipurposely use laptops for education, work, and socialising.

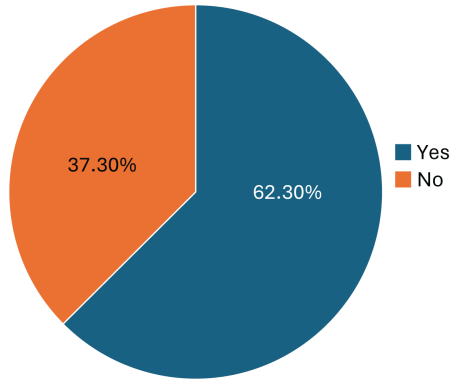


*Figure 8.1* Access to laptop of respondents

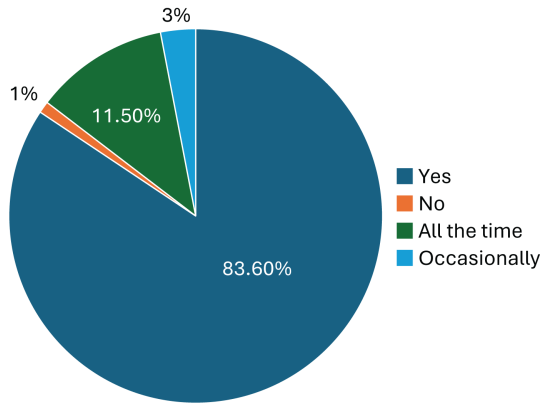


*Figure 8.2* Access to mobile phones of respondents

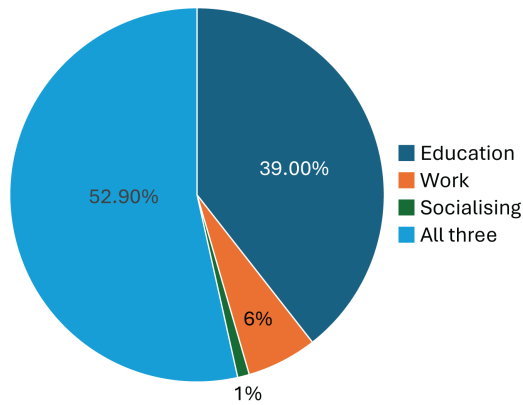


*Figure 8.3* Usage of a laptop by respondents

Figure 8.4 shows that the majority, 88.7%, purchased their laptops themselves.

Figure 8.5 shows that in total, 80.2% of the respondents had access and usage and in terms of access and usage of social media of respondents as per groups, the highest and most active were the community group users, followed by students' groups, and then family groups, as shown in Figure 8.6.

Figure 8.7 shows that digital access made them more connected with 53.8% following an upgrade in digital knowledge and skills.

Figure 8.8 showed 37.2% surety and 36.4% partially agreeing with the impact of digital use and its influence on personal communication and lifestyle.

Figure 8.9 shows that 56.2% of respondents stated that their whole family has access to digital technology.

Figure 8.10 shows that 55.4% of the respondents are from rural areas, whereas 42.1% are from urban locations.

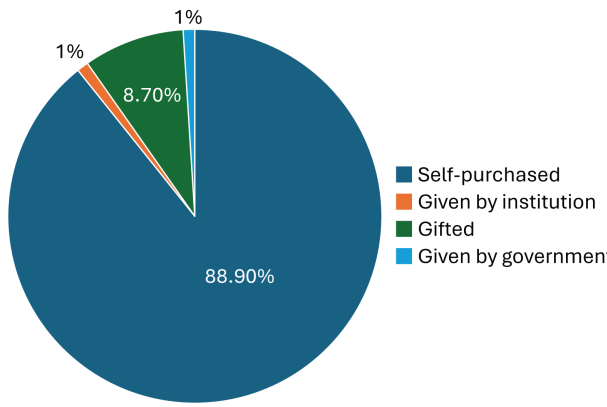


*Figure 8.4* Funding of digital devices of respondents

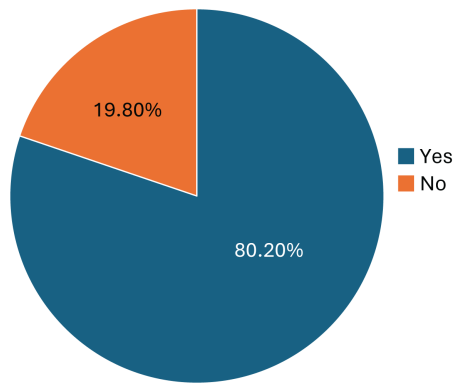


*Figure 8.5* Overall access and usage of social media of respondents

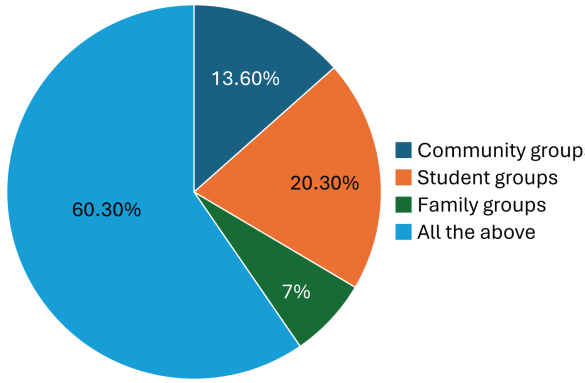


*Figure 8.6* Access and usage of social media of respondents as per groups

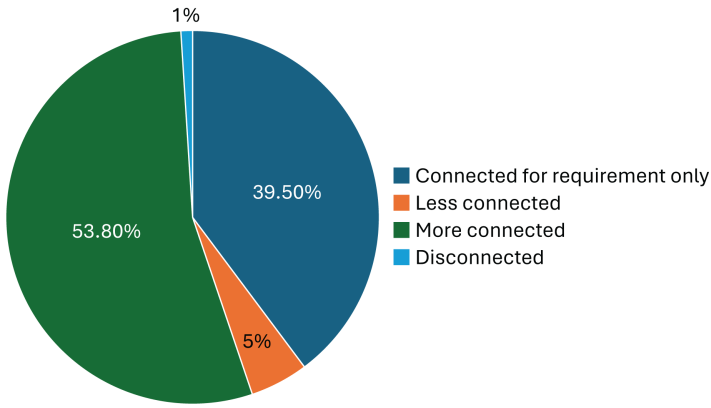


*Figure 8.7* Digital knowledge and skill of respondent

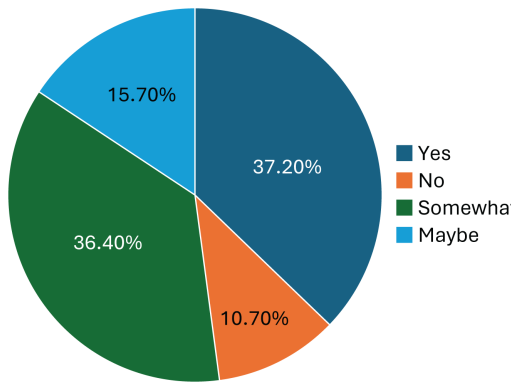


*Figure 8.8* Digital use and influence on respondent

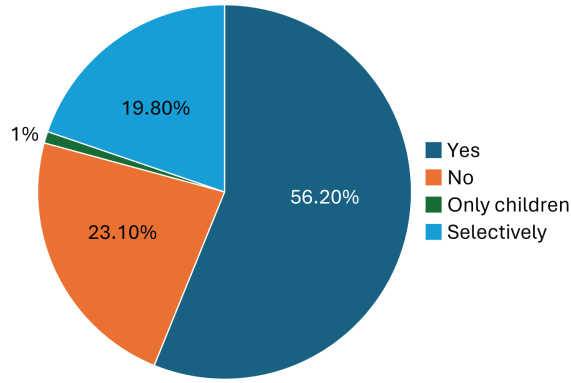


*Figure 8.9* Digital technology and access of respondents

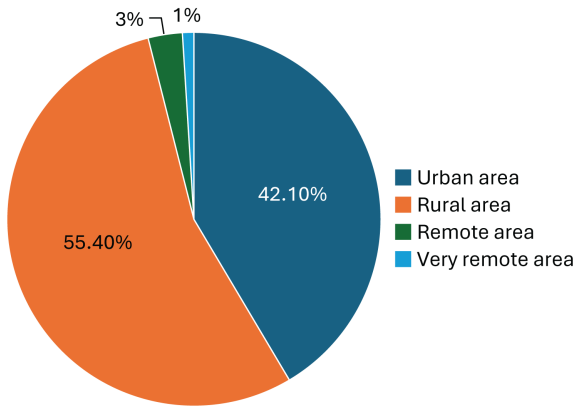


*Figure 8.10* Location of respondent (rural/urban/remote)

Figure 8.11 shows that 61% of the respondents think that their belonging to a community, be it multi-ethnic, multireligious, or multilingual, is no hurdle or barrier.

Figure 8.12 shows that 58.5% of respondents indicated that government facilities for digital communication were not equally accessed.

Figure 8.13 shows an almost equal percentage of users feel digital usage keeps them happy and unhappy. Figure 8.14 shows that 70.6% believe they received opportunities through digital access.

***Findings based on the in-depth interview study***

Five of the respondents were selected for an in-depth telephone interview. The interview was to gather comprehensive knowledge of the advantages, disadvantages, and challenges faced by being an active digital media citizen in a

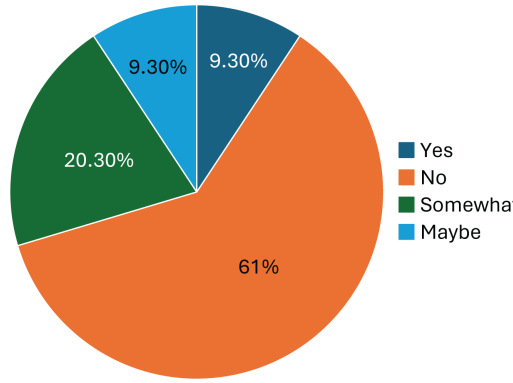


*Figure 8.11* Barriers to digital access of respondents

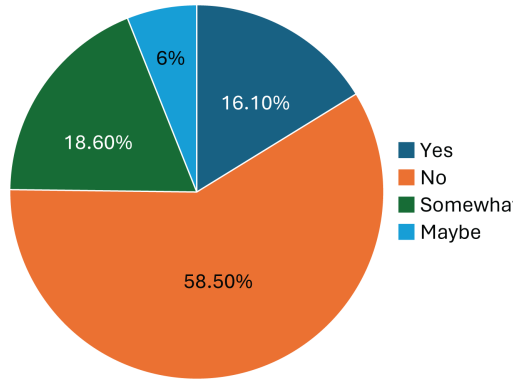


*Figure 8.12* Government policies and digital access of respondents

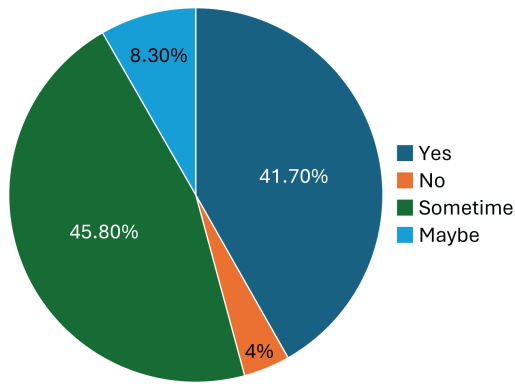


*Figure 8.13* Digital access and impact on self of respondent

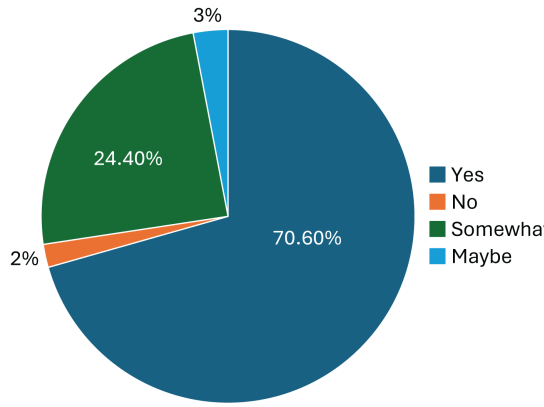


*Figure 8.14* Digital access and impact on opportunities for respondent

multicultural setting. Overall, digital usage supported by knowledge and skills has accelerated self-enhancement, especially during the pandemic.

Through the case study of Manipur, it is evident that the diversity in India reflects diversity in the digital divide, too. Digital inequality is observed in terms of access, usage, infrastructure, literacy, and skills and in terms of the personal and gender in the population. There is a digital gap due to the rural–urban divide in internet access and efficiency, and there is a socio-economic divide in the gap seen in the ownership of phones, laptops, or internet access facilities as is seen in the respondents from the urban district of Imphal and the rural district of Ukhrul or Senapati. In terms of gender, there are mothers who had to share internet access with their children during the pandemic to participate in classroom lectures or activities. There were cases in which the male members of the family were prioritised to access over the female members of the family. Among the members of a family that were left out on access, usage, and opportunities due to lack of digital literacy skills, a large section included the female folks in the household, especially the older female. Thus, many women experienced digital inequality in terms of gender and education. Culturally, on the one hand, despite the pandemic, intercultural and intracultural communication digitally continued to provide a platform with greater profit in access and opportunity, which is an advantage; and on the other hand, the exchange and influence through the varied digital platforms can be at a disadvantage as it can be a medium to give and take, words and actions, that can hamper unity of the multicultural communities in the state, or lead to cybercrime or harassment, bring gender bias, widen gender inequality, etc. Physical digital access and usage gap in multilingual and multicultural Manipur also affect the skills set of the population, thus impacting culture and growth of the people and place. This affects the cultural patterns' meanings and values that sustain growth and development in multicultural Manipur in democratic India.

## Discussion

From the findings, it is observed that digital access and usage in the small multi-ethnic and multicultural state of Manipur in India is taking new dimensions, even as a small player in today's globalised world. Communication practices in the realm of interpersonal and intercultural exchanges influence the impact of the small multicultural state of Manipur with a characteristic of their own "culturally distinctive" (Carbaugh & Cerulli, 2017) communication practices, and these impact the overall function and development of the country. In the case of Manipur in this study, it is observed that "language" plays an important role in determining the advantages and disadvantages of digital platforms, thus playing a major role in bridging or widening the digital gap in the state. For example, the *Manipuris* or the people of Manipur belonging to different communities use the English script, the Bengali script, or the traditional Meitielon script to communicate on social media with friends and family, who speak at least one of the languages Manipuri and English. Even when they use the English alphabet, they could be communicating in English or in one of the languages of the people of Manipur. This points at the distinct nature of communication that has always been there in multicultural Manipur and how it has shifted from the time when oral medium was used in the olden days to the digital mediums in today's times. Thus, in the ethnography of communication (EC) of multicultural societies, in the case of Manipur, too, "Means and Meanings" (Carbaugh & Boromisza-Habash, 2015) i.e., the language and the access and usage of means of communication are connected to the giving meaning to the growth and cultural nuances of the people and place from time to time. Therefore, an all-inclusive digital equality, through awareness of digital literacy, filling in the gaps of lack of infrastructure and technological facilities, and upgrade of skills and knowledge, is key to moving forward together as a nation in a multicultural society.

Researchers like Alatas (2006) have called for alternative ways of seeing the ICT and studying digital gap in terms of an Asia-centric social sciences and have drawn relevance to the changing times, and for which scholars like Shi-xu (2016) and others have drawn attention to factors such as the idea of the local, diversity in ethnicity, etc. Manipur's case in the study draws attention to the nuanced nature of digital gaps in Asia and the relationship of the local and the global in terms of the continual juggle of growth amidst gaps. The digital gap is one of the major hurdles to progress and development in a society, and it is necessary to explore alternative ways to cope with the nuances of the digital divide that may exist in multicultural societies across the globe.

## Conclusion

Social change, digitalisation, and the modern-day challenges in the process allow us to look at newer ways of understanding the world we live in today. Digital skills are an important asset in contemporary society (Van

Deursen & Van Dijk, 2011), and this case study on multicultural Manipur highlights it. It examines how digital skills and the digital gap observed in the access and use of people residing in the place can be a major indicator of the gaps in the growth of the culture and community. And so, digital gaps must be identified, and solutions must be sought to bring awareness and enhance digital skills from the local to the global. In interaction, interculturality involves the creation and interpretation of meanings between participants who do not share the same linguistic and cultural understandings but are residing and growing together within an economy, a community, and a state, and this requires participants to engage in processes of intercultural mediation and de-centring. Therefore, the penetration of ICTs in a society is one of the main parameters to assess societal development in a country. Today, countries with their developmental aspirations, and in the face of major hurdles like the COVID-19 pandemic, have all the more strengthened the relevance of assessing effective and inclusive ICT access and usage in our lives. The impact on ethnicity and society is harshly as well as positively felt. Social constructs and intercultural exchanges are inseparable. Notions of social constructivism can be analysed, and a re-reading of social norms can lead to greater awareness and progress in society. This chapter examined the nuanced nature of the digital divide that exists in the multicultural state of Manipur. A digital usage shift led to interpersonal and intercultural communication and cultural shifts. Similarly, a digital gap can lead to cultural gap. Cultural discourse studies, in working with the communication theories, provided a platform to look at the varied complexities in a diverse cultural society. In the case study, it is observed that digital gap exists in nuanced ways in multicultural Manipur. The need of the hour is to attend to digital access, usage, following and upgrading to newer trends, and working on the problems and solutions of people's lives through digital knowledge and skill upgrading. Despite the governmental efforts that have brought significant improvements in the digital lives of the people of Manipur, the digital gaps in digital access, usage, and skills in terms of the social, economic, rural–urban (geography), and gender in the multicultural northeastern state of Manipur in India still need attention to bring the state at par with the pace of the global digital world. It provides a case to help better understand the varied socio-economic and cultural nuances of digital participation that operates in different place and community globally, and the challenges or hurdles that need attention to a sustainable solution. It also shows the way to understand and look for meaningful solutions in cases where digital tools or ICTs can influence and bring the needed change in a diverse country like India. The current work is limited in scope as it is a preliminary study conducted using purposive sampling. Therefore, a larger selected sample size with a wider range of age groups that run across multi-ethnic, multilingual, and multicultural populations across the rural and the urban parts of the state, or gender representations of the data, would enable a more conclusive understanding.

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# 9 The digital divide and its significant impact on the emerging digital culture

## A study in Dhofar, Oman

*Sangeeta Tripathi*

### Introduction

In the era of digital globalization (Schilirò, 2020), many progressive changes have occurred globally, such as conducting business across borders, creating a multicultural work environment to enhance economic benefits, and broadening participation in several sectors. Oman is not isolated from these changes. Though the country's major ethnic group is Arabs, it shares multicultural societies due to expatriate workers and professionals from India, Pakistan, Bangladesh, the Philippines, Sudan, Egypt, Shri Lanka, and others. These expatriate groups share a multicultural bond with Omani society, and its impact can be seen in Omani cuisine, dress style, and family celebrations (Neal, 2010). Oman has experienced several changes under the leadership of Late Sultan Qaboos Bin Said. Several development efforts brought a cultural paradigm shift from traditional to modern Oman. The advanced education system and a new digital environment are their main driving force under the new leadership of His Majesty Sultan Haitham Bin Tarek; a new renaissance started where the government emphasized technology development and promoted the local information and communication technology (ICT) industry to accomplish Oman Vision 2040 (Yasin & Khansari, 2022). Its purpose is to build a solid foundation to get maximum advantage from technology and digitalization to meet the requirements of the 4th Industrial Revolution.

Like other countries, Oman's digital adoption accelerated during the COVID-19 pandemic (Al-Maroof et al., 2020), which required businesses and small and medium enterprises (SMEs) to adopt modern technologies (Mishrif & Khan, 2021). Along with this, academic institutions have entirely shifted to digital platforms. However, these changes have not been experienced so smoothly. According to Mohammed et al. (2020), significant challenges and extreme complexity unfolded due to digital adoption. A gap was experienced when all work and academic activities transferred to online mode because everyone could not use digital communication equally during a public health crisis.

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**The digital divide: a profound term**

The digital divide generally describes the gap between the *haves* and the *don't have*. This connotation has been suggested due to the word *divide*, which means gap. According to David J. Gunkel and Warschauer, the digital divide is the most discussed social phenomenon, uncertain and confusing (Gunkel, 2003) (Warschauer, 2012). Warschauer refers to the digital divide as social stratification due to the unequal ability to access, adapt, and create knowledge via ICT. Van Dijk emphasized that the digital divide echoes technological determinism (Van Dijk, 2006). Technological determinism proponents believe that new technology shapes and influences society (Hauer, 2017). Technology can determine history, social structure, and cultural values. Hence, the digital divide is considered a negative impact of technological determinism (Hauer, 2017). As the digital divide was previously considered a confusing and unclear term, its research and investigation of the concept had a narrow meaning and limited research area of physical access to ICT capital.

However, the digital divide is more profound than haves and don't haves. Some media and communication scholars use the term 'beyond physical access' because users need skills to operate ICTs (Hargittai, 2002). Media scholar Bonfadelli also stressed the skills required for different types of internet usage, and he emphasized its strong connection with a specific pattern of media use (Bonfadelli, 2002). However, other communication scholars, such as Ettema S. James, Gerald F. Kline, and Brenda Dervin, point towards situation-specific and motivational factors (Ettema & Gerald Kline, 1977; Dervin, 1980). Genova and Greenberg, like other scholars, also consider education to be an additional variable that accounts for the widening digital gap in different social groups (Genova & Greenberg, 1979). Van Dijk mentions in his book *Deepening Divide* that the issue of digital inequality does not connect only with physical access to ICT capital; it starts persisting in our social groups by including digital media in our daily routine (Van Dijk, 2005). That is why the digital divide raised several concerns and difficulties in different social groups during the crucial period of social distancing. Van Dijk's deepening divide was applied thoroughly because our lives were fully transferred to online platforms. Due to the new digital culture and connection with communication studies, the digital divide has been broadened beyond the IT research domain. It is no longer related to IT access and skill-based problems but has a social and cultural orientation. This chapter aims to explore the constructs of the digital divide in light of cultural discourse studies that have emerged as a new paradigm of discourse in communication studies. Digital inequality discourse is directly connected to cultural studies as it significantly impacts human lives and culture. Based on Shi-xu's cultural discourse studies, culture is an integral part of our life practices of a social community with others. It is complex and dynamic rather than fixed to people, time, or location (Shi-xu, 2014). The cultural dimension also identifies and classifies people based on their ability and skills to use IT capital and internet services.

## Theoretical models of cultural studies

Several theoretical models of cultural studies are available, such as the Edward T. Hall Cross-Communication Model (Edward & Hofstede, 2013), the Trompenaars Culture Model, the Schwartz Culture Model, and the Hofstede Cultural Dimension Model. They define and measure different cultural dimensions, scope, and variables to examine characteristics of specific cultural contexts. Hence, Edward T. Hall's Cross-Communication Model and Greet Hofstede's Cultural Dimension Model perfectly apply to the present chapter to discuss the theoretical paradigm of culture and its influence on the digital divide factors in the Omani context.

Edward T. Hall's cultural model (Edward & Hofstede, 2013) discusses ways of communication that differ in low-context cultures (nearly everything is explicit) versus high-context (much of the information is implicit). The second and third element is space and attitude toward time. In practice, this distinction overlays mainly with the traditional versus modern distinction.

Greet Hofstede's Cultural Dimension Model is based on five dimensions of culture. Later, two more were added, but only five dimensions were found relevant to the present chapter (see Table 9.1).

## Relevance of culture in the digital divide

Hofstede's cultural dimension model displays the several cultural variables that are determinants in accessing IT properties, motivation and material access, digital skills access, usage access, the context of opportunities, the reason for participation in society, and personal characteristics. Edward T. Hall and Hofstede's models help identify and classify the group behaviour, cultural competency, and skills required to utilize the technology entirely. Hofstede's cultural dimension model also explains information technology access inequalities due to cultural variables. He defined culture as collective mental programming software of the human mind that distinguishes one group member from another (G. Hofstede, 1991).

In the Omani context, Hofstede's definition is applied more closely. Despite the rapid transformation of Oman from a traditional to a modern society, the country has always remained in its roots (Sultanate of Oman, n.d.). Omani culture is still embedded in traditional clothing, food, arts, and crafts in every sphere of life. Omani hospitality is also royal in all senses. Oman's geographical location and inclusion of different tribal groups in the social structure make it tremendously diversified. Due to language differences between the coastal plain and mountain highlands, huge diversified societies can be seen in Dhofar, the southern part of Oman (Peterson, 2004). Since the Oman Renaissance in 1970, many socio-economical changes have taken place and enhanced physical and social mobility in these two regions, which have hundreds of kilometres of plain gravel desert. There is always a connection between the North and the South, but these two regions have different cultural orientations and trade

*Table 9.1* Cultural dimension model and cultural constructs for the digital divide study

| *Cultural Constructs* | *Reference* | *Description* |
|---|---|---|
| High Context/ Low Context (HLC) | (Hall, 1973) (E. Hall, 1976, P. 105) | The culture is divided into the ways of communicating in **high-context** (most of the information is implicit) and **low-context cultures** (mostly everything is explicit). In practice, this distinction overlaps mainly with the traditional versus modern distinction. |
| Time Perceptions (TP) Polychronic/ Monochronic | (Hall, 1973) | The degree of time is perceived as a variable.<br>**Polychronic** means a culture of doing many things. In this, the concept of time is free-flowing, and the changes depend on each situation.<br>**Monochronic** is characterized as a personality that accomplishes specific tasks at one time. They are usually strict with their plans and their short-term targets. |
| Power Distance (PD) (High/Low) | (Hofstede, 2011) | **Power Distance** has been outlined as the extent to which the less powerful members of the institutions/company (like the family) accept that power is distributed unequally. |
| Individualism versus Collectivism | (Hofstede, 2011) | The level of togetherness varies among individuals within groups.<br>**Individualism**<br>– 'I' – consciousness<br>– Right to privacy<br>– Personal opinion is expected<br>– Individual decision of the vote<br>– Task wins over the relationship<br>**Collectivism**<br>– 'We' – consciousness<br>– Stress on group's belonging<br>– The group predetermines the decision<br>– The group decides to vote<br>– Relationship wins over the task |
| Uncertainty Avoidance (UA) (High versus Low) | (Hofstede, 2011) | Uncertain situations browbeat the members of a group or culture.<br>**High UA**<br>– Not comfortable with the ambiguity inherent in life<br>– Take different conditions as dangerous<br>– Higher stress, anxiety, emotionality, and neuroticism<br>**Low UA**<br>– Comfortable with the ambiguity inherent in life.<br>– The days are taken as it comes<br>– Self-control, eased attitude, lower stress, and low anxiety |

(*Continued*)

*Table 9.1* (Continued)

| *Cultural Constructs* | *Reference* | *Description* |
|---|---|---|
| Gender Role Orientation (Masculinity versus Femininity) | (Hofstede, 2011) | The gender roles are different in society.<br>**Masculinity**<br>– Work goals focus<br>– Assertive<br>– Work wins over the family<br>– Admiration for the vital member<br>– Fathers deal with facts, mothers with feelings<br>**Femininity**<br>– Personal goals focus<br>– Maintaining a balance between family and work<br>– Modest and caring<br>– Sympathy for the weak<br>– Both fathers and mothers deal with facts and feelings |
| Confucian Dynamism (Long-Term versus Short-Term) | (Hofstede, 2011) | The fulfilment of needs is used to balance between long-term and short-term.<br>**Short-Term**<br>– Respect for their tradition<br>– Social obligations are immense and unlimited<br>– Family life guided by imperatives<br>– Always proud of one's country<br>**Long-Term**<br>– Ready to adapt to changes in traditions<br>– Social obligations are limited<br>– Shared tasks guide family life<br>– Trying to learn from other countries |

links. Due to various tribal groups' cultures, locations, social and individual behaviours, and access to a digital network, ICT capital, motivation, and skills may vary in these regions (Peterson, 2004). It is predicted to be a driving force of the digital divide.

## Determinant factors of the digital divide

According to Van Dijk, the digital divide has proceeded 'beyond access' in the research area. He indicated four factors that can reframe the digital divide with social, cultural, and psychological backgrounds (Van Dijk & Hacker, 2003; Van Dijk, 2005). Table 9.2, based on Van Dijk's model of cumulative and recursive access to digital technologies, displays the determinant factors of the digital divide and the different reasons that affect these determinants.

Like Van Dijk, three common approaches to understanding the digital divide have been offered by Natalie C. Helbig, J. Ramón Gil-García, and Enrico Ferro (2009): the access digital divide, the multidimensional digital divide, and the multi-perspective digital divide (see Table 9.3).

*Table 9.2* Determinant factors for the digital divide

| *Factors* | *Research* | *Items Affecting Determinants of the Digital Divide* |
|---|---|---|
| Motivation | (Van Dijk, 2005; Van Deursen & Van Dijk, 2009, 2015) | • Does not want internet due to social/cultural reasons, such as pervasive, potent, problematic, privacy issue, the internet does not have appeal for low income/low educated people.<br>• Psychological or mental reasons, such as computer anxiety, technophobia, stress, fear experience |
| Material Access | (Van Deursen & Van Dijk, 2009, 2015) | • Type of access<br>• Cost and availability of ICT in the country<br>• Level of education<br>• Language skills<br>• Freedom of expression and strength of policies to promote the information society in general and access in particular<br>• Cultural factors<br>• Institution or company level access |
| Skills Access<br>– Strategic<br>– Informational<br>– Instrumental<br>– Digital Skills | (Van Deursen & Van Dijk, 2009, 2015) | • Managing hardware and software computer skills<br>• Internet skills<br>• Internet users' skill levels, such as never used, low, medium, high; age; profession; employment |
| Usage Access | (Van Deursen & Van Dijk, 2009, 2015) | • Usage time<br>• Usage application<br>• Informative use<br>• Broadband, narrowband<br>• More active<br>• Creative use<br>• Entertainment use |

Other scholars, such as Laszlo Várallyai, Miklos Herdon, and Szilvia Botos (2015), have summarized six factors, which are shown in Figure 9.1.

## The digital divide in the Arab and Omani context

According to Aziz (2009), Oman's challenges are related to content access, cognitive access, and an enabling environment. Another study by Martins and Al-Shekaili (2021) reveals that, for accessing governmental services, education, professional position, ethnicity, role in the household, and age influence internet use. Health information systems (HISs) (2018) research prediction also indicates that gender is merely a relevant explanatory variable in internet use. The results revealed that lack of basic ICT skills and illiteracy are the most common reasons for not using the Internet (Jaradat, et al., 2018).

*Table 9.3* Some more factors affecting the determinants of the digital divide

| *Factor* | *Research* | *Items Affecting Determinants of the Digital Divide* |
|---|---|---|
| Access | (Company, 2001; Middleton & Chambers, 2010; Struzak, 2010) | • Have access to IT, laptop, computer/Do not have access<br>• Availability of the infrastructure (fixed phone lines, IT-related equipment, Wi-Fi, etc.)<br>• Infrastructure investment |
| Multidimensional | (Castells, 2011; Norris, 2001; Warschauer, 2004; Mossberger et al., 2003; Hassler & Jackson, 2010; Hohlfeld et al., 2010) | • Demographic attributes like race and ethnicity<br>• Income/socio-economic status<br>• Financial status and geographical location to express differences among groups and see the digital divide or divides as a mirror of social inequality<br>• Skills and experience<br>• Education/literacy<br>• Family structure<br>• Age (older people are quite often reluctant to adopt new things)<br>• Cost of access<br>• Profession/work nature<br>• Marital status |
| Multi-perspective | (Salajan et al., 2010) | • Institution structure<br>• Public policies<br>• Race<br>• Ethnicity |

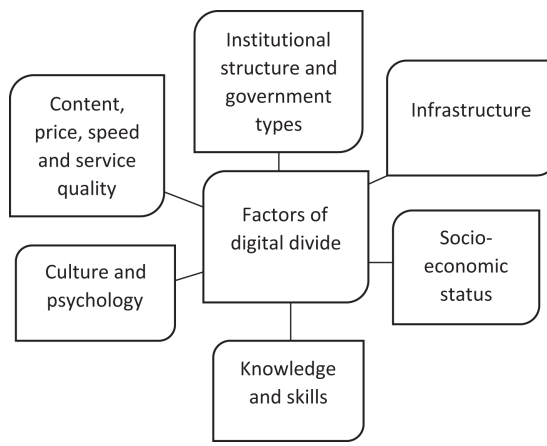


*Figure 9.1* Designed by the author.

*Source:* Based on Várallyai et al. (2015).

*Table 9.4* Proportion of households with internet access in 2019, and compound annual growth rate (CAGR), 2017–2019

| *Kuwait 100% (+0.2%)* | *Bahrain 99. % (+0.6%)* | *Saudi Arabia 99.2% (+3.2%)* | *United Arab Emirates 99% (1.1%)* | *Oman 94.5% (+3.3%)* | *Qatar 93.6% (–0.5%)* | *Lebanon 84.4%* | *Morocco 80.8% (7.2%)* | *State of Palestine* 79.6% (+24.8%)* | *Algeria 74.4%* | *Iraq 73%* |
|---|---|---|---|---|---|---|---|---|---|---|
| Egypt 60% (+10.4%) | Djibouti 57.7% (1.1%) | Tunisia 51.5% (+7.5%) | Syrian Arab Republic 45% | Jordan 37.4% | Sudan 33.6% | Libya 23.7% | Mauritania 14.3% | Yemen 6.3% | Comoros 5.56% | |

*Source:* ITU, based on ITU WTI Database for 2017 and 2019.

GCC countries are leading in the region in accessing household internet with a 58.9 penetration rate. However, a significant gender gap has also been experienced, with 47.3 per cent of females and 61.3 per cent of males using the internet in 2020. According to this report, GCC countries' gender gap is minor, while other Arab nations have this gap. Table 9.5 shows it in detail. Table 9.6 shows the penetration of basic, standard, and advanced ICT skills among GCC countries in 2019.

*Table 9.5* Gender gap in digital use in Arab nations, 2019

| *Kuwait M/F 99.5/99.6* | *Bahrain M/F 99.9/99.6* | *Saudi Arabia M/F 96.5/94.6* | *UAE M/F 99/99.5* | *Oman M/F 94.4/96.2* | *Qatar M/F 100/99.3* | *State of Palestine M/F 72.3/68.9* |
|---|---|---|---|---|---|---|
| Egypt M/F 61.5/53 | Djibouti M/F 59.9/51.6 | Tunisia M/F 72.5/61.2 | Algeria M/F 55.1/42.9 | Morocco M/F 78.6/70.2 | Sudan M/F 16.9/11 | Iraq M/F 98.3/51.2 |

*Source:* ITU WTI Database 2020.

*Table 9.6* Penetration of basic, standard, and advanced ICT skills among GCC countries, 2019

| *Country* | *Basic ICT skills* | *Standard ICT skills* | *Advanced ICT skills* |
|---|---|---|---|
| UAE | 72.3 | 60.4 | 17.9 |
| Oman | 75.4 | 36.7 | 8 |
| Bahrain | 60.8 | 42 | 18.1 |
| Kuwait | 57.7 | 43.7 | 13.4 |
| Saudi Arabia | 56.7 | 49.6 | 13.8 |
| Qatar | 44.8 | 30.1 | 5.1 |

*Source:* ITU, based on ITU WTI Database for 2017.

Due to the pandemic, digital demand has increased, and Arab nations are no exception. The International Telecommunication Union (ITU report, 2021) indicates a shift in IT adoption from 2017 to the pandemic. However, ICT development is the most diverse scenario for the Arabs. Gulf Corporation Council (GCC) countries seem to be leading in several ICT indicators, while some Arab countries, such as Comoros, Bahrain, Somalia, Djibouti, Sudan, Mauritania, and Yemen, are grappling with persisting digital anatomical

impediments (ITU Development, 2022). ITU estimates mobile coverage in Arab nations is 95 per cent. Internet use and access have increased from 47.2 per cent in 2017 to 54.6 per cent in 2020. Table 9.4 shows the country-wise details of the proportions of households with internet access (*ITU Digital Trends in the Arab States Region*, 2021).

## The digital divide during the COVID-19 crisis

Before the pandemic, a survey between 1997 and 2000 in Switzerland showed that well-educated, affluent young males dominate internet access. Well-educated people use the internet actively, and their searches are more information-oriented. In contrast, the less-educated people seemed interested in using the internet only for entertainment. As a result, the gap between those who *have* and those who do *not have* access has widened (Bonfadelli, 2002).

Almost 20 years later, something similar happened. During the pandemic crisis, the status of the digital divide has extended. Due to the low availability of ICT equipment, insufficient access or no access, and less knowledge and skills in technology, people have struggled more with government and health authorities' disease prevention and handling measures. People with less or no access communicate less and get less social network support. According to a survey on the digital divide in the Netherlands, in April 2020, people used more internet communication and accessed more COVID-19-related information (Van Dijk, 2020) due to a positive internet attitude, good access, and proper digital skills. The Netherlands has 98% internet access, but traditional literacy and unequal digital skills have created the highest effect (Van Dijk, 2020).

Oman is a young country with approximately 5,281,538 million people (*Oman Population Data*, 2024). Its young population (18 to 34) was 36.1 per cent in January 2022 (Digital Data Oman:2022). According to Digital Data Oman 2020, internet access in January 2020 was 92 per cent (Digital Data Oman:2020, n.d.), which increased to 95.2 per cent in January 2022. The National Centre for Statistics and Information survey shows that 94 per cent of households use mobile phones, while internet penetration is 93 per cent. The survey results also show that 34 per cent of people would avail themselves of e-government services in 2020, which will increase to 55 per cent in 2021. The survey indicates that the use of laptops has also increased from 34 per cent to 38 per cent from 2020 to 2021 (Oman News Agency, 2021). This result shows that the accessibility of laptops and tablets is lesser than that of mobile phones. During a critical pandemic, two social sections have appeared: one is socially advantaged and can avail all types of digital capital. They can access better networks to stay connected with the world. The other section could manage the required ICT devices and mobile data pack for internet connection. These multicultural groups residing in Oman (Omani and expatriates) have struggled to access a better internet connection. Lack of advanced skills, motivation, and technical abilities have been other drivers of creating a digital divide.

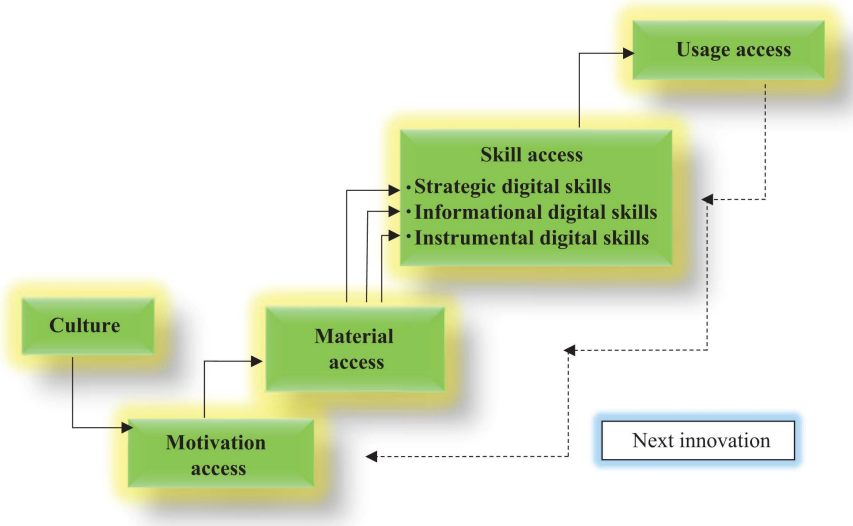


*Figure 9.2* Extended conceptual model.
*Source:* Designed by the author from Van Dijk (2005).

## Conceptual model for the present study

The conceptual model is an extended model of Van Dijk's (2005) cumulative and recursive model of successive digital technology. Figure 9.2 shows that country culture plays a significant role in controlling the motivation to use ICT.

## Methodology

The present chapter applied descriptive research methods to determine the types of digital divide in Oman. It also explores the cause, status, and trend of the digital divide in Oman. This research design is adopted due to the social and cultural variables used. The random sampling technique is applied under the quantitative research method. A Likert-scale questionnaire, from the strongly agree to disagree range, has been devised in English and Arabic to facilitate the digital divide between Omani and expat communities. Two separate Google Docs forms and links have been created. Both the questionnaire links have been administered through WhatsApp platforms and emails to the University of Technology and Applied Sciences; Salalah students from business, IT, English, and mass communication departments; and academicians from UTAS and Dhofar University, Salalah, Dhofar region.

The five primary constructs have been used to measure the digital divide in the Dhofar region, Sultanate of Oman. Each construct has some items to

measure the digital divide. The cultural factor has been used as a moderator influencing motivation to use a different ICT level. Therefore, some items from Hofstede's (2011) cultural study theory were adopted to measure the influence of culture on motivation. The aggregated data has been coded and imported from Google Doc form to SPSS version 25 for statistical analysis. Pearson's correlations have been employed to confirm whether the variables are relatable and significantly impact the result.

## Discussion

The present discussion is based on 122 responses obtained from UTAS and Dhofar University, Salalah, Oman. The data has been analyzed using the SPSS descriptive method in the percentage of frequency for the responses. Survey samples have been drawn from 16 to 74 years of age, gender, education level, profession, economic status, ethnicity, geographical locations, and family structure to understand the status of the multidimensional digital divide in the Dhofar region. As a result, 37.7 per cent of respondents are in the 16 to 24 years group, while 61.5 per cent are in the 25 to 54 age group. In addition, 61.5 per cent of the survey respondents are female, and 38.5 per cent of the survey respondents are male. The economic status of the respondents is middle class (69.7 per cent) and higher middle class (23.8 per cent). The respondents' ethnicity ratio is as follows: Omani 72.1 per cent, Indian 15.6 per cent, and other nationals 12.3 per cent.

Regarding physical access to ICT capital and the internet, 62.3 per cent of respondents strongly agree/agree that they have laptops and computer devices equal to the number of family members. In contrast, the smartphone access percentage is 90.1 per cent. For internet access, 35.2 per cent of respondents from the Dhofar region strongly agreed and 39.3 per cent agreed that they use broadband and fixed connections for the internet. A notable proportion of participants, 34.4 per cent, reported limited access to high-speed internet, while 32 per cent of respondents noted their participation was hindered due to inadequate digital skills. In contrast, 53.3 per cent of respondents said they mainly depend on mobile data packs for their routine internet access. During social distancing, smartphones, iPads, and tablets were the most used devices at 81.9 per cent. With 1.89 mean and .955 std. deviation, it can be predicted that computers and laptops have been used less than smartphones, iPads, and tablets. The data revealed that 65.6 per cent of respondents have experienced high-speed internet, while 34.5 per cent either chose to be neutral or disagreed with this statement. Only 53.2 per cent of respondents said they access the printer at home, and 42.6 per cent agreed that they use some statistical software for their work (see Table 9.7).

With 2.72 mean and 1.093 std. deviation, the prediction can be made that most Dhofar people believe the internet is pervasive and problematic. It can limit internet use to a specific area or content exploration. Similarly, with 2.23 mean and .879 std. deviation, most respondents consider social networking

*Table 9.7* Statistical analysis showing motivation for ICT use

| **Statistics** | | | | | |
|---|---|---|---|---|---|
| | *Pervasive nature of Internet limits its use* | *Privacy issue is big concern* | *ICT has no appeal for low-income people* | *Older people reluctant to use ICT* | *The digital divide is good for preserving tradition* |
| N Valid | 122 | 122 | 122 | 122 | 122 |
| Missing | 0 | 0 | 0 | 0 | 0 |
| Mean | 2.72 | 2.23 | 2.81 | 2.39 | 2.29 |
| Median | 3.00 | 2.00 | 3.00 | 2.00 | 2.00 |
| Std. deviation | 1.093 | .879 | .990 | 1.095 | .808 |
| Sum | 332 | 272 | 343 | 292 | 279 |

sites a threat and believe they have privacy issues. The majority of respondents agreed that the internet is costly and less appealing to low-income people. With a mean of 2.39, it can be predicted that older people are more reluctant to use ICT and the internet than the younger generation. Fifty-nine per cent of Dhofar respondents agreed that the digital divide helps protect Oman's country's culture and tradition, while 36.1 per cent of respondents remain neutral to this statement. Also, 79.6 per cent of respondents agreed that time perception works as a variable to motivate ICT use. During a pandemic, the polychronic situation was experienced the most, emphasizing free-flowing time, changes, and use of technology depending on each situation. Almost 60 per cent agreed that economic power and distance affects ICT use in society, which could be due to the unequal distribution of ICT in Oman. According to 68.0 per cent of respondents, Oman society is based on collectivism, emphasizing group belongingness. It can positively and negatively influence the use of ICT, while 26.2 per cent of respondents remain neutral to this statement. Oman society is a closed society system and prefers to prioritize personal privacy. That is why 65.7 per cent of respondents indicated privacy concerns about the internet can control ICT use. Similarly, 64.8 per cent of respondents agreed that ambiguity inherent in life, ICT, and the internet is considered dangerous in different circumstances. That may lead to less comfort with ICT use. The trend with a 2.59 mean can be estimated that Omani and expatriate males use ICT and the internet more for their work. In contrast, Omani and expatriate females' ICT use is balanced between work and family. According to 62.3 per cent of respondents, high-culture and low-culture contexts affect ICT use access in Dhofar society. This shows that the culture is divided into how communication is being delivered (see Table 9.8).

According to the responses, a strong and slightly significant correlation appears in a positive trend. Cultural factors such as HC/LC, time perception, economic power distance, social structure, and high uncertainty avoidance

*Table 9.8* Correlation of culture and motivation to use ICT/internet

| | | *HC/LC context affects ICT access.* | *Older people are reluctant to use ICT.* | *The degree of time/ time perception affects the motivation.* | *Economic power distance affects ICT use.* | *Dhofar's collectivist society stresses belongingness.* | *Close cultural society privacy control ICT use.* | *High UA, not comfortable with ambiguity.* |
|---|---|---|---|---|---|---|---|---|
| HC/LC context affects ICT. | | | | | | | | |
| Elderly people reluctant to ICT use. | P | 0.280 | | | | | | |
| Degree of time affects the motivation. | P | 0.230 | 0.498 | | | | | |
| Economic power distance affects ICT use. | P | 0.316 | 0.265 | 0.405 | | | | |
| Dhofar collectivism society stresses belongingness. | P | 0.353 | 0.403 | 0.512 | 0.541 | | | |
| Close cultural society privacy control ICT use. | P | 0.232 | 0.311 | 0.433 | 0.496 | 0.592 | | |
| High UA, not comfortable with ambiguity. | P | 0.258 | 0.232 | 0.447 | 0.382 | 0.359 | 0.466 | |

*Note*: PC – Pearson Correlation; UA – uncertainty avoidance; HC – high class; LC – low class

(UA) influence motivation to access ICT. The significance of the correlation is highlighted in the table with dark, light gray colours. The dark Gray value shows a strong correlation between culture and a positive trend to influence motivation to use ICT, while light Gray show mild significance in a positive direction.

Regarding operational skills, with a high mean of 3.35, it can be predicted that Dhofar people have basic computer skills. Sixty-eight per cent of respondents feel confident while downloading programs from the internet. In the survey, 78.7 per cent of Dhofar respondents agreed they use online services for routine purchases and financial transactions.

The highest mean of 3.28 showed that respondents disagreed with the statement that they do not possess the basic digital skills to use online. Only 40.1 per cent agreed that due to a lack of proper digital engagement on the professional and personal front, they faced difficulties in participating in family events, and 48.3 per cent of respondents agreed that a lack of advanced operational and cross-cultural knowledge had an effect on them during the crucial pandemic.

Table 9.9 displays the recorded mean for statistics of informational skills access between 1.80 to 2.07 and std. deviation .757 to .925. This can be

*Table 9.9* Statistics of informational skills access

| Statistics | | *Confident about searching terms online* | *Able to use advanced search options and terms to reach my required information* | *Confident in evaluating the sources of the information found online* | *Comfortable synthesizing online information* | *Find it easy to retrieve a website on the internet* |
|---|---|---|---|---|---|---|
| N | Valid | 122 | 122 | 122 | 122 | 122 |
| | Missing | 0 | 0 | 0 | 0 | 0 |
| Mean | | 1.80 | 1.80 | 1.98 | 1.83 | 2.07 |
| Median | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Mode | | 2 | 2 | 2 | 2 | 2 |
| Std. deviation | | .757 | .735 | .867 | .746 | .925 |
| Sum | | 220 | 220 | 241 | 223 | 252 |

*Table 9.10* Statistics of strategic skills access

| Statistics | | *I can choose to consult the internet.* | *I can reach my intended goal while using the internet.* | *Using various ICT tools, I feel confident in achieving my goals.* | *I feel confident in making important decisions with the help of the internet.* |
|---|---|---|---|---|---|
| N | Valid | 122 | 122 | 122 | 122 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 2.06 | 1.88 | 1.83 | 1.93 |
| Median | | 2.00 | 2.00 | 2.00 | 2.00 |
| Mode | | 2 | 2 | 2 | 2 |
| Std. deviation | | .912 | .799 | .757 | .762 |
| Sum | | 251 | 229 | 223 | 235 |

predicted by confidently using the search term and advanced options to reach the required information. They are engaged comfortably in synthesizing online information and can retrieve websites easily.

Similarly, the statistics of strategic skills access in Table 9.10 show the mean between 1.83 and 2.0. The prediction from this data is that Dhofar people can choose to consult the internet and reach their intended goal. They can use various ICT tools confidently and can make crucial decisions.

Table 9.11 shows a correlation between education and ICT accessing skills. Blue, dark green, and light green highlighting reveals a significant correlation between education and the positive trend of ICT accessing skills. At the same time, yellow and orange highlights divulge a significant correlation in a negative trend.

With a high mean of 3.06, it can be estimated that Dhofar people's internet access time during the pandemic was four to six hours and six to eight hours a day. Maximum use was for office work and academic work. Social interaction, religious purposes, and entertainment purposes scored second in their daily access (see Table 9.12).

## Finding and results

The findings indicate that the digital divide existed at a different level in Oman during COVID-19.

- The impact of the digital divide is evident in Oman. The physical accessibility of laptops and computers is still lesser than that of smartphones, iPads, and tablets during social distancing.
- Broadband and fixed-line are still not accessible to everyone. Home wi-fi access is still costly, with little appeal to low-income people.
- During the critical pandemic, two social sections appeared: one that is socially advantaged, can avail of all types of digital capital, and can access better networks to stay connected with the world; and another that could manage the required ICT devices and mobile data pack for internet connection but lack the advanced skills, motivation, and technical abilities, which have been additional drivers toward creating a digital divide.
- Smartphones, iPads, and tablet use have improved in the Sultanate as COVID-19 has urged social distancing needs.
- Physical access to printers and software for in-home use is still limited.
- Age factors limit the use of ICT. That is why older people seemed more reluctant to use ICT and the internet than the younger generation.
- Oman's sensitive culture and close society system substantially control motivation access to ICT use. As a result, it has emerged as a significant cause of the digital divide beyond physical access in the Sultanate.
- Time perception works as a variable to motivate ICT use. During the pandemic, the polychronic situation was experienced the most, emphasizing free-flowing time, changes, and accelerated technology use.
- Other cultural factors, such as HC/LC, economic power distance, social structure, and high UA influence motivation to access ICT.
- The result regarding skills access is encouraging as it shows that the young generation has the necessary essential skills to search and retrieve websites, synthesize online information, and so on. This setting helps create a new digital youth culture in Oman.

*Table 9.11* Correlation of education with ICT accessing skills

| | | *Education level* | *I understand web content.* | *I can use the internet for routine purchases.* | *I do not have enough skills for online transactions.* | *I know search terms to use the internet.* | *I can use advanced search options.* | *I know how to evaluate sources.* | *I find it easy to retrieve a website.* | *I choose to consult the internet.* | *I can easily reach my intended goal online.* | *I benefit from using the computer.* | *I feel confident using various ICT tools.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Education level | PC | | | | | | | | | | | | |
| I understand web content. | PC | –0.001 | | | | | | | | | | | |
| I can use the internet for routine purchases. | PC | 0.122 | 0.322 | | | | | | | | | | |
| I do not have enough skills for online transactions. | PC | 0.164 | –0.198 | –0.126 | | | | | | | | | |
| I know search terms to use the internet. | PC | –0.063 | 0.497 | 0.260 | –0.249 | | | | | | | | |
| I can use advanced search options online. | PC | –0.014 | 0.512 | 0.391 | –0.238 | 0.763 | | | | | | | |
| I know how to evaluate sources. | PC | –0.054 | 0.477 | 0.238 | –0.239 | 0.711 | 0.667 | | | | | | |
| I find it easy to retrieve a website. | PC | –0.026 | 0.412 | 0.238 | –0.218 | 0.526 | 0.518 | 0.518 | | | | | |
| I choose to consult the internet. | PC | 0.058 | 0.394 | 0.191 | –0.153 | 0.496 | 0.486 | 0.441 | 0.427 | | | | |
| I can easily reach my intended goal online. | PC | 0.011 | 0.427 | 0.240 | –0.207 | 0.575 | 0.607 | 0.509 | 0.403 | 0.714 | | | |
| I benefit from using the computer. | PC | –0.057 | 0.359 | 0.214 | –0.386 | 0.477 | 0.522 | 0.494 | 0.313 | 0.572 | 0.678 | | |
| I feel confident using various ICT tools. | PC | –0.038 | 0.409 | 0.261 | –0.283 | 0.561 | 0.637 | 0.535 | 0.477 | 0.709 | 0.716 | 0.768 | |

*Note:* PC – Pearson Correlation.

*Table 9.12* Statistics of usage access

| Statistics | | | | | | |
|---|---|---|---|---|---|---|
| | | *Access time* | *Office work* | *Academic work* | *Social media interaction* | *Entertainment purposes* | *Religious purposes* |
| N | Valid | 122 | 122 | 122 | 122 | 122 | 122 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | | 3.06 | 1.94 | 2.17 | 2.43 | 2.34 | 2.35 |
| Median | | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Mode | | 3 | 2 | 2 | 2 | 2 | 2 |
| Std. deviation | | .912 | .764 | .757 | .935 | .950 | .871 |
| Sum | | 373 | 237 | 265 | 296 | 285 | 287 |

- Access to strategic skills has also improved during the pandemic period in Oman as people have displayed confidence in using different ICT tools.
- Education correlates significantly with accessing different ICT tools as data mainly focuses on students and academicians. However, the result may vary if the respondents belong to other social groups.
- The impact of culture on content exploration is noticeable. ICT and internet access are mainly used during social distancing for academic, office work, religion, social media, and entertainment purposes.
- A lack of advanced operational skills affected cross-cultural communication during the lockdown period.
- During the lockdown, people in Dhofar, Oman, faced professional, personal, and cultural difficulties due to a lack of advanced operational skills.
- Weak internet speed and lack of advanced operational skills were barriers and caused a lack of participation in families and events.
- Residents with access to all types of digital devices, robust internet connections, and technical abilities are experiencing greater advantages over those without access. This divide can lead to disparities in education, work force, healthcare access, and employment opportunities. Additionally, it can impact social and political participation and lead to social isolation. Hence, significant efforts are required to bridge this gap and provide equal access to all residents in Oman.

## Practical implications

In the increasingly digital landscape, global societies are growing closer. To meet the challenges of the 4th Industrial Revolution, Oman's government has emphasized building robust IT infrastructure and digital transformation under Oman's Vision 2040. Muscat has been named the 'Arab Digital Capital' for 2022. This event significantly develops the country's social, economic, health and education environment. At the same time, the digital divide creates potential barriers and marginalizes and disempowers certain societal groups.

In such a situation, there is a strong need to understand the cause of the digital divide and its significant impact on the emerging new digital culture to support digital confidence and competency among the citizens. The present chapter reveals that Oman's close cultural system also affects the motivation to use it alongside physical access. It works as a barrier and creates hesitation in adopting ICT to explore open opportunities and content on the internet. While developing, designing, and aligning ICT functionalities and privacy policies, the policymaker must address social inequality in ICT access, apprehension of internet pervasiveness, and cultural considerations in Omani society. To address digital literacy, digital skills development programs, such as DigiSkills Program (Pakistan) (Das et al. 2019), Digital Unite Organization (UK) (Petrou et al., 2023), Digital Literacy (Africa) (do4africa.org/en/digital- literacy), Digital Literacy and Financial Inclusion Program (India) (Pandey et al., 2022), and Digital Skills for Youth (Canada) (Kelly, 2020), must start across Oman to train communities who have inadequate digital skills to participate fully.

## Limitations and directions for future studies

The present study has limitations, such as the data sample focused on Salalah (city area), academicians, and students from the Dhofar region, the South part of Oman. This selection explores the significant impact of the digital divide on the emerging new digital culture. Almost 99 per cent of respondents are from the age group of 16–54. Their digital needs, physical access level, and content exploration have improved, though the cultural impact can be seen in their digital use. This research work is pilot research and a foundation stone for further research in the future in Oman and the Gulf region. For further study, different professions and locations can be used to confirm the findings. The author focused on five primary constructs to explore the status of the digital divide. However, the cognitive, emotional, and behavioural components can be used for further study to explore online communication ability, active participation, content use, and rational decision-making ability. Another study area can use digital content, community consciousness, critical thinking ability, online engagement, and advanced ICT skills. Furthermore, longitudinal research and multivariate analyses in the context of two Arab countries' cultures can be done to facilitate a comprehensive understanding of the digital divide, its relationships between several kinds of access, and the consequences of the digital divide on social behaviour.

## Conclusion

ICT tools and internet platforms have been considered more than connecting to the world in the new digital culture in the past 10 years. Digital platforms have become essential for communication, collaboration, accessing information, conducting business, and even shaping the way we interact with the world around us. They have been used to identify and classify people based on

their class and ability to use ICT and Internet services. They attract researchers from IT, ICT, communication, and cultural discourse as it significantly impacts human lives, cultures, and societies. The present chapter has broadly attempted to extend deep insights into the different levels of the digital divide in Oman. Though previous studies on ICT and e-governance have discussed the digital divide, they are more focused on online government services use and the dimension of its literacy, barriers, and challenges to e-learning. More interdisciplinary research is needed in Oman as most research focuses on physical access, user access, and skills. This chapter discusses the digital divide beyond physical usage and skills access as culture is a significant variable controlling motivation to use ICT. This chapter is a must-read as it fills the lacuna in interdisciplinary research in IT and cultural studies in the Arab world. It reflects a comprehensive understanding of how the Arab world's digital divide exists beyond physical access. At the same time, improved physical access and skills during a pandemic are encouraging for Oman's emerging new digital culture.

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# 10 Digital journalism practices at indigenous African language newspapers in Nigeria, South Africa and Zimbabwe

## A cultural discourse studies approach

*Thulani Tshabangu, Israel Ayinla Fadipe and Abiodun Salawu*

### Introduction

There is a paucity of research that focuses on digital journalism practice by small-scale and resource-constrained indigenous African language newspapers (IALNs, hereafter) (Fourie, 2010; McNulty, 2019; Salawu, 2019). This is due to several reasons that include academic apathy towards indigenous language media research and the fact that IALNs are low in number; hence, research tends to focus on mainstream media that publishes in dominant colonial languages of English, French and Portuguese. Across the continent, IALNs face similar political and economic challenges, and their current challenge is keeping abreast with technological advancements and surviving in underdeveloped economies (Mpofu, 2019). There is arguably no modern profession that is more amenable to the dictates of technological innovations than journalism. Digital technologies alter the production and consumption of news; hence, they present a consistent challenge for almost all types of news media. In an increasingly digitalised news ecosystem, IALNs must strive to deliver news to their audiences on specific online platforms and find innovative ways to generate revenue. This requires that they adopt digital journalism practices or risk death. Considering the high mortality rate of IALNs due to a hodgepodge of political economy factors, we propose digital journalism as a panacea for their continued survival. But before we develop this proposition further, we ask the following: are IALNs adopting any digital journalism practices, such as innovative forms of producing and distributing news using digital technologies leading to 24/7 news cycles, multimedia content, audience engagement and participation and convergence of operational space and equipment? Which IALNs are the pacesetters or laggards of digital journalism? What are the common digital journalism practices adopted by IALNs? Is the adoption of digital journalism practices the same across nations? What are the cultural, context-specific and institutional factors that promote or hinder the adoption

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of digital journalism? The purpose of this chapter is to provide answers to these questions and to shine an important light on the contextually bound factors that promote or deter the adoption of digital journalism practices by IALNs. Inspired by comparative journalism research and the concept of multicultural discourse analyse, this chapter illuminates the similarities and differences in the adoption of digital journalism practices across nations, cultures and contexts in Nigeria, South Africa and Zimbabwe. Cross-national comparative research that places the cultural context at the core of research on digital journalism practice in Africa by non-mainstream media is useful to counter Western-centred research, which is often taken as representing universal truths. This chapter contributes to debates about digital journalism practice and its effects in non-Western contexts specifically by resource-constrained IALNs.

## Indigenous language newspapers in Africa and the digital journalism conundrum

Indigenous language newspapers can be crudely referred to as the vernacular press because they publish in the so-called local, minority, disadvantaged or marginalised languages rather than the dominant languages of English, French and Portuguese. They use languages of particular communities determined by geographical location or common interests (Orao, 2009). IALNs are often associated with rural and less formally educated parts of the population; hence they target mainly rural populations in Africa with content that is geared towards national development and the preservation of socio-cultural values. This study concerns three indigenous languages newspapers of *Alaroye* (Nigeria), *Isolezwe* (South Africa) and *uMthunywa* (Zimbabwe). The success of these IALNs is partly due to their tabloidisation and hybridisation of the indigenous languages.

IALNs find themselves in a precarious position which demands they establish some form of online presence to reach audiences and find ways to generate revenue outside the traditional funding mechanisms of advertising and copy sales. This requires that IALNs embrace digital journalism. Digital journalism, also known as online journalism, is a field of journalism studies associated with innovative forms of producing and distributing news using digital technologies as well as news engagement and audience participation. Waisbord (2019, p. 352) defines *digital journalism* as a conceptual framework that denotes a radically new phase in the history of journalism, primarily brought about by the digital revolution characterised by the "networked production, distribution, and consumption of news and information about public affairs". Digital journalism is shaped by new technologies and platforms and is marked by an increasingly symbiotic relationship with the audiences who can produce, share, click, scan, modify and comment on news for public consumption (Waisbord, 2019, p. 353). Digital journalists have an orientation to the audience and are dynamic in nature because they are attuned to the fast developments of technology with the ability to communicate brilliantly via social media (Vos &

Ferrucci, 2018). Digital journalism opens for news organisations the following possibilities: (1) immediacy, where content is produced 24/7 and the deadline disappears; (2) convergence, where the news space and equipment are commonly operated and managed from a centralised multimedia assignment desk such that content is shared across multiple platforms; (3) multimedia content; and (4) interactivity as consumers contribute to news production processes (Puijk et al., 2021). The content of digital journalism can be anything from traditional news, commentary, opinion, headlines, letters to the editor, arts reviews, obituaries and interviews and a plethora of content such as social media postings, memes, readers' comments and reviews, blogs, podcasts, satire, hoaxes, rumours and fake news. Simply defined, digital journalism is a contemporary form of journalism where editorial content, especially, news, features, analysis and editorial on current issues are disseminated through digital media platforms such as blogs, social media pages like Facebook, Twitter handles, among others (Apuke & Omar, 2021). It is more preoccupied with technology, the present, and audiences. In this chapter, we use the concept of digital journalism as some form of yardstick to assess the extent to which three IALNs of *Isolezwe*, *Alaroye* and *uMthunywa* have adopted new digital journalism practices.

## Towards comparative journalism studies

Africa has a lack of comparative analysis focusing on communication and the media (Salgado, 2018). Cross-national comparative research that emanates from Africa is important to counter Western assumptions about digital journalism practice. As Hanitzsch (2019, p. 214) states, "journalism studies is still struggling with the consequences of a continued Western hegemony in the way we approach and understand journalism on a global scale". The challenge of the dominance of Western journalism theory and research not only calls for the de-Westernisation of the field but more robust decolonial scholarship from the Global South. The value of comparative media analysis is that it can dispel naïve universalism and the tendency to presume that communication findings from one country also apply to other countries. Comparative journalism studies have shown that certain similarities exist between journalism cultures across the globe and also that significant differences persist, owing to a variety of political, economic, cultural, technological and historical factors (Hanusch & Hanitzsch, 2017). At its core, comparative journalism research is about charting and explaining the similarities and differences between different aspects of journalism in different countries (Ornebring, 2012). This cross-national comparative research of digital journalism practices in Nigeria, South Africa and Zimbabwe is born out of the realisation that Africa, with its 54 countries, is far from being a monolithic continent as it has the most unequal countries in the world with the highest recorded level of income and digital inequalities in terms of access, skills and use of digital technologies (Mutsvairo et al., 2021). The value of comparative journalism studies is that it allows us to test

theories across diverse contexts, helps us to not overgeneralize and fosters an international exchange of knowledge (Hanusch & Vos, 2020, p. 320). The foundation for comparative media studies is context (Salgado, 2018). Contextual sensitivity in journalism studies places objects of study in their political, economic, cultural, organizational and social settings (Carlson et al., 2018). It is important to understand digital journalism practice within specific contexts because it occurs in time-bound, cultural, geographical, political, social and gendered spaces (Mutsvairo et al., 2021, p. 10). Comparative journalism research requires that cases must be carefully selected such that they are comparable by type. In this study, the specific media type for comparison are IALNs. Comparative studies must apply concepts that are consistently defined and operationalised (Salgado, 2018, p. 196) because it is possible to have different meaning of concepts in different contexts. The concept of digital journalism practice was the basis for this cross-national comparative study. To avoid ambiguity, the researchers agreed on a definition of digital journalism practice as a modern form of journalism which transmits news and information through digital platforms. The data collection tools were standardised in the form of a semi-structured interview discussion guide and an observation checklist. The data analysis was based on a common theoretical background, that of multicultural discourse analysis.

## Multicultural discourse analysis

The theoretical point of departure in this chapter is multicultural discourse analysis advanced by Shi-xu (2012). Building on the previous discussion on comparative journalism studies, we deploy multicultural discourse analysis to understand the discourse of digital journalism across nations and cultures, crucially highlighting how it is structured by the historicity and context of each country. Multicultural discourse analysis proceeds from the point of view that "world cultures have different histories, conditions, problems, issues, aspirations" and must therefore be analysed in relation to their historicity and context. The clarion call that Shi-xu (2012, p. 648) makes is that concepts, theories and methods must not be assumed as universal and applied dogmatically across all cultures; rather, they must be re-oriented to local, concrete and particular situations. Consequently, we view digital journalism practices by IALNs in Nigeria, South Africa and Zimbabwe as peculiar to those contexts, structurally constrained by different economic, political and technological factors. This is to say that digital journalism by IALNs may have different meanings, notions and practices that are different to those of corporate media in the West or even different from mainstream English language media in the continent. Our discussion on digital journalism practices by IALNs is a discourse grounded in a specific, historically concrete context. We focus on locally relevant and context-specific practices of digital journalism that we observed in the three newsrooms understudy. We use dialectical reasoning to understand the local applications of digital

journalism benchmarked against global standards, and we use the case study approach to understand the particular yet rather general practices of digital journalism in the African context.

## Objectives

1. To ascertain similarities and differences in the adoption of digital journalism practices by indigenous language newspapers in Nigeria, South Africa and Zimbabwe
2. To understand the context specific factors that promote and or hinder the adoption of digital journalism practices by indigenous language newspapers in Africa
3. To provide a de-Westernised understanding of digital journalism and its effects on small scale, resource constrained indigenous language newspapers in Africa

## Methodology

Data was collected through semi-structured interviews and participant observation over a period of six months, from January to June 2021. After a routine process of obtaining access to each newsroom, we conducted interviews with conveniently sampled editors and journalists to gain an understanding of the everyday digital journalism practices at the selected newsrooms. The respondents were conveniently selected on the basis of their ability to provide answers to the interview questions. A standardised semi-structured interview guide was used to elicit responses from six research participants across the three countries. In each newsroom, the interviews were conducted with the editor and a senior reporter. This was considered adequate as the objective was to obtain rich qualitative data that aided our understanding of the subject matter rather than generating a sample survey. Semi-structured interviews enabled us to elicit answers from the perspective of the study participants and to gain a greater understanding of the context and meaning of those responses through various forms of probing. The interviews helped us understand the motives that journalists had for adopting or rejecting digital journalism, meanings, reasons and other subjective experiences that were time- and context-bound. Due to the COVID-19 restrictions, we were not able to physically travel to the newsrooms to conduct sustained observations. Instead, we conducted a six-month long virtual ethnography that entailed observation of *Isolezwe*, *Alaroye* and *uMthunywa* online platforms from January to June 2021. Virtual or online ethnography is a relatively new development in qualitative research, often conducted around the use of sites and services such as blogs, chatrooms, forums and news platforms. As part of the virtual ethnography, we observed *Isolezwe*, *Alaroye* and *uMthunywa* online platforms, namely the website and social media platforms, to determine the frequency of new content, the engagement of journalists with readers and the extent to which readers

engaged each other in public sphere deliberations. An observation checklist helped us identify the salient practices across the different countries. All notes obtained from the virtual ethnography and interview transcripts were analysed using thematic analyses to identify emerging trends and themes and, more importantly, to ascertain the differences and similarities in digital journalism practices.

## Findings and discussion

### *Digital journalism practices: a cross nation comparison*

Although digital journalism in technologically advanced countries in the West is more than 25 years old, in Africa it is a relatively new phenomenon that gained traction at the turn of the millennium. This buttresses the view that digital technologies enter different regions and countries at different periods of times and at different paces. As our study reveals, Nigeria, South Africa and Zimbabwe are at different levels of technological advancement. Digital journalism by IALNs can be considered a newer practice because IALNs generally have a weak digital footprint and are rarely the first adopters or pacesetters of digital technologies. We established that the IALNs under study adopted digital journalism practices based on need and perceived usefulness. The selective adoption of practices was not backed by digital-first strategies which are normally used by mainstream media to outline their innovation vision, deployment of digital technologies and audience engagement. Whilst IALNs have a large range of digital journalism practices that highly resourced mainstream media have tried out before them, not all these are relevant for them because they may serve no local purpose. The degree to which IALNs use the different possibilities of digital journalism varies across nations, contexts and cultures. This validates our theoretical framework, which underscores the need to view the discourse of digital journalism as historically and culturally situated. We established that *Isolezwe* was at least ahead in adopting new digital journalism practices, followed by *uMthunywa* and last was *Alaroye*. This can be explained by the digital inequalities that exist in Africa, specifically the country context that accounts for the level of digital penetration and level of investment in the media. The digital inequalities that exist between countries contributes to digital journalism not being adopted uniformly. There are also other factors, including education, social status, age and economic state of the region, that may influence the adoption of digital technologies across countries (Gladkova et al., 2020).

Each of the three IALNs have some form of online presence in the form of an official/proprietorial website and social media. Across the three countries, journalists used social media with varying success to obtain audience feedback and for news making, primarily by following social media interactions for story leads and interviewing sources. The impact of the online presence varies across the newspapers depending on the in-country factors, such as the digital capital

of each newspaper and the extent of the digital divide. The digital tools used in newswork processes include digital cameras, voice recorders, laptops and mobile smartphones. The journalistic use of these digital tools depends on the level of digital penetration in each country and the technological investment of each newsroom. Overall, the adoption of new digital journalism practices depends, to a greater extent, on the level of technological development in each country and context-based factors, such as the vision of the newspaper leadership, organisational culture and financial capacity of the newspaper.

*South Africa*

South Africa is the continental leader in digital absorption and penetration. It possesses one of the most technologically advanced and diverse media institutions on the continent due to its developed economy, which makes it easy to invest in digital technologies. In this chapter, we focus on *Isolezwe*, which is arguably the most successful IALN in South Africa published by Independent Publishers. Established in 2002, the tabloid has a daily circulation of 39, 900 copies concentrated in the isiZulu speaking provinces of KwaZulu-Natal and Gauteng. In 2018, *Isolezwe* was rated the fastest-growing indigenous language newspaper in South Africa due to its sharp rise in readership at a time when other newspapers were experiencing a nosedive in readership and sales (Mthembu & Lunga, 2021, p. 100). The success of *Isolezwe* is attributed to its tabloid content, which appeals to a majority of its readers, and its affordable cover price. *Isolezwe* is leading in the adoption of digital journalism practices due to the high digital capital of South Africa. The country is leading in the implementation of the Fourth Industrial Revolution, which will see South Africa adopting the latest technologies, such as artificial intelligence (AI) and robotics, the Internet of Things and augmented reality, among others. Mainstream newsrooms in South Africa are already a notch up as they are using AI practices such as news automation, algorithms and robots (Munoriyarwa et al., 2021).

At the time of this study, *Isolezwe* had a staff complement of 23, including 15 men and 8 women. This staff complement was a lot higher when compared to the staff at *uMthunywa* with three staff and *Alaroye* with 15 staff. The level of staffing is an indicator of how well resourced and funded the newspaper is. It is therefore apparent that *Isolezwe* is the better resourced outlet. 21 of the staff members were youthful, younger than 40, and only two were older than 40 years. The editor of the newspaper, who is also youthful, was happy with her team composition as she perceived it to be agile and better placed to drive the newspaper's digital footprint. She noted, "the team mostly consists of young journalists which is an advantage in terms of linking print with digital as it requires speed. This however, juniorise the newsroom and in some instances affects depth and perspective in tackling some topics". It is possible that the adoption of new digital journalism practices is linked to staff demographics. A newsroom staffed with youthful journalists is more likely to innovate and

embrace new digital journalism practices as youths tend to be more attuned to technological developments and better understand the fast-paced changes of digital technologies. In addition, *Isolezwe* had by far the biggest digital capital when compared to the two other newspapers of *Alaroye* and *uMthunywa*. The newspaper not only had high quality and the latest technological gadgets but also each of its journalist were allocated a company-owned laptop. This technological investment and the youthfulness of its team undoubtedly positioned it as a leader of digital journalism practices amongst IALNs studied.

One of the key characteristics of digital journalism is the constant circulation of news. Like contemporary digital journalism news outlets, *Isolezwe* operates as a 24/7 business operation which provides fresh news and updates around the clock. This ambitious service sometimes exerts pressure on the editorial staff who are time-constrained to "deliver fresh and top-quality news in a short space of time" (Interview with *Isolezwe* editor). This rush to be first with the news often leads to editorial errors that can be prevented. The *Isolezwe* newsroom has clearly defined and specialist roles that included the news editor, live editor, sports editor, chief sub-editor, photographer and chief reporter. This delineation of roles is outstanding as not all IALNs have newsrooms with clear roles and responsibilities, let alone specialistic roles like the live editor. As this discussion will reveal, *uMthunywa* and *Alaroye* do not have specialist roles, and the limited staff is often forced to multi-skill and multitask, thereby removing specialisation. The position of live editor warrants special mention because it indicates *Isolezwe*'s commitment to digital journalism. The live editor is primarily responsible for producing digital content and maintaining online interactions with audiences on websites and social media. This trendier position is common in digital news to channel audience experiences, feedback and input.

Digital journalists relate to and engage with the audience unlike the past generation of reporters, who cared less about what readers thought. *Isolezwe* journalists engage audiences mainly via its social media platforms of Twitter, Facebook and Instagram. At the time of conducting this research, trendier platforms such as WhatsApp, Telegram, Viber and Facebook Messenger were not being used by *Isolezwe*.

The *Isolezwe* editor leads by example in using social media for audience engagement. She sometimes uses her personal Twitter handle to announce the main news headlines and to invite readers to participate in online discussions. The responsibility to post online content, however, rests with the live editor, who uses Twitter and Facebook to announce the main news headlines in a clickbait or sensational manner that functions to hook audiences to the paper. We established that online content was usually different from hardcopy. The editor explained that "online content is straight to the point and short whilst newspaper content is detailed and allows room for creativity". We surmised that another reason why online content was short when compared to hardcopy was to save users from heavy downloads and the cost of internet data.

*Isolezwe* has an undocumented social media engagement policy which discourages readers from engaging in an offensive manner. Comments that discriminate, incite violence or are generally derogatory are removed from all platforms to protect the reputation of the publication and its parent company, Independent Media Group. A challenge with digital journalism performed on social media is that of fake news spread using parody accounts. A parody account on Facebook uses *Isolezwe*'s nameplate and masthead to attract a significant following with daily doses of fake news. If this continues unchecked, it may potentially ruin the reputation of the news outlet amongst its audiences.

Despite having a strong online presence, the *Isolezwe* editor expressed some scepticism about digital journalism. She noted that "strengthening our digital platforms has also seen a drop in print, as more people are now able to consume the news electronically". This is perhaps a common concern for most proprietors and editors of IALNs who fear that migrating to online platforms may result in loss of business from advertising and copy sales. It is important that proprietors and editors develop new business models that are compatible to the dictates of digital journalism, such as internet advertising, paywalls and diversified income streams, such as grant making, sponsorships, crowdfunding, public relations, eventing and commercial printing. Although South African newsrooms, including *Isolezwe*, are ahead with digital journalism practices, there remains an aura of scepticism around the use of digital technologies for newswork processes driven by fear of job losses. The current crop of journalists is also under pressure to obtain the requisite skills to maximise the potential use of digital technologies for newswork processes.

*Zimbabwe*

Like most countries in sub-Saharan Africa, digital journalism in Zimbabwe started early 2000 driven by an upsurge of internet connectivity and saturation of mobile smartphone usage. The print media industry in Zimbabwe is dominated by titles from the publicly listed and state-controlled largest diversified media group, Zimbabwe Newspapers Group 1980 (Zimpapers), which publishes 11 newspapers and 3 magazines. All Zimpapers titles publish in English except for *uMthunywa* (1985), relaunched in 2004, and *Kwayedza* (1986), which publish in isiNdebele and ChiShona, respectively. Since its inception, *uMthunywa* has operated as a traditional news outlet that disseminates news primarily in the legacy format of newspaper. *uMthunywa* has had mixed fortunes, being forced to fold in 1989 and to re-emerge in 2004 with a tabloid and market-driven form of journalism. At its peak in 2007, it was circulating an average of 20,000 copies per week before plummeting to a few hundred copies in 2016. At the height of the COVID-19 crisis in June 2020, *uMthunywa* stopped print and was no longer circulating hardcopies. It is currently available online only, making it an interesting case study of arguably the first fully digitised indigenous language newspaper in Africa. Against this background, we ranked *uMthunywa* as the second-best adopters of digital journalism practices.

Currently, *uMthunywa* operates with only three full-time staffers, these being the editor and two reporters. The newspaper was forced to lay off three reporters due to low business caused by the COVID-19 crisis. The editor remarked that this staff complement was not adequate as she needed more journalists to travel and report from the rural areas where the paper has a significant readership. Although a staff complement of three may seem skeletal, digital newsrooms are generally small because they are converged, having thinner staff that are multi-skilled to deliver multimedia content across various platforms. Therefore, the current team of three can potentially achieve more if they are adequately skilled in digital journalism and have the requisite technologies at their disposal.

*uMthunywa* has an official news website which appears to be static. Dynamic websites with interactive features, such as comment sections, social media share buttons, lists of hyperlinks and sometimes audience polls are the hallmarks of digital journalism that enable news organisations to engage with audiences. Whilst the *uMthunywa* news website has a user comments section, its readers never used this function to interact with its journalists or to simply comment on published content. A key characteristic of digital journalism is audience engagement and participation. User comments on news websites are an indicator of an engaged audience that drive web traffic. Lack of interactivity on the *uMthunywa* news website creates unidirectional journalism, which means that audiences are disengaged, disinterested or indifferent to the content. In this regard, *uMthunywa*'s attempt at digital journalism is seen to be failing – it doesn't engage audiences or allow for their participation in public sphere deliberations. Another drawback to *uMthunywa*'s digital journalism drive is the reluctance to incorporate dynamic website design elements and multimedia content. If *uMthunywa* is serious about digital journalism, it must incorporate multimedia content and foster citizen engagement and participation on its different platforms.

Apart from the news website, *uMthunywa* can be accessed on Facebook and Twitter. Regrettably, both accounts were often idle and, if ever, updated once a week. This could be attributable to the fact that all *uMthunywa* online offerings were not managed by its reporters but were centrally managed as part of operational convergence by the Zimpapers Bulawayo digital team that was also responsible for the online platforms of its sister publications *Chronicle*, *The Sunday News*, and *BMetro*. It is possible that the digital team sometimes forgot to update *uMthunywa* social media accounts due to overbearing work duties or because they never prioritised them. Because *uMthunywa* social media accounts were not vibrant, some of its journalists used personal social media accounts to engage with readers and update themselves on the latest news and events. This enabled the social media active journalists to grow the readership of their stories on personal social media accounts at the expense of the proprietorial platforms. This helped them build a personal brand, a fan base and a direct relationship with the readers, resulting in what Olausson (2018) calls "the celebrified journalist" who uses social media for self-promotion and branding at the expense of their employers.

As part of a convergence strategy, *uMthunywa* reporters relied on shared computers, cameras, transport and skills. Although *uMthunywa* has its own office space, it was difficult to measure its digital capital because its reporters relied on pooled resources. This centralisation of resources, functions and skills may create problems as it led to the neglect of *uMthunywa* online platforms. However, convergence was beneficial for *uMthunywa* because it reduced production costs due to sharing of expertise and infrastructure. Due to the resource constraints, journalists from the English daily *Chronicle* and the weekly *The Sunday News* received priority in the allocation of shared resources, such as vehicles for travel to outlying areas of the city and photojournalists to accompany a reporter on an assignment; hence, *uMthunywa* was treated as an unworthy appendage of the Zimpapers stable.

As part of online innovation, *uMthunywa* introduced a subscription-based electronic paper (e-paper). The e-paper is an innovative strategy for *uMthunywa* to deal with shortages of newsprint, distribution challenges and to generate income through the sale of content via online platforms. However, the concept of the e-paper does not seem to have many takers as many of its readers are impoverished and would prefer to receive news on online platforms for free. This has been seen by some commentators as the free rider problem, where the core challenge is to cultivate and encourage a culture of paying for news/paywalls. In Africa there is no evidence yet, at least to the authors' knowledge, that paywalls are working very well and that news organisations generate revenue and profits from them. Another new digital journalism practice at *uMthunywa* was content curation. Content curation involves selecting and sometimes editorialising news content from online sites and repurposing it as new content for a different audience. At *uMthunywa*, content curation was adopted as a strategy to overcome resource constraints in producing new content. *uMthunywa* often curated isiZulu news from *Isolezwe* because isiZulu and isiNdebele are mutually intelligible languages that belong to the Nguni linguistic group. Curated content from *Isolezwe* enabled *uMthunywa* to continue providing a news service to its readers in the face of resource constraints since such content did not require editing and resonated with readers' interests. In some instances, *uMthunywa* led with *Isolezwe* stories because they were more appealing than local lead stories.

Although *uMthunywa* positions itself as a digital-only newspaper, it has not fully adopted digital journalism practices as seen in its organisational culture. The newsroom organisation is still ensconced in traditional journalism staffed by an editor issuing assignments to standby reporters. The news cycle has not changed to 24/7 as the newspaper publishes new content once a week. Furthermore, *uMthunywa* has not created new positions that deal with audience engagement and digital technologies, such as data analysts and web designers charged with driving the newspaper's digital strategy.

Sadly, *uMthunywa* journalists had low confidence in articulating their everyday encounters with digital journalism. Even though they were practising some form of digital journalism, *uMthunywa* journalists were not so keen to

define and defend their practices as they felt they were doing things extremely wrong. In a different context, Gondwe and White (2021) established that journalists from Zambia and Tanzania did not consider themselves as data journalists even when they were practising it. It is possible that gender affects technological innovation because in most cases the meaning of technology "is cast in terms of male activities" (Wajcman, 2010, p. 144). Without perpetuating bias and stereotypes, our study finds that female staff at *uMthunywa*, comprising the editor and a reporter, may have had limited ambition to adopt digital journalism practices. Technology embeds gender power relations; hence, female editors are more likely to be averse to digital journalism than their male counterparts because technologies tend to privilege masculinity over femininity. There is a need to cross this gendered digital divide in newsrooms by empowering women editors and journalists to appreciate more digital technologies and to encourage them to use them in their everyday newswork.

*Nigeria*

Digital journalism practice in Nigeria started between 2003 and 2010. At the forefront were mainstream newspapers such as the *Punch*, *Guardian*, *This Day* and *Daily Trust* followed by the citizen journalism outlet *Sahara Reporters*. The drivers of digital journalism in Nigeria include the migration of consumers, particularly the youth, to online platforms due to the influx of highly affordable mobile smartphones of Asian origin that were mass produced for the Nigerian market and a significant drop in newspaper hard copy sales. Today, online media and social media platforms such as Twitter and Facebook have become vibrant sources of news and information in Nigeria that command huge audiences (Apuke & Omar, 2021). Despite the rise of digital journalism, some traditional print news organisations publish both in hard copy and online because they need revenue from hardcopy sales. That Nigeria is already deploying advanced digital technologies in journalism is evidenced by the recent use of drones for news making purposes. Drones are being used in investigative journalism assignments to capture aerial photographs thereby contributing to in-depth coverage of issues (Okocha et al., 2021). Because there is hardly a media organisation that doesn't have an online presence, IALNs like *Alaroye* have established some form of online presence so as not to be left behind. *Alaroye* is the most successful Yoruba language newspaper in Nigeria published by World Information Agents since 1996. It circulates an average of 50,000 copies per week in Yorubaland, and its audiences are captivated by its emphasis on investigative and balanced journalism, insightful feature writing and contemporary political review. Even though Nigeria is a regional superpower with a well-developed media and a high digital capital, we ranked *Alaroye* as the laggers of digital journalism practices in this three-nation comparative study. This was largely due to institutional factors and interests of ownership and control that were against the ambitious adoption of digital journalism.

*Alaroye* primarily exists as a vehicle for language revitalization, and its readers cut across all age groups. The newspaper has a special appeal to old people who are excited by its use of the Yoruba language in a flowery manner and read it for the purposes of language pride. Because the Yoruba language is compulsory at primary and secondary school, a lot of educators and traditionalists have a keen interest in how *Alaroye* journalists write the language. This makes Yoruba language skills a priority journalistic skill at *Alaroye*, effectively downgrading digital journalism skills. *Alaroye* currently has 15 journalists, comprising 8 men and 7 women, aged between 30 and 55 years. Still structured along the lines of traditional newsrooms, *Alaroye* has a lean management structure with two top positions of general editor and line editor who work with a pool of 13 reporters. In terms of digital capital, the newspaper has two journalists per computer. The proprietor felt that 15 journalists were not adequate to accomplish the newspaper's daily chores, something that indicates a lack of effective deployment of personnel. An interviewed journalist thus noted:

> On average we have 1 man to 3 duties, you write, edit and plan the pages. The buck stops with the proprietor, there is no clear segmentation of duties and reporters do not have beat specialisation. As a reporter you know that for crime stories you go to police headquarter for details, for culture stories you interview the traditional authorities and for anything you must go somewhere! The most important thing is how you manage yourself and the resources availed to you.

*Alaroye* journalists were able to multitask and multi-skill to some extent. They used digital tools at their disposal, specifically mobile smartphones and software editing tools, to do additional duties such as photo editing, page design and layout, producing live videos and recording for YouTube streaming. The small nature of the newspaper and its limited resources made the journalists more techno savvy, innovative and versatile.

*Alaroye*'s online presence includes an official news webpage and social media. The main content delivery platform for *Alaroye* is its news website, which unfortunately does not have interactive and dynamic features. The website only exists as some form of a clickbait which markets the main news headlines at the same time as it pushes readers to purchase the hard copy. Online stories on the website are often truncated to force the reader to purchase the hard copy for additional details. *Alaroye* also has an impactful social media presence on YouTube, Facebook and Instagram. The newspaper mostly engages with its audiences on Facebook, publishes picture stories on Instagram and recently introduced *Alaroye* TV on YouTube. The newspaper has a huge following on Facebook, and most interactions with audiences occur there. Audiences can provide feedback to *Alaroye* journalists on Facebook, engage in peer-to-peer discussions about the content and even question the authority of journalism. *Alaroye* journalists also use social media for news making purposes as they interview sources on Facebook and WhatsApp.

New content is uploaded on *Alaroye* online platforms every day at an interval of 12–36 hours. The newspaper sometimes uses curated content from audiences, citizen journalists and other news outlets to ensure currency and accuracy and for fact-checking purposes. Despite *Alaroye* being available on digital platforms, we established that some retirees still maintained subscriptions for the hardcopy. For them, news on digital platforms has a handicap in that it doesn't have extra features, such as classified ads, crossword puzzles and cartoons, that come with the hardcopy. They also prefer to purchase *Alaroye* hardcopy simply for the purposes of having a feel of the newspaper and the belief that hardcopy newspapers are authentic and cannot be conveyors of fake news as some online platforms are.

As a newspaper that still depends much on hardcopy sales, the coronavirus (COVID-19) forced the organisation to bottom line as consumers' purchasing power declined, hence affecting copy sales. The proprietor does not have enough financial capital to pay for a bigger and well-resourced newsroom. The challenge for digital journalism at *Alaroye* is that it doesn't resonate with the interests of ownership and control and contradicts the current business model of copy sales. The proprietor prefers to sell the newspaper in the traditional hardcopy format because it brings the much-needed revenue; hence, he is not fully committed to the goals and practices of digital journalism. Another challenge is that the target readership for *Alaroye* is conservative. One of the interviewees noted that "*Alaroye* readers believe in the hard copy because they want to feel and see the newspaper"; hence, it positions itself as the bastion of traditional journalism. An additional challenge for digital journalism at *Alaroye* is that of the digital divide since the older demographic aged above 65 years prefer to read the hard copy because they attach authenticity to it more than to content disseminated via online platforms. An erratic power supply and poor internet services remain as barriers to digital journalism in Nigeria.

### *Factors that hinder and promote digital journalism amongst IALNs*

Our study established that there was selective and slow adoption of digital journalism practices at the selected IALNs. There are several institutional, contextual and human agency factors that affect the adoption of new digital journalism practices across the three cases. Although some factors are peculiar to some countries, we discuss these factors collectively, and where necessary, we use specific examples to illuminate the findings. In Zimbabwe and Nigeria, some of the key factors affecting the adoption of digital journalism practices by IALNs are technophobia and conservative organisational cultures.

During interviews, we observed that some journalists were not comfortable discussing the opportunities brought about by digital technologies, something that points to the fact that they had limited understanding of what digital journalism entails. Even though some journalists we interviewed were already practising digital journalism, they were not confident to defend their practices and to initiate new ones due to limited digital skills. The conservative nature of

IALNs can also be explained by the fact that they regard themselves as bastions of traditional journalism and vanguards of the indigenous African communication system that must remain unadulterated by the influences of technology.

Except for *Isolezwe*, which created the position of live editor to engage with audiences and to produce digital content, *uMthunywa* and *Alaroye* functioned more like traditional news outlets that were being forced by fate to embrace digital journalism. Another reason for the slow uptake of digital journalism at IALNs is the lack of dynamic and skilled staff. Not all journalists at the newspapers studied had the latest digital skills to function in fully newsrooms.

*Alaroye* journalists came close to multi-skilling because they could perform almost all production duties and could produce multimedia content for different platforms. We recommend a programme of multi-skilling and digital content production for all the newsrooms studied which will see journalists creatively use digital tools for newswork processes.

Leadership and vision are some of the key factors that affect adoption of new practices in media organisations. We found out that age, gender and personal ambitions of some proprietors and editors in Nigeria and Zimbabwe were perhaps affecting the adoption of digital journalism practices. We found that a female-headed *uMthunywa* newsroom had reluctance in adopting digital journalism because technology innovation is often seen as a male domain. The *Alaroye* proprietor was opposed to an ambitious programme of digital journalism due to personal interests of ownership and control. An additional reason for the slow update of digital journalism in IALNs is lack of capital to invest in the latest digital technologies. *Alaroye* has been leaping from one financial crisis to another because it is being published single-handedly by its owner. In instances where the IALNs are owned by well-funded corporate media, as in the case of *Isolezwe* and *uMthunywa*, the challenge is often that IALNs are not prioritised in terms of resource allocation.

Subsidiary managed IALNs like *uMthunywa* always wait for the signal and approval from the office headquarters to incorporate new digital work practices. This kills newsroom innovation and partly contributes to the slow adoption of digital journalism practices. Without government funding or subsidies, the purchase of the latest technological gadgets, such as smartphones for reporters, recording devices and computing technology, remain prohibitive for most IALNs.

### *Challenges and opportunities for digital journalism in Africa*

Digital journalism can be discouraged through repressive legislation by some African governments. This is because some online news platforms publish counterhegemonic content that ferment citizen disobedience, forcing governments to retaliate with repressive legislation. In 2015, the Nigerian government was forced to drop proposed repressive legislations, such as the Cybercrimes Acts and the Anti-Social Media Bill. Zimbabwe still has an array of repressive laws that threaten to muzzle media and internet freedoms. The

Cyber Crimes and Cyber Security Bill (2017) proposes a litany of crimes punishable with imprisonment of up to 10 years for transmitting messages by means of computers or information systems that incite racism, xenophobia and violence or cause harm. Such a bill, although perhaps well-meaning, may be used to limit internet freedoms and possibly deter digital journalism. Furthermore, the threats to digital journalism in Zimbabwe include unwarranted state surveillance, content blocking and internet shutdowns. Although South Africa is not a perfect country, it has no known limits to digital journalism; hence, it is a leading democracy in the continent. Duru (2016) states that there are ethical issues surrounding the practice of digital journalism in Nigeria. Apuke and Omar (2021) found a high rate of unethical practices in online media in Nigeria that include fake news, lack of objectivity, lack of decency, invasion of privacy, hate speeches and sensationalism ascribed to poor or lack of training in digital journalism ethics. Another challenge for digital journalism in Nigeria is that its market is segmented due to the digital divide. Old people are still drawn to traditional journalism as seen by their preference to purchase *Alaroye* in hardcopy, and yet youthful audiences have migrated to online spaces. Another challenge for digital journalism in Africa is erratic power supply. In Nigeria, this problem is more pronounced especially during the rainy season when heavy rains destroy the available infrastructure. In South Africa and Zimbabwe, power is available, although there are bouts of load shedding, especially in winter, when there is a high demand for electricity for home heating. The challenge for electricity means that people are not able to use their digital devices to access news on various online platforms. The lack of digital skills also confronts all newsrooms as most journalists in IALNs are not sufficiently multi-skilled for digital media production. The conservative culture of African language journalists leads to a slow adoption of digital journalism practices. Some of them do not want to embrace change and expose themselves to the possibilities of digital technologies.

An additional drawback is that the business model for digital journalism has not been adequately developed. Most proprietors are concerned about how their business will survive if they embrace digital journalism. This is because they still believe in the traditional funding model of journalism which relies on copy sales and advertising. A paradigm shift is required so that proprietors can understand that journalism can still make profits even if it is done solely online through content sales (paywalls) and internet advertising, also known as advertising 2.0. Digital journalism in Africa is also affected by the digital divide. Gondwe and White (2021, p. 11), writing about a closely related subject of data journalism, observe that the digital divide and disparities that exist make the West more privileged than Africa in using digital technologies as most African journalists learn advanced skills by association and most probably by accident. Within Africa itself, the digital divide is apparent as the three countries under study have "asymmetrical distribution and use of [digital] technologies" (Mabweazara, 2010, p. 27). Economic circumstances and histories contribute to the disproportionate distribution of electricity, poor

and unreliable telecommunications infrastructure and connectivity challenges amongst African nations. It may be possible to consolidate the potentials of digital journalism, and it is encouraging to note that IALNs such as *Alaroye* are already experimenting with multimedia content production on YouTube. There is an opportunity to redesign journalism education and curriculum in the continent to suit the current realities in the field, specifically by incorporating digital journalism training. This is born out of a realization that most journalism schools in the continent do not have a strong digital journalism training component. There is need for higher and tertiary education institutions to develop practice-based digital journalism training programmes that will equip journalists with the relevant skills. However, a challenge with this is that the current crop of lecturers at leading universities may not have the requisite skills to teach practical courses in digital media production. Currently, most journalists acquire digital skills through practice (trial and error), that is self-teaching and through inhouse training programmes. In Zimbabwe, leading digital journalists are the ones that have benefitted from scholarship and exchange programmes that have enabled them to travel to the West for postgraduate education and short-term courses in digital media. Across the three countries, journalists also benefit from digital literacy upskilling courses and training workshops offered by Western-based media development non-governmental organisations (NGOs) and civil society organisations.

## Conclusion

This chapter has highlighted the digital disparities that exist between nation-states that affect the adoption of digital journalism practices by small-scale and resource-constrained IALNs. Anchored on the theory of multicultural discourse analysis, the chapter demonstrates that digital technologies, notwithstanding their attractiveness for journalism, cannot be appropriated in African countries in a similar manner. Using case studies from three nations, the chapter finds IALNs adopt digital journalism practices selectively, at their own pace, depending on how useful and relevant they are to them. The common digital journalism practices by the IALNs under study is to have some form of online presence in the form of news websites and social media. IALNs cannot continue to pretend be conservative anymore as they need to adopt more of the new digital journalism practices for their continued survival. Digital journalism across the three nations is constrained by several contextual, institutional and human agency factors. In terms of digital capital and adoption of new digital journalism practices, *Isolezwe* newspaper from South Africa is the pacesetter, followed by *uMthunywa* in Zimbabwe and *Alaroye* from Nigeria. This is because *Isolezwe* is in a high-tech country, while *uMthunywa* benefits from the trickle down of technologies and practices from South Africa. Although Nigeria has a technologically developed media system, *Alaroye* has not embraced more digital journalism practices due to the interests of ownership and control. The *Alaroye* proprietor is averse to digital

journalism because its business model is still founded in traditional journalism of hardcopy sales.

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# 11 Disability, debilitation, and the digital economy

## The case of the superapp Grab in the multicultural nation of Singapore

*Kuansong Victor Zhuang and Gerard Goggin*

### Introduction

On the night of 10 April 2021, a minority race food delivery rider, Mohammed Ali, was involved in an accident in the western part of Singapore, leaving him with multiple injuries, including broken bones and brain injuries. Ali was working as a delivery rider for the service GrabFood to supplement the family income and had crashed his motorcycle into the back of a car (Kwa, 2021). As a result of the accident, Ali underwent emergency brain surgery and was in a coma for seven days. Faced with rising hospitalisation bills of more than S$100,000, Elfy Andriann, Ali's brother, pleaded for netizens to "help my brother, Mohammed Ali Bin Mohammed Kamarruhadi, and ease my family financial burden" (Andriann, 2021a). The plea for donations was widely covered by the Singapore media (Awang, 2021). A number of the online news outlets included explicit and detailed photos, including photos of the images taken from Elfy's Facebook page (e.g., Romero, 2021)). Singaporeans responded almost immediately to support the family; by 4 May, almost S$150,000 had been raised (Andriann, 2021d). Subsequent posts from Elfy Andriann thanked Singaporeans for their kindness and generosity and gave regular updates on Ali's recovery (Andriann, 2021b, 2021c, 2021d).

For us, Ali's case is reflective of the larger issues surrounding gig workers and platform work, highlighting the current shift in labour towards new forms of digital precarity, with key consequences for workers and the organisation of society. We situate Ali and other Grab delivery riders within the emergence of what de Stefano (2015) highlights as the "just-in-time" workforce, where the use of technology provides access to an extremely scalable labour supply, which, while providing economic benefits, also creates certain problems.

The emergence of these digital platforms, such as superapps like Grab, has led to a reorganisation of the economy with larger consequences and impact for wider society (Kenney & Zysman, 2016). As Woodcock & Graham, 2020, pp. 9–10) explain, one consequence is the rise of the gig economy, where labour markets "are characterized by independent contracting

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that happens through, via, and on digital platforms" and where such jobs are often contingent, precarious, temporary, and unpredictable. A key effect studied in gig economies has been the algorithmic management that platforms enact over their workers; these cast a panoptic gaze over their workers in order to milk their productive labour power and, in their quest for maximal efficiency, also exposes workers to low levels of economic security, bodily risks, and, ultimately, exploitation (Bailey, 2016; Duggan et al., 2020; Goods et al., 2019; Graham et al., 2017; Gurran, 2018; Khan, 2020; Wood et al., 2019). Scholars have also highlighted the need for greater regulations in the gig economy, noting how self-regulating digital platforms continue to evade governmental control (van Dijck, 2021). In the continued absence of regulation, Vallas and Schor (2020) characterised platforms as "permissive potentates" who use their technologically enabled power to exploit labour forces. The net effect is a platform facilitated competitive labour market, which, on the one hand, matches demand and supply but, on the other hand, also creates what Stewart and Stanford (2017, p. 420) describe as a "ruthless race to the bottom".

While superapps like Grab offer a means of entry for some groups into work, they must be examined for their debilitating effects, often leading to injury and disability. In Singapore, research by the Institute of Policy Studies highlighted how platform workers "face high risks of precariousness and insecurity . . . [and] also experience precariousness as a process, at every stage of the work process dealing with everyday stressors" (Mathews et al., 2022, p. 9). Regarding accidents alone, the experience of many motorcycle, scooter, and bicycle riders working in the gig economy involves a high prevalence of accidents. Neither state agencies nor food delivery companies in Singapore tracked or published such figures (Ang, 2022); however, a media report noted that "Nine out of 10 delivery riders interviewed . . . said that they had met with accidents or knew of fellow riders who had met with accidents since they started working in the industry" (Menon, 2019). In Vietnam, a study of Grab motorcycle taxi riders undertaken in 2018 pointed to a "self-reported crash prevalence" of 30.4% (Nguyen-Phuoc et al., 2019, p. 73). As Hong (2022) explains in his discussion of disabled Grab delivery riders in Singapore, such forms of platform economies, while seemingly affording disabled workers a means of entry into the labour force, also functioned as a form of curative violence in rehabilitating them for work. The contradictory effects of enablement must be highlighted; that in making live, it is in fact also, following Puar (2017), situating Grab workers within the vector of "not let die". These kinds of dynamics are another dimension of what Sopranzetti (2021, p. 7), in his study of Grab and Uber in Bangkok, terms "the complexity of app-based informality in the contemporary world".

But importantly, the case of Ali and the response by the Singapore public and media also reflects the ethos of a multicultural Singapore, one which values community self-help and support rather than state handouts and welfarism. Ali's incident thus serves as a reminder that superapps like Grab are embedded

within its larger environment. As Goggin (2011, p. 150) highlights, cultural work on apps is important to understand the following:

> What kind of technological system [mobile apps] constitute as a cultural platform; and, in particular, what kinds of activities, projects, aims, groups and individuals may access apps – and upon what terms, and subject to what social, and power, relations they may do so.

Similarly, Poell et al. (2019, p. 8), in their extensive review of the literature, call for a focus on the "reorganisation of cultural practices and imaginations around platforms". In particular, they highlight three key dimensions, namely, to examine the development of data infrastructure, how platforms organise economic relations, and the kinds of behaviours and interactions that are structured by platforms (Shi-xu, 2022).

As a contribution to this emerging research, and amidst the constant clamour of "tech for good", our focus in this chapter turns to reconsider the ways that digital platforms work to influence, reorganise, and perpetuate cultural discourses. We ask: what kind of cultural representations are perpetuated by Grab, and how does this aid in reproducing cultural discourses about digital inequalities and their implications? What is the reality of multiculturalism in Singapore projected through the platform of Grab, especially when viewed through the lens of disability? And importantly, in taking a disability-led approach to examine the question of digital inequalities, we also consider how disability can serve as a generative analytic to think through cultural and media representations that circulate around food delivery riders, such as the case of Ali, and, at the same time, challenge supposedly hegemonic notions of platforms as a force for good. In doing so, we build on the works of scholars around digital inequalities (Goggin, 2017; Hargittai, 2013; Van Dijk, 2005), who have highlighted how the uneven adoption and use of digital technologies can lead to problems and social stratification across specific groups in society, in particular, with disability. In addition, in line with the volume's focus on cultural discourse studies (Shi-xu, 2016, 2017, 2022), we offer a situated reading of the workings of the superapp Grab in Singapore, paying attention to the power relations inhabiting the space of cultural discourse in and across digital platforms so as to highlight its workings and its associated problems, as well as the ways in which local discourses, such as multiculturalism, are deployed to the service of neoliberal capitalism and their implications for disability. As we will show through our adoption of a disability analytic, cultural representations of delivery riders obscure the debilitation and problems embedded within platforms and gig work and can further perpetuate digital inequalities. In other words, while examination of digital platforms and infrastructures and their workings are key, such analysis should not be divorced from how traditional forms of media technologies are used by digital platforms to reinforce the "benefits" and "benevolence" of such digital platforms. In the sections that follow, we first situate the context of Grab within a

multicultural Singapore before discussing our theoretical approach. We then discuss a 2021 media campaign by Grab Singapore, titled "Supporting you and who you drive for", to highlight the problems in cultural representations of workers and the role that superapps and digital platforms like Grab play in digital inequalities.

## Digital inequality in multicultural Singapore

The case of Ali, introduced at the start of this chapter, thus represents both the issues that scholars have raised about the gig economy and also the problems of digital inequality. And it is here that we turn to situate digital inequalities within the context of Singapore and to illustrate the workings of Grab. This is especially pertinent given how Singapore is one of the most digitally advanced and connected societies in the world, where 89% of resident households have access to computers and 98% to the internet (IMDA, 2022).

First and foremost, Grab seeks to stake out a position from other profit-oriented digital platforms; while firmly embedded within neoliberal capitalist circuits and ambitions, it also has a keen focus on doing good. Founded in 2012, in Kuala Lumpur, Malaysia, Grab has grown from simply "a ride-hailing app into food and grocery delivery, insurance, payments, e-wallets and lending across eight countries in Southeast Asia, fuelled by a young, mobile population" (Ruehl, 2021). Since relocation of its headquarters to neighbouring Singapore (Brail, 2020), the founders of Grab, Anthony Tan and Hooi Ling Tan (2021), make clear how the "Grab Way" aims to "make a lasting difference for Southeast Asia by creating economic empowerment for everyone".

In various public documents, Grab also explains how it aims to "sustain livelihoods and offer earning opportunities to those who need it" (Grab, 2020, p. 9), or what the co-founders have articulated as a "force for good" (Tan & Tan, 2021). Yet at the same time, it aims to be an "everyday everything app" for consumers, extending into all aspects of life (Grab, 2021c, p. 5). Grab merged with a special-purpose acquisition company (SPAC) in order to public list on the New York Nasdaq in early December 2021 in what was hailed as the "biggest Wall Street debut by a Southeast Asian company" (Toh, 2021). In its public documents, Grab highlights its extensive penetration in Southeast Asia – it has more than 5 million registered driver-partners in 400 cities across 8 nations, as of December 2020, and more than 1.9 billion transactions over its platform in 2020 (Grab, 2021c, p. 13). As a superapp, it increasingly serves as a key role as the "operating systems of our lives", following Vaidhyanathan's (2018, p. 99) description of the rise of FAANG and their "digital empires" (Keane & Yu, 2019).

Amidst the constant stream of messages of "Grab for all" and "Grab for good" encountered in everyday life in Singapore, for many there is growing awareness of the problems of digital inequality that arise out of gig economy and platforms. Or, to adapt the phrase of Magalhães and Couldry (2021),

what is at stake in Grab and other Southeast Asian gig economy companies' "reconfiguration of social good". State actors in Singapore are especially keen to address the inequality exacerbated by the gig economy, with growing recognition that more regulation is needed in the sector. In his national day rally speech in 2021, Prime Minister Lee Hsien Loong pointed out how gig workers have no employment contracts and thus lack basic job protections that most employees have, such as workplace injury compensation, union representation, and employers' contribution to the workers' Central Provident Fund. The Central Provident Fund is a pay-as-you-go pension system and is central to many aspects of social life in Singapore – besides providing for one's elderly retirement, it also functions as a means of entry to fund public housing purchases and medical care (Vasoo & Lee, 2001). Commentators are also generally in agreement that the state needs to step in to regulate the sector and to enact protections for workers in the gig economy; at the time of writing, a government committee is examining the issue and looking into recommendations for the gig economy (Ang, 2021; Mathews et al., 2022; Meah, 2021; Ong, 2021; Zain & Woo, 2021).

Such an orientation also reflects the desire of the ruling People's Action Party to remain relevant to groups at the margins. As Chua (2017) explains, while the People's Action Party has pursued economic growth as part of an ideology of national survival since independence, in keeping with its origins of social democracy, it has also invested considerable energies in equitable distribution. In recent years, disabled people have been singled out as a group worthy of inclusion in Singapore society (Zhuang, 2016), with a whole array and corpus of policies aimed at supporting them in society. And this has seen a focus on digital inclusion (Goggin & Zhuang, 2022), with technology central to enabling disabled people towards full participation in social and community life but also with a keen recognition of the possible inequalities that might arise from the digitalisation of society (Ng et al., 2021).

It is against this current backdrop of concern over the workings of the gig economy in Singapore and a keen focus on inclusion that we turn towards disability as a generative form of knowledge to think through the representations and issues that surround the emergence of and claims arising from Grab and the gig economy.

Tracing its origins from the disability rights movement, disability studies is an interdisciplinary field of study that has generated a whole corpus of scholarship focused on the critique of discourses in society that postulate disability as problematic; at the same time, centring on disability is a means to generate new ideas and possibilities for society and life (Barnes, 1991; Davis, 1995, 2002, 2014; Goodley et al., 2019; Kafer, 2013; McRuer, 2006; Mitchell & Snyder, 2015; Oliver, 1983, 1990, 1996). There is also a growing presence in examining the impact of technology and its intersections with disability, in particular, moving away from narratives that accept technology as salvation to also consider how disability is imagined within tech (Allan, 2013; Blume et al., 2014; Goggin, 2016; Goggin & Newell, 2004; Lazar & Stein, 2017;

Mankoff et al., 2010; Roulstone, 2016). Similarly, in Singapore, there is a small but growing interest among scholars on the generative aspects of disability and how such work can enrich our understandings of Singapore society (Chen, 2021; Chua, 2019; Goggin & Zhuang, 2022; Holden, 2020; Lee et al., 2017; Wong, Low, et al., 2017; Wong, Ng, et al., 2017; Wong & Wong, 2015; Zhuang, 2016, 2020, 2021). We note also the nascent work on disability and digital economies, especially work and consumption associated around disabled people in the gig economy (Harpur & Blanck, 2020; Macdonald, 2021; Milkman et al., 2021).

Our chapter thus builds on this growing scholarship and makes the connection between food delivery riders and questions of debility and disability. As Puar (2017, p. xiv) points out in her insightful analysis in *The Right to Maim*, the identification of disability as fixed attributes is a form of misrecognition; instead, disability "exists in relation to assemblages of capacity and debility, modulated across historical time, geopolitical space, institutional mandates, and discursive regimes". The incorporation of human capital as productive units of capitalist economies, and their subsequent debilitation within circuits of work as a result, are biopolitical strategies. Using this lens to examine the case of Ali allows us a different insight to the plight and circumstances of food delivery riders. On the one hand, gig work through platforms like Grab offer opportunities for employment and income – a form of capacitation which allows for Ali to gain earning power to support and supplement the family income. Yet, on the other hand, the lack of sector regulation places food delivery riders in a state of constant debility at risk of bodily injury, disability, and death.

Taking such an approach also builds on the possibilities of disability as a critical lens to examine societal structures (Kim, 2017; Minich, 2016; Schalk, 2017), instead of only reaffirming medical diagnosis of disability in the analysis. It is here that we turn to a recent advertisement campaign by Grab to consider how Grab delivery riders are represented and what these say about approaches to digital inequalities in multicultural Singapore.

## Disabling delivery riders?

The video of the campaign, titled "Supporting you and who you drive for | Grab Singapore", was released by Grab Singapore on 12 November 2021. Approximately 3 minutes long, it has garnered more than 2 million views on YouTube and more than 3,000 views on its Facebook page as of 30 November 2021. The video opens with an interview with Mei Xiang, a 61-year-old housewife, who explains that she is unable to work because of her health but is fortunate because she can rely on her eldest son. Sitting on a chair in her home, Mei Xiang goes on to describe the life of her eldest son – he works long hours and has no off days and no time for leisure activities. The music that accompanies the initial part of the video is sombre and slow, and Mei Xiang ends off the first portion of the video by stating, "Actually, I want him to know that he does not have to do all of this".

Immediately after Mei Xiang's statement, the tempo of the music picks up and the video moves to focus on the everyday life of her son. We see her son, dressed in office gear, opening his locker and proceeding to change to the ubiquitous Grab green, long-sleeved tee-shirt, seeming in a rush. We learn that her son works two jobs so as to earn enough money. The video then shows her son at work as a Grab delivery rider and the kinds of conditions he faces daily. Her son is seen eating instant noodles, implying that he has no time for proper meals; before braving rain as he attempts to make a delivery. We then see her son handing money to Mei Xiang, while she says "actually I think he should spend some of his savings on himself, or for his future wedding, but he always put the family first". As the video nears the 2-minute mark, the unseen interviewer asks Mei Xiang if she had ever thanked her son, to which she answers, "no not yet".

The video then moves into its final part – which centres on Mei Xiang expressing her gratitude. She hand-washes the green Grab uniform, presumably her son's, before the video transitions to show the dining table, set with home-cooked food, seemingly as a way of emphasising her thanks to her son. As touching music accompanies the video, her son joins the family for dinner. We next find out that this video is played by actors and inspired by the true story of Zheng Wei, a Grab delivery partner, as a photograph of his mother and himself leaning on his bicycle is flashed on screen. A neutral voice then narrates Grab's intent in supporting their workers and that they "value the hard work our partners put in for their loved ones". Concurrently, the various schemes available to support Grab's delivery riders are listed, namely, "Affordable Critical Illness, Prolonged Medical Leave, Emerald Circle Scholarships and Bursaries, and Grab Academy Courses". The video then transitions into a montage showing the back of various Grab delivery riders as the words "For my Family/Children/Parents", respectively, flash on their backs while the narrator states, "because what matters to you, matters to us" (Figure 11.1). The video finally ends with a call to work for the platform so that Grab can "support you and who you drive for".

While the video focuses on how Grab aims to do good and support its riders, disability is central to the story and serves as what Mitchell and Snyder (2000) describe as narrative prosthesis, where disability is used as a stock feature for characterisation and as an opportunistic metaphorical device, key to supporting the unfolding of the story. The introduction of Mei Xiang and the interviewer's first question sets the tone for how disability is used. As the camera centres on a sitting Mei Xiang, the interviewer asks, "Are you still working?"; to which Mei Xiang replies candidly, "No lah, I'm not, I wish I could". The camera then immediately switches to focus on her legs as she elaborates, "I can't work anymore because of my health" (Figure 11.2). Here, the use of the camera technique and focus on her legs suggests that Mei Xiang's health issues have affected the functionality of her limbs, a form of disability. Disability studies scholars have noted how the exclusion of disabled people from mainstream employment is a result of the affirmation of particular able-bodied

norms at work (Barnes, 1991; Barnes & Roulstone, 2005; Roulstone, 2013). And Mei Xiang's disbarment from neoliberal circuits of work because of her health also parallels disability studies concerns around the kinds of bodies and expectations demanded at work, even while she might not claim disability as an identity.

Importantly, Mei Xiang's disability serves as the introduction into her son's entryway into gig work. Here, not surprisingly, Grab is seen as a force for good – one which empowers worker-citizens like Zheng Wei to earn the income required for their living and sustainment in the world. This is curiously


*Figure 11.1* Ending of the video, featuring the backs of Grab delivery riders
*Source:* Grab (2021e).


*Figure 11.2* Screenshot of Mei Xiang's response and the camera's focus on her limbs
*Source:* Grab (2021e).

contradictory – Zheng Wei is the sole breadwinner of the family and firmly embedded within circuits of work because of his mother's inability to gain employment. Interestingly, Mei Xiang suggests that he need not do so. Yet, her disability does not enter her into welfare systems, especially in a country where welfarism is disavowed for fear that it dampens the economic productivity of its population (Chua, 2017) and where there is no specific state support and monetary assistance for disability (Zhuang, 2016). Thus, while Mei Xiang suggests that more work is not needed, the reality is that her implicit disability leaves the family with no other option.

Disability is thus central to representations of delivery riders, whether by Grab or in the case of Ali introduced at the start of the chapter. Ali's body sustains injury and consequently disability in his attempt to exchange his labour for economic gain. His accident and hospitalisation affirm his entry into disability, embedded also within circuits of healthcare and rehabilitation and linked to notions of cure and recovery. Similarly, Zheng Wei's personal story, while situated within Grab's rhetoric of a benevolent tech platform that supports their driver-partners, is also connected to that of Ali, given how he is always-already at risk. For both, the spectre of disability hangs over them – one already realised, while the other, hinting towards a deferred future.

## Grab for good? The value of disability

An important question to ask is what do the notions of goodness that Grab professes actually do?

In the video campaign, Grab reiterates its support and gratitude for its rider-partners (to use Grab's terminology), specifically, in naming the various policies it has introduced. Grab enables Zheng Wei and Mei Xiang to earn a living, who correspondingly are thankful towards the platform. Such narratives remind of the benevolent nature of corporate capitalism, reflecting what Friedner (2017, p. 12) describes as "feel good diversity" where disability is deployed in a non-threatening form by both corporates and state as a means for accruing value through the "circulation of feeling and sentiment among non-disabled Indians". Similarly, Matthews (2021) notes how disability is intimately connected to values embedded within technologies; discussing the case of hearing communication apps, she highlights how notions of disability and diversity are marketed as commodities to be sold and purchased. In the case of Grab, the timing of the release of the video, around the moment where the state is keen to explore further regulation and as it is due to be publicly listed, suggests that its focus on good serves to generate value for the company as a form of corporate social responsibility.

More importantly, such depictions of technology that serve to do good neglect to discuss the inequalities that platforms like Grab create. There are tacit acknowledgements of the working conditions of delivery riders – in the video, Mei Xiang shares how her son has to "work two jobs" and that "he's very very busy, he works long hours, and sometimes he doesn't have any

off days". Both the tone that Mei Xiang uses and the overall framing of the narrative, however, position this as a source of pride. The problem with this depiction is that it neglects to acknowledge the systemic issues that food delivery riders face. Examining the case of Australia, Goods et al. (2019) highlight that while workers might appear to have autonomy and flexibility in the gig economy, they are in fact price takers with no control and wages consistently below minimum levels. These findings of low wages have also been consistently highlighted by studies in other national contexts (Anwar & Graham, 2021; Healy & Pekarek, 2020; Prassl, 2018; Smith et al., 2021). While statistics of the wages of food delivery riders are not readily available in Singapore, anecdotal accounts from various news blogs and local media sites highlight how delivery riders' average hourly pay, ranging from S$12 to S$21 per hour (Lim, 2021; Ling, 2021), is significantly lower than the wages of the average Singaporean, which clocks in at S$4,000 monthly in 2020 (Ministry of Manpower, 2020, pp. T32–T33) and works out to S$23.36 per hour of work (Koo, 2021).

The lower pay of delivery riders are further compounded by the fact that they are misclassified as independent contractors even while they work for the digital platform (Aloisi, 2015; Prassl & Risak, 2015; Stewart & Stanford, 2017). A key consequence of such misclassification is that delivery riders are imbricated in precarious work and do not receive the same kind of protections as employees in other sectors.

In the context of Singapore, this misclassification also means that platforms do not need to provide for Central Provident Fund employer contributions, which amounts to about 17% on top of workers' pay. While this means more cash in hand for delivery riders, the overall consequence is the depletion of food delivery riders' ability to save, given that the Central Provident Fund system, a pay-as-you-go pension system, is central to Singapore's plans for ensuring its citizens' financial security in retirement (Vasoo & Lee, 2001). This misclassification, we contend, has more severe consequences, given how the predominant cultural representation presents both tech and Grab as benevolent and doing good. In other words, it is not just workers that misconstrue themselves as fully functioning and autonomous independent units. This misrecognition also extends to cultural representations – a production and consequence of what scholars have highlighted as algorithmic control and management (Wood et al., 2019).

## Multiculturalism as self-help?

Importantly, Grab's approach towards their delivery riders also reflects the Singapore ethos of multiculturalism. By multiculturalism, we refer to the ideology in Singapore used as a means to manage racial difference. While multiculturalism has been questioned for its effectiveness as a tool for nation-building (Fomina, 2006), it has remained a key policy in Singapore. The realities of multiculturalism, however, need to be understood in its specific historical and

political contexts (Shi-xu, 2009), and scholars have highlighted how citizens and groups have contested, negotiated, and challenged the policy regime of multiculturalism across various sites (Abu Bakar et al., 2021; Ahn, 2013; Thurairajah, 2017). In Singapore, we situate the policy of multiculturalism as a form of management, one aimed at specifying how people of racial difference can be incorporated into the body politic. As Chua (2003) explains, the Singapore state choose to affirm an embrace of multiculturalism; focused mainly on affirming the four racial categories of Chinese, Malay, Indian, and Others at point of independence. In doing so, the state also placed itself as the neutral arbitrator of disputes and as an independent umpire which seeks to allocate resources (Chua, 2003). As a mode of governance, scholars have highlighted the pervasiveness of the ideology into all aspects of Singapore society (Goh, 2011, 2013; Nirmala, 1998; Norman, 2012; Velayutham, 2017; Velayutham & Somaiah, 2021). Chua (1995) also highlights how multiculturalism extends into ideas of communitarianism. A key focus has been community self-help where the state recedes from being the sole provider of welfare and where all sectors of society come together to support marginalised groups and those facing problems in life (Chua & Kwok, 2001; Ho & Wee, 2016). Importantly, the ethos of multiculturalism are also present in policies to resolve digital inequalities. While the state is actively addressing these inequalities, it is also keen to also promote the active engagement of community groups in supporting digitally disadvantaged groups. Such an approach, or what is often described as the many helping hands approach, is also present within policy discourses around disability (Zhuang, 2016).

Multiculturalism as an ideology and approach towards inequality is also present within both the video campaign and the incident involving Ali. In Ali's case, faced with lengthy hospitalisation, rising medical bills, the sceptre of non-recovery, and the possibility of disability, the family turns first not to state support but to the community for help. Such an approach is peculiar as, while means testing and co-payment has been a key function of the Singapore healthcare system to keep costs down (Hong, 2002; Lim, 2017), the state has also been keen to provide a safety net with the Medifund scheme to support citizens with financial difficulties (Ministry of Health, 2021). While the specifics of Ali's situation are not made known, it is telling that Ali became a food delivery rider to support his family; at the same time, it is also the family who supports him after the incident and appeal through social media sites for donations. In a similar vein, Zheng Wei is depicted as the sole breadwinner, and because of that, he steps in to fill the role of the missing father to provide for the family. Throughout the video, Mei Xiang points out how Zheng Wei "always put the family first", contributing to household finances and taking care of his younger brother. And while Mei Xiang says, "Luckily I can rely on my eldest son", as an explanation and solution for her predicament, her story is in fact also embedded within a multicultural Singapore that sees the family as the primary mode of support. In both cases, family comes first, reflecting the pervasiveness of an ethos of

multiculturalism and communitarianism as a fundamental organising principle of Singapore society.

The turn to the community is also a consequence of inadequate insurance coverage for platform workers. While Zheng Wei and Mei Xiang paint a picture of "Grab for Good", the reality is that riders involved in accidents have had to turn to the public for funds. This poses a severe contradiction with Grab's intent of supporting their workers; in the subheading to the video posted on YouTube, Grab (2021e) states that it aims "[t]o support them on the road . . . provide our partners with a range of benefits that safeguards their income and allows them to build a better life for the ones they love". In the video, Grab also lists various policies that it has enhanced from 1 July 2021, including coverage for critical illnesses and prolonged medical leave coverage (see Figure 11.3).

A closer examination, however, reveals problems. The premiums for enhanced coverage of critical illnesses are paid for by the workers themselves, rather than the company (Grab, 2021b). Also, prolonged medical leave benefits are offered only to select workers, notably, riders who have attained a certain amount of deliveries, thus excluding newly minted delivery personnel (Grab, 2021a). These prolonged medical benefits also only apply from the sixth day onwards, excluding the first five days of outpatient medical leave (Grab, 2021d). And while there is coverage for medical expenses, including hospitalisation, the quantum for such coverage is only up to US$1,000. It is also within this context that we can understand how delivery riders who suffer debilitating injuries like Ali have had to turn to the community for support. As Pillai (2021) reports, the key reason for such non-coverage is that delivery riders are considered independent contractors; they are not covered under the

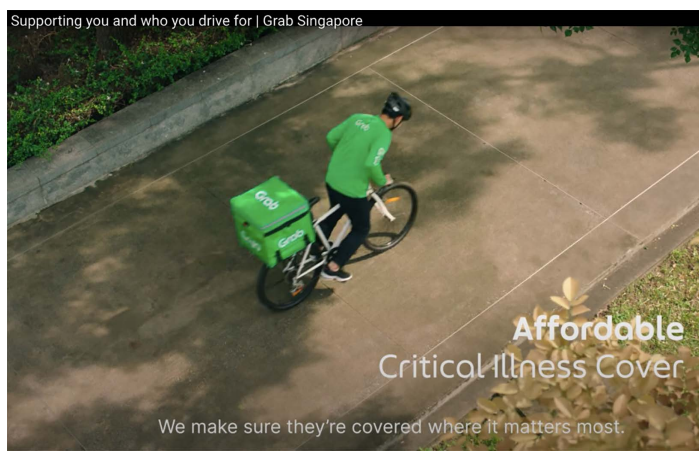


*Figure 11.3* Screenshot showing one of Grab's policies to support its delivery partners
*Source:* Grab (2021e).

Employment Act in Singapore and thus are not eligible to claim for injuries endured at work under the Work Injury Compensation Act. The turn towards support by their families and communities is then telling for both Ali and that of Mei Xiang and Zheng Wei. On the one hand, it reflects the key principles of multiculturalism – a pervasive reliance on self and community in times of need. On the other hand, it highlights how workers in the gig economy and platforms lack protections and that their support falls short of what is typically provided to other workers in Singapore. In both cases, there is a misrecognition of tech for good as the salvation of workers.

## Tech not so good – what ways forward?

The case of Ali, to return to the example cited at the start of the chapter, reflects the issues and problems of delivery work as precarious employment that embeds delivery riders within circuits of debilitating labour. Such forms of work place delivery riders in positions that expose them to potential disability. In calling for a focus on the structures of debilitation, we highlight the lack of structural regulation and systemic support, which connects food delivery riders with potential injury and disablement. As Nirmala Erevelles (2011) points out, the kinds of bodies that get marked as disabled are ultimately connected to the socio-economic and material contexts in which such bodies reside in. Importantly, such work begs to ask the question, following Puar (2017), of how bodies are geared towards the making of life and of creating value and how bodies within such systems are often put into a complex relationship between disability and debility.

And this is also where we return to disability, moving from impairment – something that happens to an individual – to consider disability as a form of valid embodiment and generative knowledge to think through the debilitation of gig workers. If we recognise gig workers as constantly in a relationship of flux with disability as a result of debilitation, how else can we think differently about gig work on the one hand and, consequently, disability and marginality in society? Importantly, a recognition of disability allows us to turn our attention to identify how material conditions and structures create conditions of debility and potential disablement. As Puar (2017) points out, these structures posit such bodies within the vector of "not let die", where their bodies are milked for productive capacity within capitalist economies. The case of gig economies thus presents the worst-case scenario of exploitation even while cultural representations depict platforms as benevolent entities.

Importantly, the misrecognition of what technology does is central to the imagination of technology in gig economy. This is not to say that technology has no role to play in doing good and the betterment of society; rather, a focus on disability brings to the fore the underpinning norms and associated problems in technology. Within the ethos of a multicultural Singapore, technology for good has the potential to enable and support various populations towards better livelihoods. Yet, we need to be cautious of the cultural work

that such technology is doing and hold them accountable to the possibilities it entails and projects (Holzmeyer, 2021). Only then can tech (and Grab) truly be for good.

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# 12 5Ws and H as determinants of culture-driven internet search queries in West Africa

## A critical information-seeking discourse analysis from Google Big Panel Datasets (GBPD)

*Mutiu Iyanda Lasisi, Mustapha Muhammed Jamiu and Natalia Poplavskaya*

### Introduction

Since the advent of the internet in the early 1980s towards the early 1990s (Mowery & Simcoe, 2002; Greenstein, 2010; Nevejan & Badenoch, 2014), it has become an important tool for people around the world that enables them to communicate without the constraints of earlier times (Abbate, 2000; Haigh et al., 2015). This is largely because established methods of communication and information society have evolved. Despite the advantages, some existing literature noted that many people around the world are still unable to access and effectively utilize the internet due to issues like poor infrastructure and the high cost of data subscriptions in many Global South countries; this introduced the term *digital divide*, *second digital divide* or *digital inequalities* in research (Hargittai, 2021). As research progresses, scholars and professionals are still battling with the challenges facing the issues of digital divide and inequalities several years after the internet was first created as the field is yet to be well appreciated (Robinson et al., 2015). The 15 West African countries – Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo – are a part of the Global South's countries that have gone through and are now going through digital inequality and divide. Numerous scholars have studied these difficulties (see Azubuike et al., 2021) while exploring specific ways through which people in the region are deploying various emerging technologies for their information needs towards achieving their socio-economic and political goals (Asibey et al., 2017; Lasisi et al., 2021; Lasisi & Oyedele, 2021). However, none of the studies has specifically constructed large panel datasets using public search queries from Google Trends considering relevant constructs or elements of information-seeking, cultural dimension and reasoned action and planned behaviour theories. Therefore, as the intellectual debate continues on the place of technology in the socio-economic and political development of

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the region, it is necessary to investigate how cultural difference or equivalence is shaping the use of search engines, especially Google Search Engine, for seeking socio-economic and political related information and determine the extent to which one could say the regional organisation is working towards achieving its main goal of promoting economic cooperation among member states by formulating and executing digital policy and/or programmes in order to raise living standards and promote economic development.

**Literature review and empirical analysis**

Due to the fast-growing nature of technology, settling on a stable or simple definition of the internet has become more difficult (Haigh et al., 2015); however, many scholars have investigated these charges and captured various definitions upon new phases. According to Haigh et al. (2015), the internet from the 1980s described it as "the interconnected set of local networks hooked together with the TCP/IP protocol". This hardware-focused definition is no longer adequate, as the internet has evolved significantly over time and the scope of its functions has expanded due to advances in technology. For example, a diverse number of technologies are connected to the network today and are being used for different purposes, such as televisions, telephones, computers and cars, and even the mode of transacting businesses in different parts of the world has advanced due to the evolving nature of the internet. According to Mowery and Simcoe (2002), the internet is a network that facilitates communication among computers with the usage of a shared set of standards and protocols and enables accessibility through the World Wide Web (WWW). The growth and development of the internet in the United States was characterized by three phases (Mowery & Simcoe, 2002). The first phase, the period between 1960 and 1985, was considered the earlier stage of theoretical development and dominant usage amongst the researchers and gradually expanded to the public. The second phase, 1985 to 1995, was considered to be the period the internet shifted from public to private management and paved the way for private access to public access that utilized the public telecommunications infrastructure. The year 1995 was considered the beginning of the third phase in the evolution of the internet which saw the completion of the privatization of the key companies behind the technology of the WWW.

Many positive attributes are connected to the early emergence of the internet across the world, such as improving the means of communication by connecting people from different locations and remote areas, increasing the ease of business transactions from small-and-medium-scale enterprises, fostering inclusion for marginalised groups, improving quality of healthcare systems/access to education and advancing of democracy and innovation promotion; the same benefits occurred in Africa, particularly the West African countries (Ejemeyovwi et al., 2019; Veiga et al., 2018; Mustapha & Agyei, 2022). For example, the process of making calls to neighbouring African countries was more expensive than calling countries in the Western world until the

emergence of the internet, which makes it easier, cheaper and equally fosters cross-border regional trade (Veiga et al., 2018). Veiga et al. (2018) further note that between 2008 and 2012, internet bandwidth in Africa grew 20-fold between 2008 and 2012. Specifically, in West Africa, Lars (2022) reported in the 2022 Statista report that the usage of the internet grew at a high rate between 2000 and 2021 as Togo reached 91.2%, São Tomé and Príncipe increased by 88.2%. Likewise, Ejemeyovwi et al. (2019, p. 1), in their study on the influence of internet usage and innovation on human development in 15 Economic Community of West African States (ECOWAS) countries, found that internet usage, innovation and their interaction have a significant and positive relationship with human development. Despite all the positive attributes and potentials of the emergence of the internet in African countries, there are many downsides, including weak connectivity, a higher price for purchasing internet data and inequality in accessibility (Veiga et al., 2018; Ejemeyovwi et al., 2019). To alleviate some of these challenges, ECOWAS, like many of their contemporaries in the Global North such as the European Union (EU), have employed some strategies (like Vision 2020 in 2007 and Vision 2050 in 2022) to ensure that the citizens of the ECOWAS member countries are not left behind (Ejemeyovwi et al., 2019; ECOWAS vision 2050).

### *Influence of cultural differences, uniqueness and dynamism on technology usage*

Many scholars have recently applied the concept of culture to specific phenomena in their studies to gain a deeper understanding. This approach moves beyond a static or geographically confined notion of culture, recognising its dynamic nature (Quist, 2001; Abdulai et al., 2017; Arowolo, 2010). The contention of some of these scholars is that culture as a phenomenon is beyond a practice of key values accepted among a set of groups but instead is a continuous "dynamic process" of evolvement, actions and relationship among the cultural actors beyond one group to another. That is how culture and the action of the actors affect and shape one another beyond boundaries or borders among the states, institutions and so on (See Quist, 2001; Shi-xu, 2016).

Long before the arrival of the colonialists, empires, kingdoms or states in the present-day West African countries had well-established political structures and cultures with unique manners of governing, interacting, integrating, interchanging their values and beliefs beyond boundaries and sustaining peace among themselves (Arowolo, 2010). However, colonialism expanded the region to two more influences of cultures that turned the African culture into what is known as the "Triple heritage": African, Euro-Christian and Arab-Islamic (Quist, 2001; Arowolo, 2010). After the arrival of colonialism, the culture of the people of these terrains become disintegrated, disrupted and nearly went extinct due to the influence of the colonists and the indirect, and sometimes forced, way they imposed their culture as a means of civilisation (Arowolo, 2010). Arowolo submits that "the dynamism and significance

of Africa on the global continuum tends to support the argument that Africa would have evolved and sustained level of development and civilisation without the retrogressive contact with imperial forces" (p. 1). And this submission contends with one of the questions of Shi-xu (2016) on cultural discourse studies (CDS) that there is a need to reflect on "how to combat Westcentrism, expose and deconstruct ethnocentric discourses of domination". At least, the awareness that cultural imposition, dominance or discrimination exist through such existing works will go a long way to find more solutions in taking necessary actions in order to prevent the extinction of African culture which dominated the region through colonialism and the new trend of globalisation. It could be said that colonialism and Westernisation contributed greatly to the cultural division (socially, politically and even economically) among the West African countries due to the nature of their various former colonial masters, even in a post-colonial period (Arowolo, 2010). For example, the Gambia, Sierra Leone, Ghana and Nigeria were colonies of Britain (which practised a policy of adaptation), while Senegal, Guinea, Mali, Burkina Faso, Benin, Ivory Coast, Niger and Togo were colonies of French (which practised a policy of assimilation) (see Quist, 2001).

### *Digital divide and inequality*

Going by the assertion of Toffler (1980), a period will come when information and communication technologies (ICT) will be the driver of every aspect of life (cultural, political, economic and social), which he described as an "information society" or "infosphere" which the world had already found itself in for some decades. Lagging behind in the usage of the resources for building a better society, as many countries in Sub-Saharan African countries are experiencing, is a typical example of what the digital divide is (Gyamfi, 2005; Bornman, 2016). While much literature has looked at the digital divide in the Global North, the same is emerging from the Global South, particularly West Africa, though as of now, there is not enough research to make the discourse significant, and more work from this region is required as it remains the most marginalised and excluded in the world (Fuchs & Horak, 2008; Bornman, 2016).

The concept of digital divides has been largely defined and explored by many scholars which are highly connected with information society, ICT and inequality for accessibility and usage (Castells, 2002; Fuchs & Horak, 2008; Antonio & Tuffley, 2014; Bornman, 2016; Van Dijk, 2017). In defining digital divides, Van Dijk (2006) defined it as "the gap between those who do and do not have access to computers and the Internet" (p. 178). Likewise, Castells (2002) defined digital divides as "inequality of access to the Internet" (p. 248). Some other scholars further noted that digital divides as a phenomenon is multidimensional, from global to social or democratic (Norris, 2001; Fuchs & Horak, 2008). Scholars have classified digital divides into many types since each region of the world has peculiar issues that differ from one another. For example, looking at the digital divide from a multidimensional angle as

observed by Fuchs, & Horak, (2008) as "Global (Gap between the information rich and poor in each nation), Social (Gap between the information rich and poor in each nation), and Democratic (Difference between those who do, and do not, use the opportunities of digital resources to engage, mobilize and participate in public life)" (p. 101), Van Dijk and Hacker (2003) equally divided barriers of digital divides into three as follows:

> barriers to access: The lack of "mental access" refers to a lack of elementary digital experience; The lack of "material access" means a lack of possession of computers and network connections; The lack of "skill access" is a lack of digital skills; The lack of "usage access" signifies the lack of meaningful usage opportunities.
>
> (Fuchs & Horak, 2008, p. 100)

These typologies of digital divides by different scholars reflect the reality that each region of the world has peculiar issues that differ from one another. The digital divide in Africa could be between them and the developed, between those who do and those who do not have (money or skill set) or between the urban and rural. In West or Sub-Sharan African countries, the discussed typologies are highly connected with the issue in the region as there are divisions and inequality of access usage and know-how of the ICT or digital tools between the urban and rural settings, the rich and poor, lack or few ICT infrastructure, instability of electricity (presence in the urban but not in the rural areas), weak internet connectivity, expensiveness of internet access, among others (Gyamfi, 2005; Meseret & Jackson, 2006). Hence, the divides become wider between West Africa or Sub-Saharan African (SSA) countries and the Global South with more arising issues.

Several efforts have been made jointly by many foreign, regional and national agencies to help deal with digital divides issue among the West African countries. As reported by Gyamfi (2005), some examples of these include the following:

> The Agence de la Francophonie: an agency for cultural and technical cooperation that executes development programs and projects among French-speaking countries; The Kofi Annan ICT Centre of Excellence: a joint Ghana/India project to produce the human resources needed for the emerging ICT industry in Ghana and the West African subregion; INTELCOM II plan of the Economic Community of West African States (ECOWAS): an initiative to upgrade regional telecommunications networks and establish communication links between all sixteen capitals of the member states.
>
> (p. 24)

However, all these efforts are not making much difference due to the nature of a series of underlining cultural and social issues, such as the inability to

consider the nature of the region, like the weather; the languages of the people (like Hausa, Twi, Yoruba and Zulu), as many of the computers are in foreign languages; and complicated software. To study these forms of disadvantage, it is essential to take into account the social, economic and cultural contexts of digital engagements. To avoid issues like this, Robinson et al. (2015) cautioned that to study and better understand means to solve the issue of imbalance, considering cultural, social and economic factors. With all the interventions over the years, it is critical to analyse the outcomes in the region as the need to join the global knowledge economy keeps rising.

## Theoretical framework

The importance of information-seeking behaviour cannot be jettisoned in the information age where everyone is expected to obtain and use information by exploring the internet, which serves as a conduit for other forms of technologically supported products and services (Esew et al., 2014; Kundu, 2017). Different existing literature alludes to the fact that the concept of the information-seeking behaviour theory, which involves the where, why, when, and how, is multidimensional and complex. The multidimensionality and complexity equally depend on the contexts (Komlodi & Carlin, 2004; Ikoja-Odongo & Mostert, 2006) and suggest how the information seekers want to achieve their needs and use them. In other words, Kingrey (2002) writes that "information seeking involves the search, retrieval, recognition, and application of meaningful content" (p. 1). Kingrey (2002) further stresses that information behaviour would have been the most suitable term for information seeking since it vented to cognitive, cultural and social issues that people face when faced with uncertainty (see also Savolainen, 2013). People who have access to the internet as a result of their socio-economic status, as well as the enabling environment provided by the government and other concerned stakeholders, have the opportunity to obtain and use information that advances them socially, economically and politically. On the other hand, where socio-economic power is lacking and the needed political will for advancing society technologically is absent, people are bound to harness the inherent opportunities in the technologically driven information revolution insignificantly. This position leads us to the theory of reasoned action (TRA) and planned behaviour, which proposes that human beings do not just take action without thinking about why the action is needed and potential obstacles in the course of achieving their desired outcomes. The theory is highly connected to information seeking as some scholars have submitted that the information-seeking behaviour theory is more cognitive and multifaceted in nature (Garg, 2016; Hagger, 2019). This is to say that there are social "causal factors" that motivate an information seeker to search, which according to Savolainen (2013), are "ability, effort, task difficulty, and luck". Savolainen further notes that motivation depends on "whether the causal factors are seen as internal or external, stable or unstable, and controllable or

uncontrollable" (p. 1). The theory of reasoned action and planned behaviour seeks to explain the conscious behaviour of an actor in seeking information (Hale et al., 2002; Yzer, 2017). There are instances when an information seeker will intentionally or unintentionally invest more effort in planning and reflecting on what she or he is searching for (Hagger, 2019). While the TRA looks into predicting variability in people's behaviour across many contexts, the theory of planned behaviour (TPB) focuses on predicting, understanding and perceiving behavioural control (Ajzen & Kruglanski, 2019). However, they are rooted in individuals' beliefs and subsequent actions or behaviours (Hagger, 2019). Ajzen and Kruglanski (2019) note that the central construct of TRA is about the behavioural intention that could be determined by "three behaviour-centred factors: attitude towards the behaviour, subjective norm concerning the behaviour, and perceived control over the behaviour, or perceived self-efficacy" (p. 1). Situating these factors within the context of information seeking with the appropriation of our proposed search strategy means using the strategy would largely depend on individuals' differences and ability to maintain internal and external control over the types of information needed by perceiving which of the indicators of the strategy would deliver expected information needs significantly.

As previously stated, successfully navigating internal and external forces towards seeking the needed information would be premised on the extent to which information seekers consider existing socio-economic and political indices, which usually entail cultural elements and economic power in most cases, in relation to their levels of reasonings and plans for aggressively seeking the needed information as captured by the theory of reasoned action and planned behaviour. However, Geert Hofstede, the proponent of cultural dimensions theory, has made us realise that attitude, perceived control, subjective norms and perceived self-efficacy could be situated within national norms and values of people in a country by considering their in-group and out-group cultural traits or behaviours (Hofstede, 1980; Jackson, 2020). This is relatively important to our study because cultural dimensions theory suggests the impacts of culture on a society's values and how these values influence behaviour. In other words, the proposed constructs of power distance, uncertainty avoidance, individualism/collectivism, masculinity/femininity and long-term orientation/short-term orientation of the theory are expected to shape the attitudes and behaviours of people in the West African region while satisfying their information gap through various search engines using the 5Ws and H search strategy.

Hofstede (1980) conceptualises power distance as the degree to which people with less power and authority believe and expect power to be distributed unequally. In this regard, information seekers are likely to be interested in getting information that would help them understand powerful individuals and/or enable them to be powerful. For example, seeking specific information with the aim of gaining knowledge would position the seekers as knowledgeable, which could be used to their advantage when the situation demands.

*Uncertainty avoidance* is considered the extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid them. This indicates that people usually find ways of addressing an unknown future by preparing ahead using various strategies and tactics. In the context of information seeking, people would be willing to seek information capable of enhancing their ability and capability ahead of the potential unknown conditions. For example, in a country where socio-economic and political situations are unpredictable, people are expected to always search for information that would partially or completely help them address some of the effects of policies or programmes of the government and activities of the public. While this dimension stresses an unknown future that requires people to take care of their information needs in a systematic manner, the individualism/collectivism dimensions, in our view, suggest that those with access to technology based on their socio-economic status should consider those at the bottom of the pyramid, who lack the socio-economic power to access the internet, by exchanging some of the sought-after information with them. When this happens, the powerful information seekers have fulfilled the construct of collectivism rather than the individualism construct. The masculinity/femininity construct addresses the idea that people are usually after what could make them the best and like what they do.

Following this thought about the construct, we expect people in the region to seek information, using our proposed strategy, that could advance them to greatness and make them feel accomplished. However, achieving greatness and feeling accomplished, according to the long-term orientation construct, would largely depend on how they maintain some links with the past while dealing with the challenges of the present and future. This also aligns with the uncertainty avoidance construct, which emphasises the importance of being strategic and tactical about how an unknown future is articulated and prepared for by exploring relevant information. Therefore, as the indulgence construct captures it, desires and impulses need to be controlled based on an individual's parental background. Though Hofstede (1980) notes that a society that exhibits a willingness to fulfil impulses and desires is usually tended towards having people who want to enjoy life and have fun, we argue that in the context of information seeking, such people are most likely to seek information that would advance greatness and make them feel accomplished. For example, seeking information such as who is the best footballer or the richest person in the world could be interpreted as a way of knowing the strategies and tactics that made the person accomplish the feat and the possibility of using the same.

Linking these theories with a cultural discourse studies framework is essential because they are hierarchically connected with information-seeking discourse. In this study, we consider information-seeking discourse as various information needs, such as education, business, lifestyle, health and politics among others, because people are expected to articulate and disarticulate them after retrieving them from different sources. We argue that the different sources could be situated within the communicators and mediums of communication

(language, channels, media, time, setting, among others) proposed by Shi-xu (2015) while conceptualising the discourse component of CDS on the basis that people in the region are directed to different individuals and organisations that published the retrieved information having used search engines as mediums and had the intention of forming relationships with the sources towards achieving the desired purposes or consequences.

**Measures and methods**

We specifically constructed big panel datasets using public search queries from Google Trends with the consideration of relevant constructs or elements of information seeking, cultural dimensions and reasoned action and planned behaviour theories. The panel dataset for these theories was developed independently. Each of the Ws in the 5Ws (what, who, where, when and why) and H (how) was put into Google Trends to retrieve related search queries between 2006 and 2020. The retrieved related queries were transformed into social, economic and political categories for the purpose of situating each of the dimensions in the cultural dimensions theory within the information needs of the public based on the adopted computational content analysis. The constructed socio-economic and political categories were further placed within the relevant constructs of reasoned action and planned behaviour theory that enables the information seeker's intention and actual behaviour. These datasets were developed as dependent variables, while the relative search volume for the 5Ws and H search strategy was an independent variable. We then carried out analyses using simple frequency counts and percentages as well as linear regression.

Before doing analyses, we projected that the volume of search for 5Ws and H per year would be 30, 916 and 900,000 for the entire 15 years based on the selection of the first 10 related queries for each of the indicators in the search strategy. This is based on the fact that Google Trends normalises people's search interests between the 0 and 100 score threshold. Therefore, we expected at least a 100-score range per related query after input of what, who, where, when, why and how in the appropriate search section of the tool. However, expectations were not met in some countries based on the existing challenges that prevent people from accessing the internet, as discussed earlier. This problem was mainly discovered in French and Portuguese-colonised countries, especially Guinea and Guinea-Bissau, where data were completely unavailable according to the tool and linked to the low number of searches among the people.

After considering the 5Ws and H search strategy as facilitators of the information-seeking behaviour of people in the region towards meeting various information needs, we classified search interest into two categories, where the first level of searches (called specific search interest) informed the construction of the second category (dominant search interest). The specific search interest entailed lifestyle, education, neutral, religion, business, health,

sports, employment, internet, crime, president, entertainment and currency exchange, among others, while the dominant search interest was carried out using three parameters (economic, social, political and neutral). The economic parameter specifically encompassed related queries that indicated that people wanted to learn about or be informed about various economic needs or challenges. The social parameter was formed on the basis of seeking information related to social activities such as religion, education, health and so on. The political category was examined by considering needs and issues related to national and international politics explored during the 15-year period of our analysis. We developed the neutral category because there were queries that could not be placed within social, political, or economic parameters. For instance, queries like "what is" and "what is the meaning of" were considered neutral because they were not completely fixed into any of the categories. We considered them as navigational searches, which are expected to direct the information seekers to different sources, not specific ones like what a query such as "What is management?" would deliver. To really establish our assumption of the link between the specific search interest and culture, we employed the scores discovered for each country by Hofstede (1980). Suffice to note that the average score of each dimension for the countries considered by Hofstede was used for countries that were not considered in the cultural dimensions' score formulation (see Table 12.1).

*Table 12.1* Cultural dimension score for the countries

| | *Power distance* | *Individualism* | *Masculinity* | *Uncertainty avoidance* | *Long-term orientation* | *Indulgence* |
|---|---|---|---|---|---|---|
| Benin Republica | 74 | 20 | 41 | 53 | 13 | 42 |
| Burkina Faso | 70 | 15 | 50 | 55 | 27 | 18 |
| Carbo Verde | 75 | 20 | 15 | 40 | 12 | 83 |
| Cote d'Ivoirea | 74 | 20 | 41 | 53 | 13 | 42 |
| The Gambiaa | 74 | 20 | 41 | 53 | 13 | 42 |
| Ghana | 80 | 15 | 40 | 65 | 4 | 72 |
| Liberiaa | 74 | 20 | 41 | 53 | 13 | 42 |
| Malia | 74 | 20 | 41 | 53 | 13 | 42 |
| Nigera | 74 | 20 | 41 | 53 | 13 | 42 |
| Nigeria | 80 | 30 | 60 | 55 | 13 | 84 |
| Senegal | 70 | 25 | 45 | 55 | 25 | 0 |

*Source:* Hofstede Insights (2023); Authors' formulation (2023).

[a] The average score of each dimension for the countries considered by Hofstede was used for countries that were not considered.

**Results and discussion**

In this section, outcomes of the analysed data are presented with the consideration of technology, digital and cultural equivalences as well as distinctions discussed earlier. Apart from this, we find it more appropriate to integrate the assumptions and propositions of the theories that underpinned the study because it clearly expatiates various assumptions we made earlier about convergence and divergence in the use of the considered search strategy in relation to cultural influences, uniqueness and dynamics in the West Africa sub-region. To really establish the genealogy of deploying the strategy between 2006 and 2020, data in Table 12.2 was produced purposely for determining the trends across the countries in the region. For the 15 years examined, Ghana and Nigeria led other countries in the deployment of 5Ws and H for seeking information on the internet through Google search engine and others. Between 2006 and 2009, internet users in the two countries frequently used the search strategy. Despite the increase in the volume of search generated for the search strategy in the subsequent years, analysis indicates a significant decrease in the strategy deployment. In some years, Liberia, the Gambia and Sierra Leone, other British-colonised countries, joined Ghana and Nigeria in the appropriation of the strategy for seeking various socio-economic and political related information. According to our data, some of the French-colonised countries, such as Togo, Senegal and Cote d'Ivoire, started deploying the strategy frequently in 2011, five years after the British-colonised countries were using the strategy. While this suggests a digital divide or inequality for the French-colonised countries, the low interest in using the strategy by Carbo Verde, Guinea and Guinea-Bissau could be described as both a digital and cultural divide or inequality. They were colonised by Portugal and are still finding it difficult to access the internet due to economic challenges and language politicization.

Beyond understanding the trends of using the search strategy, the data in Table 12.3 represent the individual volume of search for each indicator across the countries. Our analysis establishes that *what*, *who*, *when* and *how* are deployed most often. In all, Ghana and Nigeria led other countries in the significant deployment of *where*, *when* and *why* more than using *what*, *who* and *how*. People in Carbo Verde, the only Portuguese-colonised country, deployed *what* for their information seeking. This is also found for Burkina Faso, Niger and Mali, French-colonised countries. However, some other French-speaking countries, such as the Benin Republic, Cote d'Ivoire, Senegal and Togo, had people who employed more than one indicator of the search strategy. Despite the leading place of Ghana and Nigeria in all indicators, analysis shows that people in Togo appropriated *what* more than the two countries, while the Gambia and Liberia, two British-colonised countries, nearly closed in the use of the indicator. Like Ghana and Nigeria, which follow each other, this suggests that the Gambia and Liberia also move in the same direction, which could be linked to their geographical closeness in addition to their shared

*Table 12.2* Cumulative relative search volume of 5Ws and H by country per year

| | *2006* | *2007* | *2008* | *2009* | *2010* | *2011* | *2012* | *2013* | *2014* | *2015* | *2016* | *2017* | *2018* | *2019* | *2020* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benin Republic | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 2.61% | 2.69% | 1.77% | 2.05% | 1.89% | 2.73% | 0.00% | 5.16% | 7.61% | 3.85% |
| Burkina Faso | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.77% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Carbo Verde | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.77% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Cote' d Ivoire | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 7.10% | 7.89% | 3.75% | 5.82% | 7.54% | 5.25% | **10.40%** | 6.29% | 5.18% | 7.58% |
| Gambia | 0.00% | 0.00% | 0.00% | 0.00% | 6.64% | 7.83% | 6.49% | 6.23% | 7.81% | 10.27% | 10.87% | **13.72%** | 5.99% | 7.80% | 11.11% |
| Ghana | 16.21% | **55.18%** | **62.07%** | **54.97%** | **58.39%** | **27.17%** | **31.02%** | **26.29%** | 7.81% | **27.88%** | **28.15%** | **26.98%** | **25.64%** | **20.35%** | **29.23%** |
| Liberia | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 2.69% | **15.13%** | 9.87% | 7.69% | 8.11% | **14.43%** | 9.96% | **16.58%** | 4.16% |
| Mali | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 9.87% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.80% |
| Niger | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.80% |
| Nigeria | **83.79%** | **44.82%** | 37.93% | **45.03%** | **28.33%** | **41.27%** | **22.32%** | **22.28%** | **18.74%** | **19.02%** | **20.91%** | **17.26%** | 14.82% | **17.26%** | **15.62%** |
| Senegal | 0.00% | 0.00% | 0.00% | 0.00% | 6.64% | **11.41%** | **12.90%** | 6.78% | 6.809 | 6.94% | 6.11% | 8.87% | **11.45%** | **12.27%** | **10.97%** |
| Sierra Leone | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 6.81% | 1.90% | 3.91% | 1.93% | 3.89% | 6.82% | 1.89% |
| Togo | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 2.61% | **14.00%** | **14.24%** | **15.01%** | **16.87%** | 13.98% | 6.42% | **16.80%** | 6.15% | 11.98% |
| **Total** | **617** | **1,216** | **1,015** | **1,799** | **1,507** | **3,831** | **3,714** | **5,652** | **4,876** | **5,305** | **6,117** | **5,175** | **5,756** | **6,570** | **5,552** |

*Table 12.3* Relative search volume of disaggregate 5Ws and H by country

| | *Country type* | *What* | *Who* | *Where* | *When* | *Why* | *How* |
|---|---|---|---|---|---|---|---|
| Benin Republic | Francophone | 7.22% | 0.00% | 0.00% | 2.37% | 0.00% | 0.00% |
| Burkina Faso | Francophone | 0.49% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Carbo Verde | Portuguese | 0.49% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Cote d'Ivoire | Francophone | 6.68% | 4.29% | 0.00% | 1.19% | 6.78% | **14.36%** |
| Gambia | Anglophone | **11.32%** | 5.36% | 2.57% | 1.19% | 0.00% | 0.00% |
| Ghana | Anglophone | **17.49%** | **15.05%** | **60.18%** | **60.31%** | **45.14%** | **27.74%** |
| Liberia | Anglophone | **12.11%** | **22.70%** | 0.00% | 0.00% | 0.00% | 2.60% |
| Mali | Francophone | 0.49% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Niger | Francophone | 0.49% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Nigeria | Anglophone | **14.64%** | **24.59%** | **34.67%** | **32.19%** | **40.17%** | **15.65%** |
| Senegal | Francophone | 8.97% | 5.72% | 2.57% | 2.76% | 7.92% | **22.66%** |
| Sierra Leone | Anglophone | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | **17.00%** |
| Togo | Francophone | **19.61%** | **22.30%** | 0.00% | 0.00% | 0.00% | 0.00% |
| **Total** | | **20,481** | **10,127** | **3,885** | **8,440** | **6,316** | **7,746** |

*Source:* Authors' analysis (2023).

*Table 12.4* Dominant search interests

| | *Economic* | *Social* | *Political* | *Neutral* |
|---|---|---|---|---|
| What | 8.88% | **32.80%** | 4.87% | **40.72%** |
| Who | 2.22% | **17.04%** | **60.97%** | **19.58%** |
| Where | 0.00% | 10.12% | **21.95%** | 8.76% |
| When | 2.22% | 11.40% | 9.75% | 2.57% |
| Why | 0.00% | 11.58% | 2.43% | 3.60% |
| How | **86.66%** | **17.04%** | 0.00% | **24.74%** |
| **Total** | **45** | **1649** | **41** | **194** |

*Source:* Authors' analysis (2023).

colonial cultural values. It is also important to point out that some of the indicators are employed almost at the same level by people in Francophone and Anglophone countries. For instance, our analysis reveals that with 5.72% of the total search volume $(n = 10127)$ for *who*, Senegal slightly edged out the Gambia, which had 5.36%. For the *where* indicator, both countries had the same percent (2.57%) of the total search volume $(n = 3885)$. The implications of using the dominant indicators are explored through the data presented in Table 12.4, where the dominant search interests of people in the region are considered in terms of socio-economic, political and neutral activities, as exemplified in the methodology section.

Data in Table 12.4 substantiate those presented in Table 12.3 by establishing the aggregate categories of search interests. For the past 15 years, people in the region have prioritised social information needs over political and economic ones, according to the data. The dominance of neutral after social needs could be understood within our earlier position on people's use

of the navigational search approach. Despite the category dominance, analysis suggests that people sought information that could advance them socially and economically. The low interest in seeking political information could be explained by the fact that information seekers were not really interested in some of the political activities or events that occurred during the years. This, in our view, suggests that people were not worried about the existing unequal power distribution. However, accepting this position would be limited here because we still explored specific search interests. Thus, it could be that people really had an interest in some of the issues that constituted the political category at the disaggregate level, which we considered subsequently.

Basically, the data in Table 12.5 show that the search strategy was mainly used for seeking information related to lifestyle, education, religion, business and health. These are the top five information needs during the 15 years of our analysis. Again, it substantiates the earlier position that people leaned towards getting information that would make them enjoy life, have fun and advance socially and economically rather than being politically conscious of their environment. In other words, they were fixated on indulgence, masculinity and uncertainty avoidance dimensions while exploring various information needs such as *what is sex, what is love, what is computer, what is management, who is God, who is Jesus, and who is the richest man in the world* on the internet, using what and who more than other indicators in our proposed search strategy (see Table 12.3). These cases of specific search interest are explored further with the data presented in Table 12.6, where each of the indicators (5Ws and H) is situated within each of the constructs of the cultural dimensions theory to enable us to critically examine the information seeking discourse previously discussed.

Out of the six constructs of the cultural dimensions theory that were considered, our analysis reveals a significant relationship between the search strategy and the theory, as well as variance for two constructs. According to the data in Table 12.6, where and why indicators were more used for seeking information that resonated with masculinity (where: $r = .824$, $R^2 = .671$, $p < .001$; why: $r = .790$, $R^2 = .625$, $p < .001$) and uncertainty avoidance (where: $r = .734$, $R^2 = .538$, $p < .004$; why: $r = .741$, $R^2 = .549$, $p < .004$). These results indicate that the use of *where* connected with the masculinity dimension by 82.4%, and 67.1% of it could be discerned from the dimension. For the uncertainty avoidance construct, the *where* indicator was correlated with it by 73.4%, while the variance was 53.8%. The use of *why* resonated with masculinity by 79% with a variance of 62.5%, while uncertainty avoidance had 54.9% and the indicator connected with it by 74.1%. The examination of the specific cases of the search interest indicates that when people employed the *where* indicator, especially in the Gambia and Nigeria, they sought information about their president. This is within the president discourse. When they wanted to enjoy life or have fun, people searched the internet looking for *where to download movies* and specific songs such as "Where are you?" In addition to these, we discovered cases of marital issues or needs. For instance, in Ghana, Nigeria, the Gambia, Togo and Liberia, people searched for *why men cheat*, *why I got married* and *why*

*Table 12.5* Specific search interests[1]

| | *Business* | *Education* | *Election* | *Health* | *Internet* | *Lifestyle* | *Neutral* | *Politics* | *Religion* | *Entertainment* | *Sports* | *President* | *Strike* | *Technology* | *Banking* | *Crime* | *Forex* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| What | **3.92** | **62.15** | 0.00 | 15.56 | **100** | **22.57** | **40.41** | **40.00** | 1.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Who | 1.96 | 5.81 | **61.11** | 11.11 | 0.00 | **19.14** | 19.69 | 20.00 | **42.68** | **100** | 93.33 | **68.42** | 0.00 | 0.00 | 0.00 | 4.35 | 0.00 |
| Where | 0.00 | 1.72 | **22.22** | 0.00 | 0.00 | **15.93** | 8.81 | 0.00 | **17.07** | 0.00 | 0.00 | **31.58** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| When | 1.96 | 11.61 | 16.67 | **37.78** | 0.00 | 10.07 | 2.59 | **20.00** | **28.05** | 0.00 | 6.67 | 0.00 | **100** | **100** | 0.00 | 0.00 | 0.00 |
| Why | 3.92 | 4.09 | 0.00 | 0.00 | 0.00 | **18.58** | 3.63 | **20.00** | 1.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| How | **88.24** | **14.62** | 0.00 | **35.56** | 0.00 | 13.72 | **24.87** | 0.00 | 9.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | **100** | **95.65** | 100 |
| **Total** | **51** | **465** | **18** | **45** | **27** | **904** | **193** | **5** | **82** | **12** | **30** | **19** | **1** | **1** | **2** | **23** | **9** |

*Table 12.6* Cultural dimensions and specific search interests using the 5Ws and H

| *Model* | *R* | *R square* | *Adjusted R square* | *Std. error of the estimate* | *Change statistics* | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Power distance* | | | | | *R square change* | *F change* | *df1* | *df2* | *Sig. F change* |
| What | **.206a** | **.042** | **−.045** | **94.870** | **.042** | **.487** | **1** | **11** | **.500** |
| Who | .123a | .015 | −.074 | 47.701 | .015 | .170 | 1 | 11 | .688 |
| Where | .100a | .010 | −.080 | 40.774 | .010 | .111 | 1 | 11 | .746 |
| When | **.188a** | **.035** | **−.052** | **28.110** | **.035** | **.403** | **1** | **11** | **.538** |
| Why | .047a | .002 | −.088 | 48.184 | .002 | .024 | 1 | 11 | .879 |
| How | .054a | .003 | −.088 | 37.450 | .003 | .033 | 1 | 11 | .860 |
| **Individualism** | | | | | | | | | |
| What | **.489a** | **.239** | **.170** | **84.551** | **.239** | **3.462** | **1** | **11** | **.090** |
| Who | .054[a] | .003 | −.088 | 48.000 | .003 | .032 | 1 | 11 | .862 |
| Where | .069[a] | .005 | −.086 | 40.880 | .005 | .053 | 1 | 11 | .822 |
| When | **.285a** | **.082** | **−.002** | **27.430** | **.082** | **.976** | **1** | **11** | **.344** |
| Why | .084[a] | .007 | −.083 | 48.067 | .007 | .078 | 1 | 11 | .785 |
| How | .154[a] | .024 | −.065 | 37.058 | .024 | .267 | 1 | 11 | .616 |
| **Masculinity** | | | | | | | | | |
| What | .199[a] | .040 | −.048 | 95.011 | .040 | .453 | 1 | 11 | .515 |
| Who | .074[a] | .005 | −.085 | 47.939 | .005 | .060 | 1 | 11 | .811 |
| Where | **.824a** | **.679** | **.650** | **23.207** | **.679** | **23.298** | **1** | **11** | **.001** |
| When | .114[a] | .013 | −.077 | 28.434 | .013 | .145 | 1 | 11 | .711 |
| Why | **.790a** | **.625** | **.590** | **29.555** | **.625** | **18.302** | **1** | **11** | **.001** |
| How | .140[a] | .020 | −.069 | 37.135 | .020 | .221 | 1 | 11 | .648 |
| **Uncertainty avoidance** | | | | | | | | | |
| What | .226[a] | .051 | −.035 | 94.432 | .051 | .594 | 1 | 11 | .457 |
| Who | .135[a] | .018 | −.071 | 47.630 | .018 | .204 | 1 | 11 | .660 |
| Where | **.734a** | **.538** | **.496** | **27.842** | **.538** | **12.830** | **1** | **11** | **.004** |
| When | .059[a] | .003 | −.087 | 28.571 | .003 | .038 | 1 | 11 | .848 |
| Why | **.741a** | **.549** | **.508** | **32.408** | **.549** | **13.369** | **1** | **11** | **.004** |
| How | .009[a] | .000 | −.091 | 37.504 | .000 | .001 | 1 | 11 | .976 |
| **Long-term orientation** | | | | | | | | | |
| What | **.409a** | **.167** | **.092** | **88.461** | **.167** | **2.212** | **1** | **11** | **.165** |
| Who | .023[a] | .001 | −.090 | 48.057 | .001 | .006 | 1 | 11 | .941 |
| Where | .056[a] | .003 | −.087 | 40.913 | .003 | .035 | 1 | 11 | .855 |
| When | **.292a** | **.085** | **.002** | **27.371** | **.085** | **1.027** | **1** | **11** | **.333** |
| Why | .011[a] | .000 | −.091 | 48.234 | .000 | .001 | 1 | 11 | .971 |
| How | **.258a** | **.066** | **−.018** | **36.238** | **.066** | **.783** | **1** | **11** | **.395** |
| **Indulgence** | | | | | | | | | |
| What | .154[a] | .024 | −.065 | 95.794 | .024 | .266 | 1 | 11 | .616 |
| Who | .095[a] | .009 | −.081 | 47.850 | .009 | .101 | 1 | 11 | .756 |
| Where | **.473a** | **.224** | **.154** | **36.095** | **.224** | **3.178** | **1** | **11** | **.102** |
| When | .126[a] | .016 | −.074 | 28.393 | .016 | .178 | 1 | 11 | .682 |
| Why | **.434a** | **.189** | **.115** | **43.451** | **.189** | **2.557** | **1** | **11** | **.138** |
| How | .022[a] | .001 | −.090 | 37.496 | .001 | .006 | 1 | 11 | .942 |

*Source:* Authors' analysis (2023).

*women cheat*. To balance this search, we found cases of *where is the Bible*, *where is the Garden of Eden* and *where is God*, all of which are within the religion discourse. Though the use of *when* and *how* are not significant, their examination is important because of the level of variance they had in power distance, individualism and long-term orientation. Like other indicators, their use also cut across the discourses we explained previously. The cases like *when does ovulation occur* and *when can a woman get pregnant* were searched and related to health discourse. We also found cases of *when is Ramadan 2013* and *when is Easter*, which are primarily religious discourse. The *how* indicator was used to elicit information related to business, health, education and crime discourses.

## Conclusion and recommendations

Having used three unique theories and explored Shi-xu's cultural discourse studies (CDS) framework, our empirical findings from 15 West African countries confirmed the framework on the importance of decolonisation and the need for consideration of the cultural diversity of the marginalised regions, such as the West African countries, in designing key ICT tools they use. This led us to propose a new framework of digital and information seeking cultural discourse (DISCD) in Africa. DISCD is a multimodal, big data-driven analytic technique for the examination of the interplay and overplay of theories of information-seeking behaviour, reasoned action and planned behaviour as well as cultural dimensions to unpack the place of the 5Ws and H as a search strategy for determining various information discourses. To advance the new framework, we recommend further exploration of DISCD in the region by using other methods of data collection, such as surveys, interviews, focus-group discussions, and netnography (for example, exploration of social media). Doing this will help validate existing concepts on cultural discourse (Hartmann, 2014; Xu, 2022) and reinforce the emerging framework as a tool for exploring diverse perspectives. It will also extend the framework's application to different regions, particularly other countries in the Global South.

## Note

1 Numbers are in percentage.

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