The Role of Social Media in Development Communication: Opportunities and Challenges

Bernice O. Sanusi
Redeemer's University, Ede, Osun State, Nigeria
sanusib@run.edu.ng

Adebisi Shakirat Ifedolapo
Redeemer's University, Ede, Osun State, Nigeria
Ifedolapoade2017@gmail.com

Lawal Olusola Ayinde
Redeemer's University, Ede, Osun State, Nigeria
Sholytex17@gmail.com

Abstract

The study investigated the role of social media in development communication: opportunitiesand challenges. The study revealed that Nigeria's evolving communication landscape, is driven by a blend of traditional media and the rapid rise of social media, has significantly influenced the country's socio-economic development. Social media platforms such as Facebook, Twitter, and Instagram have redefined communication by facilitating public engagement, fostering transparency, and amplifying voices of marginalized groups. This digital shift has allowed for increased civic participation and empowered communities to mobilize on critical issues. The #EndSARS movement, for instance, showcased how social media can bring national and global attention to social justice causes, reflecting the transformative potential of digital platforms in fostering democratic values and driving change. While social media provides new opportunities for development communication, its effectiveness hinges on factors like digital literacy and equitable access. This study thus investigates the dual role of social media in advancing development communication in Nigeria, focusing on the challenges and opportunities it presents in the nation's socio-political context.

Introduction

Nigeria boasts a diversified population, a rich cultural legacy, and a rapidly expanding economy, positioning the country as a key player in Africa's development landscape. Communication plays an integral role in Nigeria's socio-economic development, with media both traditional and digital serving as a powerful tool for shaping public opinion, promoting democratic values, and driving national progress. According to Ivwighren, and Oghiagbepha (2024) over the years, Nigeria's media environment has evolved, with the proliferation of private media outlets and online platforms, indicating the country's transition towards a more pluralistic and dynamic media ecosystem.

One of the most significant changes in Nigeria's communication landscape has been the rapid adoption of social media (Olaniyan 2021). Globally, the communication environment has been revolutionized by social media platforms such as Facebook, Twitter, Instagram, and WhatsApp, which have redefined how individuals, communities, and organizations communicate (John Matamoros-Fernández, A., & Baulch2023). Social media, once primarily associated with entertainment and personal communication, has now become a crucial tool for a variety of sectors, including development communication (Mulhern,2023). Its accessibility, interactivity, and real-time nature make it an essential resource for disseminating information, engaging communities, and mobilizing resources, particularly in the context of development in Nigeria.

Social media offers a variety of opportunities for accelerating development communication in Nigeria (Adeola 2022). In particular, it empowers marginalized groups, facilitates participatory governance, encourages civic engagement, and enhances the dissemination of critical information, especially during times of crisis. The potential for social media to transcend geographical barriers and communicate development messages on a global scale fosters international collaboration and solidarity. This is especially critical in addressing the complex and interconnected challenges that developing nations like Nigeria face. One of the most transformative impacts of social media is its ability to amplify the voices of marginalized and underrepresented groups in society. Traditionally, access to mainstream media in Nigeria has been limited by socio-economic factors, with many rural and marginalized populations unable to access or contribute to media platforms dominated by urban elites (Adeeko 2023). However, social media platforms offer these communities the opportunity to participate in the national discourse, share their experiences, and advocate for their rights.For example, the #EndSARS movement, which emerged as a protest against police brutality

in Nigeria, was largely driven by youth activists on social media. Platforms such as Twitter and Instagram provided a space for protesters to organize, share information, and amplify their calls for reform. The success of the movement in drawing international attention to the issue of police violence in Nigeria illustrates the power of social media to empower marginalized groups and facilitate social change. It is against this backdrop the study seeks to investigate the challenges and opportunities of social media in communication Development

Literature Review

Social Media

Social media has become a cornerstone of global communication, altering how individuals, organizations, and governments interact. Platforms such as Facebook, Twitter, Instagram, and WhatsApp have significantly reshaped traditional media landscapes. With billions of users worldwide, social media has expanded its influence across nearly every aspect of life, connecting people with shared interests and providing access to tailored information. It has also revolutionized business operations by affecting transactions, promotions, and customer service. The rise of social media has spurred considerable academic and practical interest, leading to a growing body of literature across various fields, including marketing, innovation, education, and healthcare. This paper reviews relevant studies to offer a clearer understanding of social media's complexities and significance in these areas.

Social media's origins trace back to 1979 with Usenet, a platform for sharing articles and news. The 1990s saw the emergence of early social networking sites like Six Degrees, Black Planet, and MoveOn, which set the stage for the rapid expansion of social media in the 2000s. Landmark platforms such as Wikipedia (2001), Myspace, LinkedIn (2003), Facebook (2004), and YouTube (2005) revolutionized interaction, collaboration, and communication. Defining social media can be challenging due to its evolving nature. Definitions have focused on its role in enabling online communication and networking. For example, Russo et al. (2008) described it as a medium for online communication, collaboration, and networking. Kaplan and Haenlein (2010) characterized it as internet-based applications that facilitate content creation and exchange. These descriptions highlight social media's role in user-generated content and interaction.

Bobbi (2023) expanded on these definitions by emphasizing digital technologies that support connection, communication, and content creation. Michael L. Kent (2010) highlighted the

interactive nature of social media, noting its features like real-time feedback and decreased privacy. David (2019) provided a broad definition, focusing on the diverse forms of contenttext, audio, video, and picturesthat differentiate social media from traditional media. Social media is rooted in Web 2.0 technologies, which enable users to create, edit, and share content in various forms. It is distinct from social networking, a subset of social media platforms designed for individual interaction, such as Facebook and Twitter. Social media differs from traditional mass media in several key ways. Traditional media, like television, newspapers, and radio, follow a one-to-many communication model with information flowing from a single source to a broad audience. In contrast, social media supports various communication formsone-to-one, one-to-many, and many-to-manyallowing for more dynamic interactions.

Another distinction is the role of content creators. Traditional media content is produced by professionals, whereas social media democratizes content creation, enabling anyone to contribute. This shift has transformed information production and dissemination, allowing individuals to participate more actively in media. The speed of content distribution also sets social media apart. Unlike traditional media, which operates on a fixed schedule, social media allows for real-time sharing and updates, facilitating rapid information dissemination and timely corrections. Social media's interactive nature also enables immediate content updates and corrections, enhancing its reliability and reducing the lag associated with traditional media. This immediacy fosters greater participation in public discourse, allowing a wider range of voices and perspectives to be heard.

social media presents new opportunities for marketing, customer engagement, and brand promotion in majority of businesses and organizations. It enables direct interaction with customers, feedback collection, and product and service customization. This shift has transformed traditional business models, making social media an essential tool for contemporary enterprises. Social media has fundamentally changed how individuals and organizations communicate, collaborate, and share information. Its interactive, real-time, and user-generated nature distinguishes it from traditional mass media, and as it continues to evolve, it will likely play a more significant role in shaping communication, business practices, and public discourse in the digital era.

Communication Development

Communication plays a crucial role in advancing sustainable development, acting as both a facilitator and a form of development itself. As development paradigms evolve, so does

development communication, shifting from a top-down approach to a model where society is viewed as an active participant rather than a passive recipient. This transition emphasizes the importance of participatory communication, which focuses on dialogue and collaborative engagement at various societal levels to achieve sustainable development goals (Olifer, 2021).

Effective development communication is intertwined with human capacity building and partnership formation across personal, institutional, and organizational domains. This process involves fostering knowledge sharing and collaboration to enhance the capabilities of institutions, organizations, and individuals based on their specific needs and contexts (Salehi et al., 2023). It extends beyond mere information dissemination to include participatory dialogue, which is crucial for facilitating understanding and sharing knowledge (Servaes, 2022). Knowledge sharing, in this context, serves as an egalitarian process that fosters discussion and interaction among stakeholders, thereby supporting development and creating opportunities for meaningful dialogue (Batt-Rawden et al., 2022; Veeger et al., 2022).

In the digital age, digital literacy has become a fundamental component of development. The advancement of information and communication technologies (ICTs) has transformed communication behaviors and provided new avenues for engagement. Social media and digital networks have gained prominence, especially among younger generations, due to their capacity to facilitate rapid and widespread communication. These platforms are effective for knowledge sharing, reaching broad audiences, and fostering interactive dialogue. They also enable users to stay updated with the latest information and actively participate in discussions, thereby enhancing communication development (Hays et al., 2013; Zhao, 2021).

The integration of ICT, including social media, into development communication efforts can significantly accelerate progress and promote equality of opportunities. However, the success of these tools depends on the readiness of infrastructure, individual capacities, policies, and the surrounding environment. Addressing the digital divide—characterized by disparities in access related to geography, demographics, and socio-economic factors—is essential to ensure equitable development and prevent issues such as educational inequities and uneven access to technology (Bennett &Segerberg, 2023).

Development communication employs various methods to achieve its objectives, including direct communication, conventional media, and new media and multimedia (Danet, 2020). Effective

communication campaigns often integrate these forms to maximize their impact. It is important to recognize that development communication extends beyond the production of media content to encompass the strategic use of communication channels, audience targeting, and creating opportunities for dialogue (FAO, 2013). A successful development project requires a thoughtful combination of communication tools tailored to different audiences and contexts, along with adequate time for implementation.

Direct Communication

Direct communication is a fundamental approach in conveying clear messages and instructions, ensuring that the intended message is understood without ambiguity. This method involves engaging directly with the community where development activities are planned or ongoing, facilitating straightforward interactions and feedback (Ibrahim, 2022). One key tool in direct communication is public meetings and hearings. These face-to-face interactions, one of the oldest and most direct forms of communication, help establish trust and transparency with both rural and urban communities. Public meetings and hearings enable the identification of community needs, assessment of ongoing development projects, and mediation of conflicts between the community and authorities. However, it is crucial to avoid discussing highly sensitive or controversial issues, such as religion or domestic violence, in these forums (Ibrahim, 2022).

Another effective tool is exhibitions and fairs. These events allow for the presentation of local products and innovative methods, foster stakeholder engagement, and attract media attention. Coordinating these events with local unions and community groups can enhance their effectiveness by mobilizing local support (Singhal & Rogers, 2018). Campaigns in educational settings, such as schools and universities, represent another direct communication tool. These campaigns not only raise awareness but also leverage students as multipliers who spread messages within their families. Incorporating elements of entertainment, such as theatre and contests, can make these campaigns more engaging for young audiences. Coordination with educational authorities is essential to ensure that these campaigns align with school curricula and educational goals (Singhal & Rogers, 2018). Workshops and seminars are valuable for introducing new methods, facilitating the exchange of ideas, and bridging differences in opinions. These events provide a platform for in-depth discussions and knowledge sharing among participants. For example, seminars with journalists on topics like climate change can enhance media coverage and public awareness.

Limiting the number of participants can promote more effective and productive discussions (Singhal & Rogers, 2018).

Communication Through Printed or Electronic Media

This form of communication utilizes various media to disseminate information to targeted communities (Oduol, 2019). Tools include newspapers, magazines, flyers, banners, posters, and community radio. Printed materials, such as newspapers and flyers, are crucial for raising awareness and promoting new methods. These materials should be clear, concise, and visually appealing, with high-quality graphics and images. Effective planning of distribution and print runs is essential, and where possible, digital publication can reduce costs (Oduol, 2019).

Community radio stations are particularly significant in regions with limited internet access. Radio remains a dominant medium in Africa due to its extensive reach and ability to engage with audiences interactively. Community radio stations are effective for promoting development issues, mobilizing local communities, and facilitating educational programming. However, for broader coverage, collaboration with national radio networks may be necessary (Oduol, 2019).

Communication Through the Wide Range New Media and Multimedia

Utilizing new media and multimedia is crucial for effectively sending and receiving messages. Social media platforms, in particular, have become essential for disseminating information due to their widespread use and the significant amount of time people spend online (Gil-Garcia, 2018; Molla, 2018). For those looking to share information, inspire action, or spark discussions, social media is indispensable. However, development organizations that invest in platforms like Facebook, YouTube, or blogs often overlook the specialized resources required to maintain a consistent online presence (Ibrahim & Kavanagh, 2020). Blogs are especially valuable as they allow individuals to share personal experiences related to development issues, providing a more relatable and trustworthy perspective compared to mainstream media. Despite their advantages, maintaining a blog involves considerable effort and costs (Ibrahim & Kavanagh, 2020; Jensen &Soensen, 2016).

Digital storytelling is another powerful tool in development communication. It allows ordinary individuals to create and share narratives that shape reality from their own perspectives, countering the dominance of major media outlets (Lambert, 2019). These personal stories, often created with

smartphones and shared via platforms like YouTube and social networks, are valued for their authenticity and subjective viewpoints. This form of storytelling can be particularly effective in citizen journalism, mobilizing support for social issues such as environmental protection and human rights, and documenting instances of government abuse or negligence (Dunaway &Baumgartner, 2020). However, it's important to ensure that participants are informed and give permission before their stories are shared online (Lambert, 2019).

The Role of Media in Development Communication

Wilbur Schramm (as cited in Dunaway & Baumgartner, 2020) identified three key roles of media in development: informing, instructing, and participating. Media plays a crucial role in informing the public about social, political, and economic issues, thereby contributing to societal growth. It covers a broad spectrum of interests, including weather, politics, health, and more, and the demand for news has led to the creation of specialized channels and publications. Media helps overcome geographical barriers, allowing for quick dissemination of information and keeping the public updated on current events (International Council on Human Rights Policy, 2002, as cited in Lambert, 2019).

Media also serves an instructive role by promoting literacy and education. Media programs can provide essential information and skills to the public, making education more accessible. Nelson Mandela's statement that "Education is the most powerful weapon which you can use to change the world" underscores this role. Media can deliver educational content efficiently and at a low cost, making it a valuable tool for mass education, especially in remote areas (Schramm, as cited in Dunaway & Baumgartner, 2020). The 2030 Agenda for Sustainable Development highlights the importance of quality education as a key goal. Media contributes to achieving this goal by disseminating educational content and supporting societal values through various platforms (Dunaway & Baumgartner, 2020). Finally, media plays a participatory role in development by encouraging active citizen engagement. Through discussion, debate, and media coverage, citizens can become more involved in development programs and improve their communities. Media outlets analyze and critique societal issues, aiming to inspire progress and change (Lerner, as cited in Lambert, 2019). Radio and television, in particular, are effective in engaging audiences and promoting development initiatives (Schramm, as cited in Dunaway & Baumgartner, 2020).

Opportunities of Social Media in Communication Development

Social media offers a variety of opportunities for accelerating development communication in Nigeria. In particular, it empowers marginalized groups, facilitates participatory governance, encourages civic engagement, and enhances the dissemination of critical information, especially during times of crisis. The potential for social media to transcend geographical barriers and communicate development messages on a global scale fosters international collaboration and solidarity. This is especially critical in addressing the complex and interconnected challenges that developing nations like Nigeria face.

Empowering Marginalized Groups

One of the most transformative impacts of social media is its ability to amplify the voices of marginalized and underrepresented groups in society. Traditionally, access to mainstream media in Nigeria has been limited by socio-economic factors, with many rural and marginalized populations unable to access or contribute to media platforms dominated by urban elites (Adeeko 2023). However, social media platforms offer these communities the opportunity to participate in the national discourse, share their experiences, and advocate for their rights. For example, the #EndSARS movement, which emerged as a protest against police brutality in Nigeria, was largely driven by youth activists on social media. Platforms such as Twitter and Instagram provided a space for protesters to organize, share information, and amplify their calls for reform. The success of the movement in drawing international attention to the issue of police violence in Nigeria illustrates the power of social media to empower marginalized groups and facilitate social change.

Facilitating Participatory Governance

Social media has also had a profound impact on governance in Nigeria, enabling more participatory and transparent political processes. Platforms such as Facebook, Twitter, and WhatsApp have become important tools for political engagement, allowing citizens to interact directly with government officials, voice their concerns, and hold leaders accountable. This is particularly important in a country like Nigeria, where traditional media has often been criticized for its alignment with political elites and limited coverage of grassroots concerns.

The real-time nature of social media allows citizens to monitor government activities, share their opinions, and mobilize for collective action. For instance, during the 2019 Nigerian general elections, social media platforms were widely used to monitor the election process, report instances of electoral malpractice, and promote voter education. By providing a space for open

dialogue between citizens and the government, social media has the potential to strengthen democratic governance in Nigeria and promote transparency and accountability

Enhancing Civic Engagement and Advocacy

In addition to facilitating participatory governance, social media has become a powerful tool for civic engagement and advocacy in Nigeria. Platforms such as Facebook, Twitter, and YouTube allow NGOs, development agencies, and grassroots movements to disseminate development messages, raise awareness about important issues, and advocate for policy changes. Social media's ability to reach large audiences quickly and at a relatively low cost makes it an invaluable resource for development communication, particularly in a country like Nigeria, where access to traditional media is limited in many rural areas.

For example, social media has been used to raise awareness about health issues such as maternal and child health, HIV/AIDS prevention, and vaccination campaigns. During the COVID-19 pandemic, social media platforms played a crucial role in disseminating information about safety protocols, vaccination sites, and government policies. By leveraging the power of social media, health organizations were able to reach a wide audience and provide critical information that helped to save lives.

Mobilizing Resources and Facilitating International Collaboration

Another key advantage of social media is its ability to facilitate the mobilization of resources and promote international collaboration. Development communication often requires the participation of multiple stakeholders, including governments, NGOs, international development agencies, and local communities. Social media platforms provide a space for these stakeholders to collaborate, share ideas, and mobilize resources in support of development projects. For example, crowdfunding campaigns on platforms such as GoFundMe and Facebook have been used to raise money for development projects in Nigeria, including disaster relief efforts, education programs, and healthcare initiatives. Social media's ability to transcend national borders means that development projects in Nigeria can receive support from individuals and organizations around the world, fostering global solidarity and collaboration.

Challenges of Social Media in Development Communication

While social media offers numerous opportunities for development communication in Nigeria, it also presents a number of challenges that must be addressed in order to maximize its potential. However, Pennycook (2020) Highlighted some of these challenges to include the spread of misinformation, the digital divide, and concerns about data privacy and surveillance.

Misinformation and Disinformation

One of the most significant challenges associated with social media is the spread of misinformation and disinformation. In Nigeria, social media platforms have been used to spread false information about a range of issues, from political events to health crises. This has been particularly problematic during public health emergencies such as the COVID-19 pandemic, where misinformation about vaccines and treatments undermined efforts to control the spread of the virus. Misinformation spreads rapidly on social media due to the viral nature of content and the algorithms used by platforms to promote engagement. In many cases, sensational or misleading information receives more attention than factual and accurate information, making it difficult for development organizations to counteract false narratives.

The Digital Divide

Another challenge is the digital divide, which refers to the gap between those who have access to digital technologies and those who do not. While social media has the potential to democratize information and facilitate participation, its benefits are not equally distributed. In Nigeria, access to the internet and digital devices is still limited, particularly in rural areas and among low-income populations. This digital divide means that many Nigerians are unable to participate in online discussions, access critical information, or benefit from development initiatives that rely on social media. Development organizations must consider this digital divide when designing communication strategies and invest in infrastructure that expands access to digital technologies.

Data Privacy and Surveillance Concerns

The widespread use of social media in Nigeria has also raised concerns about data privacy and surveillance. Social media platforms collect vast amounts of data on their users, including personal information, browsing habits, and location data. In many cases, this data is used for targeted

advertising or sold to third parties without users' consent. In addition, social media platforms have been used by governments to monitor and suppress dissent. In countries with authoritarian regimes, social media has been used to track the activities of activists, journalists, and political opponents, raising concerns about the role of social media in enabling state surveillance and undermining freedom of expression.

Conclusion

Social media plays a pivotal role in development communication by providing new avenues for disseminating information, fostering community engagement, and amplifying marginalized voices. The opportunities offered by social media including its widespread reach, real-time communication, and interactive nature enable development communication to reach larger and more diverse audiences than traditional media channels. However, challenges such as the digital divide, misinformation, privacy concerns, and cultural misalignment must be addressed for these opportunities to be fully realized. To harness the full potential of social media in development communication, stakeholders must adopt a strategic and inclusive approach that considers both the opportunities and the obstacles. By expanding access, promoting digital literacy, ensuring content relevance, and safeguarding user privacy, social media can be a powerful tool for advancing development goals and fostering sustainable social change. With careful planning and ethical practices, social media will continue to evolve as a crucial platform for development communication in the years to come.

Recommendations

Bridging the Digital Divide: Governments, development agencies, and private sectors should invest in expanding digital infrastructure to ensure that underserved and rural populations have access to the internet and social media platforms. Public-private partnerships could be leveraged to provide affordable and accessible digital solutions, reducing disparities and allowing development communication efforts to reach a wider audience.

Enhancing Digital Literacy: Development programs should prioritize digital literacy initiatives to educate individuals, especially in rural areas, on how to use social media effectively and critically. This education should focus not only on technical skills but also on media literacy to help users discern credible information from misinformation. Empowering people with these skills will increase the effectiveness of social media in development communication.

Promoting Ethical Data Practices: Development communication efforts on social media should adhere to ethical guidelines that protect users' privacy and data security. Organizations must be transparent about how they collect and use data and ensure that consent is obtained from users. Strengthening these ethical standards will build trust among users, leading to more active engagement in development-related conversations.

Fostering Collaboration Between Stakeholders: Social media strategies for development communication should encourage collaboration among various stakeholders, including governments, NGOs, private organizations, and local communities. Coordinating efforts across these groups ensures that development communication messages are consistent, widely distributed, and aligned with broader development goals.

References

Adeeko, T. I. (2023). *Nigerian Media: A Comparative Media Analysis* (Master's thesis, Northern Illinois University).

Adeola, b. O. (2022). An appraisal of development communication as a tool for national development in nigeria. *Global journal of arts humanity and social sciences issn*, *2583*, 2034.

Batt-Rawden, V. H., &Traavik, L. E. (2022). Fostering egalitarianism for team learning in professional service teams. *The Learning Organization*, *29*(6), 597-614.

Bennett, W. L., &Segerberg, A. (2013). *The logic of connective action: Digital media and the personalization of contentious politics*. Cambridge University Press.

Dunaway, J. & Baumgartner, F. R. (2020). Agendas and the Scope of Conflict: How Social

Hays, S., Page, S. J., &Buhalis, D. (2013). Social media as a destination marketing tool: its use by national tourism organisations. *Current issues in Tourism*, *16*(3), 211-239.

Ibrahim, Y. & Kavanagh, D. (2020). Social media, the Islamic State, and the anthropology

Ivwighren, H., &Oghiagbepha, O. (2024). FUTURE TREND, PROSPECTS AND CHALLENGES OF DIGITAL MEDIA REPORTAGE IN NIGERIA. *The Indonesian Journal of Social Studies*, *7*(1), 119-133.

Johns, A., Matamoros-Fernández, A., & Baulch, E. (2023). *WhatsApp: From a One-to-one Messaging App to a Global Communication Platform*. John Wiley & Sons.

Literacy. Wiley. http://doi:10.1002/9781118978238.ieml0295.

media shapes the conversation about police violence against civilians in the United States.

Moyo, D. (2019). Citizen Journalism and social media in Nigeria's 2019 general elections:

Mulhern, F. (2013). Integrated marketing communications: From media channels to digital connectivity. In *The evolution of integrated marketing communications* (pp. 11-27). Routledge.

Oduol, J. (2019). Development Communication. *International Encyclcopedia of Media* of ethics. *Journal of the Royal Anthropological Institute*. 26(1).

Olaniyan, A., &Akpojivi, U. (2021). Transforming communication, social media, counter-hegemony and the struggle for the soul of Nigeria. *Information, Communication & Society*, *24*(3), 422-437.

Olifer, O. (2021). The characteristics and philosophical foundations of the learner-centered paradigm of education. *Ukrainian Journal of Educational Studies and Information Technology*, *9*(3), 1-17.

Pennycook, G., & Rand, D. G. (2020). Fighting misinformation on social media using crowdsourced judgments of news source quality. *Proceedings of the National Academy of Sciences*, 117(37), 22823-22831.

Radovanović, D., Holst, C., Belur, S. B., Srivastava, R., Houngbonon, G. V., Le Quentrec, E., ... & Noll, J. (2020). Digital literacy key performance indicators for sustainable development. *Social Inclusion*, *8*(2), 151-167.

Salehi, M., & Sadeq Alanbari, S. A. (2023). Knowledge sharing barriers and knowledge sharing facilitators in innovation. *European Journal of Innovation Management*.

Servaes, J. (2022). Communication for development and social change. In *The Routledge handbook of nonprofit communication* (pp. 23-31). Routledge.

Social Media + Society, 6(1).

Veeger, J., & Westermann-Behaylo, M. (2022). Knowledge exchange within multi-stakeholder initiatives: tackling the Sustainable Development Goals. In *Research Handbook on Knowledge Transfer and International Business* (pp. 108-135). Edward Elgar Publishing.

Zhao, J. (2009). ICTs for achieving millennium development goals: Experiences of connecting rural China to the internet. *Knowledge, Technology & Policy*, *22*, 133-143.