

Communicare: Journal for Communication Studies in Africa

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School of Communication
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Communicare

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ABOUT THE JOURNAL

Communicare: Journal for Communication Studies in Africa facilitates scholarly discussion on communication phenomena in Africa and how these are in conversation with other regions. *Communicare* is a non-profit, open-access journal, in existence since 1980, published biannually by the School of Communication, University of Johannesburg, South Africa. *Communicare* uses a double-blind peer review system and is accredited by the South African Department of Higher Education and Training.

Communicare aims to serve as a point of reference for continental academic debate and geo-specific theorising. It thus invites articles that complement, test, refine or counter global theoretical perspectives by amplifying and consolidating African research and scholarship. The journal publishes original theoretical-conceptual and empirical articles regardless of paradigm, perspective or context and welcomes a wide range of methodological approaches. *Communicare* publishes articles in a broad spectrum of communication sub- and related disciplines, including organisational communication, strategic communication, marketing communication, corporate communication, development communication, social change, political communication, gender communication, postcolonial studies, identity politics and politics of everyday life, celebrity studies, visual communication, internet studies, gaming, digital communication, digital media, film studies, media studies, cultural studies, popular culture, and journalism. *Communicare* also publishes generic (non-region specific) research articles on topics relevant to scholarly conversations on communication in Africa.

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Full-length theoretical, conceptual and empirical research articles (5000-8000 words at submission, all-inclusive).

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Aziz, Z.A. (2021). The influence of communication on project success: a survey of the SANRAL Gauteng e-tolling project in South Africa. *Communicare*, 40(2):101-128.

Frassinelli, P.P. (2019)a. *Borders, media crossings and the politics of translation*. London: Routledge

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Johnson, L. [n.d.]. *Will technology save the education system?* Available from: <http://www.netscape.com/users/johnl/save.html>

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Ramphela, L. (2017). Three of SA's big banks accused of collusion. *Cape Talk*, 16 February. Available from <http://www.capetalk.co.za/articles/245059/three-of-sa-s-big-banks-accused-of-collusion>

Stats SA. (2019). *Living conditions*. Available from http://www.statssa.gov.za/?page_id=595.

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EDITORIAL

This issue marks three years of *Communicare: Journal for Communication Studies in Africa* publishing in an open-access format under UJ Press. Since 2022, the journal has achieved significant milestones by retaining South Africa's Department of Higher Education accreditation and being added to the Directory of Open Access Journals (DOAJ) in 2024. *Communicare* is a top performing among UJ Press journals with monthly views between 1500 and 3000. These successes are attributed to the contributions of editors, reviewers, authors, readers and the production staff.

It is noteworthy that the journal has expanded its reach across Africa, as evidenced by the increasing number of submissions from the continent. This issue alone features research on communication in Ghana, Nigeria, Tanzania and South Africa.

Reyneke-Geyer and de Beer highlight the importance of measuring employee engagement as a way for organizations to assess commitment and performance. Research shows a strong link between high engagement levels and positive business outcomes. However, employee engagement is low globally and in South Africa, especially among non-managerial staff, leading to financial losses due to untapped potential.

This study by **Adjah, Decardi-Nelson, Ry-Kottoh, Mamah and Sam** examines how fonts from different families are used to test disfluency in reading. A review of 10 articles shows a preference for sans serif fonts in fluent conditions and serifs, scripts, or handwritten fonts in disfluent conditions. The study highlights a significant research gap due to the absence of standardised methods for selecting fonts in disfluency experiments.

Nwankwo-Ojonu, Adzharuddin, Waheed, Khir and Elija's study examines ambiguous arguments in marketing, finding that highly ambiguous advertisements positively influence purchase decisions due to their novelty and complexity. The study supports the elaboration likelihood and strategic ambiguity models and highlights the role of individuals' ability to process cues.

Ishengoma and Mutinta explore Tanzanian journalists' efforts to fight fake news by evaluating their awareness, challenges, and strategies. Data was collected from 306 journalists across radio, television, newspapers, and online media in different regions of Tanzania's mainland.

Mbatha investigates the digital divide as a barrier to technology adoption by small, medium, and micro enterprises (SMMEs) in the agribusiness sector in Tshwane, South Africa. His findings show that the digital divide hinders technology adoption, with high costs, limited funds, and a lack of technical expertise identified as the main obstacles for SMMEs in adopting information and communication technologies.

Fadipe, Salawu and Ogundeyi's research is based on the model of indigenous language for development communication, which emphasizes the link between language and people's understanding of messages. The study used a survey to gather opinions from 191 Nigerian respondents in Lagos and 114 South African respondents in Mafikeng. The survey focused on the dominant indigenous languages used for COVID-19 vaccine messages, respondents' understanding of these messages, and their acceptance or rejection of the vaccine information.

Hlungwani and Tyali examine how the communication strategies of South African political parties impact voters' decision-making. The study aims to understand the effects of political communication on voters' choices. The study focused on Diepsloot, a densely populated township located in the northern part of Johannesburg, Gauteng, South Africa.

Nyarko argues that the circulation of print media in Ghana is unevenly distributed between the capital and rural areas. The study reveals that factors such as ownership, revenue motives, availability of skilled labour, government presence, and urban media credibility contribute to the concentration of newspapers in urban centres.



Employee engagement in the South African short-term insurance sector: repositioning communication climate as a job resource

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Abstract

Measuring employee engagement is a popular means for contemporary organisations to assess employee commitment and engagement. It is evident from literature that a strong relationship exists between improved employee engagement levels and positive business outcomes. However, globally and in South Africa, employees tend not to be engaged, with non-managerial employees showing lower engagement compared to their managerial counterparts. From this perspective, disengagement, resulting in untapped employee potential, has significant financial implications.

Traditional employee engagement models list a positive communication climate as one of many job resources that contribute to improved engagement, alongside resources such as performance feedback, employee autonomy and opportunities for learning and development. Against this background, this research argues that a positive communication climate could possibly play a more expanded role in driving non-managerial employee engagement than is currently recognised.

Survey data were collected from four short-term insurance organisations in the South African financial sector. Data analysis was done using factor analysis and structural equation modeling. The results show a reasonable fit and support the notion that a positive communication climate may have an impact on all job resources, which could lead to higher levels of employee engagement among non-managerial staff.

The results show that communication climate may possibly be the foundation of job resource effectiveness. As such, management can address communication climate when seeking to improve engagement levels of non-managerial employees.

Keywords

Communication climate, drivers, employee engagement, financial sector, internal communication, job resources, South Africa, structural equation modeling

INTRODUCTION

Employees are arguably the most important stakeholder group leading the organisation to improved growth and financial success (Kundariyah et al., 2022). Organisations aiming to achieve this growth and success can improve employee performance by engaging more effectively with their employees (Al Zeer et al., 2023). Measurement of employee engagement is a popular tool used by human resource and communication departments to determine employees' commitment to and engagement with their specific jobs and the organisation in general (Pincus, 2023; Sun & Bunchapattanasakda, 2019), with the ultimate aim of improving performance. Studies consistently show a positive relationship between high employee engagement levels and improved business outcomes, such as talent retention, lowered

absenteeism, increased productivity, enhanced customer satisfaction and, ultimately, higher shareholder returns (Aon Hewitt, 2017).

However, a trend persists across sub-Saharan Africa in which employee engagement levels remain significantly lower than the global average. Only 20% of employees in this region report feeling fully engaged, compared to a global average of 23% (Harter, 2021). This low engagement represents a significant disadvantage for organisations (Gallup, 2023). These findings are supported by Hayes et al. (2019) who illustrate that engagement levels in South Africa are as low as 16%.

In this context, South African managers are more engaged than non-managerial employees (Reyneke, 2019), which coincides with global findings (Hakanen et al., 2019; Hayes et al., 2019). Conventional methods using job resources to improve engagement among non-managerial employees therefore seem insufficient, as this group consistently demonstrates lower engagement compared to their managerial counterparts.

Various theories explicate ways to improve employee engagement. This article draws on the work of Demerouti et al. (2001), who identify specific job resources as controllable factors within an organisation that can drive employee engagement. These job resources include among others communication, performance feedback, autonomy and opportunities for learning and development (Bakker & Demerouti, 2008; Demerouti & Bakker, 2011; Rothmann et al., 2006; Schaufeli et al., 2009).

A positive relationship between internal organisational communication and employee engagement has recently been established and presented by various authors. Abduraimi et al. (2024), Gómez-González and Gallardo-Echenique (2023), Mbhele and De Beer (2021), Santoso et al. (2023), Verčič et al. (2021) and Verčič and Men (2023) show that improved internal communication leads to higher levels of employee engagement.

Redding (1972) conceptualises internal communication as communication climate, which is defined as the character of an organisation's communication system. Goldhaber (1993), furthermore, affirms that communication climate involves the perceptions held by employees regarding the quality of communication in an organisation. For the purpose of this study, the concept of communication climate is used to define internal communication.

This article provides a perspective on how a positive communication climate can foster employee engagement, particularly among non-managerial employees in the South African short-term insurance sector. A positive communication climate could play a more expanded role than is currently recognised, acting as more than simply one among many job resources. It could act as the foundation upon which other job resources are built, ultimately leading to higher engagement levels.

The following literature review explores the current understanding of employee engagement, its drivers (that is, job resources) and the view of communication climate in fostering employee engagement. The review also determines whether there is theoretical support for this proposed new perspective. Subsequently, factor analysis and structural equation modeling (SEM) are used to investigate whether the empirical evidence supports this perspective.

LITERATURE REVIEW

Employee engagement

Employee engagement is a well-researched concept. Kahn (1990) offers one of the first working definitions, stating that engaged employees perceive themselves to be physically, emotionally and cognitively connected to their work. It is also argued that a positive psychological state of connectivity to their work positively affects employees' willingness to contribute towards creating a successful organisation (Albrecht, 2010). Dhanesh (2017) puts forward a contemporary definition of engagement by criticising the concept, particularly in the context of digital, employee and stakeholder engagement. Much of the research done on employee engagement looks at the concept more holistically by focussing on psychology and organisational behaviour theories that conceptualise engagement as having cognitive, affective and behavioural dimensions. However, engagement should not be conflated with concepts such

as employee satisfaction and commitment. Dhanesh (2017:925) defines engagement as “an affective, cognitive and behavioural state wherein publics and organisations, who share mutual interest in salient topics, interact along continua that range from passive to active and from control to collaboration, and is aimed at goal attainment, adjustment, and adaption for both publics and organisations”.

Schaufeli et al. (2002) developed another widely used definition that describes employee engagement as a positive psychological work-related state of mind characterised by vigour, dedication and absorption. Engaged employees perform their work with more energy, commitment and enthusiasm. They are willing to take on more challenges and are able to concentrate more effectively to complete tasks. Importantly, engagement is not a single, momentary event, but it is a persistent state of being focused on the job (Schaufeli & Bakker, 2004).

The outcomes of employee engagement are of particular importance, as these impact an organisation's financial performance, among other areas (Merry, 2013). Aon Hewitt (2017) categorises the potential positive business outcomes into four areas: talent, operational, customer and financial outcomes. Talent outcomes include higher retention rates, improved employee wellness and lower levels of absenteeism. Operational outcomes comprise higher levels of productivity and safety in the workplace. In terms of customer outcomes, employee engagement leads to higher levels of customer satisfaction and retention. Financial outcomes include increased sales or revenue growth, improved operational income margins and better shareholder returns (Aon Hewitt, 2017). Highlighting the importance of engagement, Aon Hewitt (2017) (as cited by Merry, 2013) furthermore indicates that with each percentage point that employee engagement improves, the organisation can expect a 0.6% growth in sales. Given these benefits, it is crucial to understand the factors that drive employee engagement.

Job resources as drivers of employee engagement

The definition of employee engagement determines the factors or drivers that influence it. Numerous sets of drivers have been proposed in previous research. This article focuses on research by Demerouti et al. (2001) on the Job Demands–Resources (JD-R) model to understand these drivers. This model explains how employees experience burnout and engagement in the workplace. It shows that employees are often overwhelmed by the demands of their job and that their own resources, as well as the resources provided by the organisation in the workplace (job resources), are insufficient in terms of support. Consequently, employees are more likely to experience the negative consequences of burnout, such as exhaustion. The model emphasises the importance of job resources – the physical, social and organisational aspects of an employee's job that will support them to perform their job. These job resources also enable employees to achieve their work goals and promote personal growth, learning and development (Bakker, 2011; Bakker & Demerouti, 2008; Demerouti et al., 2001).

Several studies show a positive relationship between job resources and employee engagement (Bakker, 2011; De Braine & Roodt, 2011; Demerouti et al., 2001; Rothmann & Rothmann Jr, 2010; Rothmann et al., 2006; Schaufeli et al., 2009). These job resources include, but are not limited to, communication, autonomy, performance feedback, opportunities for learning and development, supportive superiors and colleagues, participation in decision making, salary or wages, career opportunities, job security and role clarity (Bakker & Demerouti, 2008; Demerouti & Bakker, 2011; Demerouti et al., 2001; Rothmann et al., 2006; Schaufeli et al., 2009).

For the purpose of this study, autonomy, performance feedback and opportunities for learning and development were chosen for investigation together with communication climate, as previous research showed a positive relationship between these individual job resources and improved employee engagement (Maslach et al., 2001; Schaufeli et al., 2009; Slåtten & Mehmetoglu, 2011). These three resources – autonomy, performance feedback and opportunities for learning and development – also play an instrumental role in employees' ability to grow and achieve their work goals (Gruman & Saks, 2011).

Traditionally, communication climate is identified as one of several job resources influencing employee engagement (Aon Hewitt, 2017; Rothmann et al., 2006). However, this study proposes that a positive communication climate can possibly play a more expanded role than was previously thought.

Communication climate potentially enables the job resources employed by the organisation to increase employee engagement.

Communication climate as a significant job resource

As previously noted, numerous recent studies support the notion that internal communication has a positive impact on employee engagement levels. Abduraimi et al. (2024) examine the relationship between internal organisational communication and employee engagement among employees in the educational non-profit context in the Republic of North Macedonia. Their study strongly correlates internal organisational communication with employee engagement defined by vigour, dedication and absorption. Thus, "in order to increase employee engagement, it is essential to focus on internal organisational communication" (Abduraimi et al., 2024:158). Gómez-González and Gallardo-Echenique (2023) found a statistical correlation between satisfaction with internal communication and engagement defined by vigour, dedication and absorption. Mbhele and De Beer (2021) identified internal communication as a key driver of employee engagement in the South African context. Santoso et al. (2023) interviewed human resource officers to better understand the role of internal communication in building trust and employee engagement during the COVID-19 epidemic.

Internal communication is crucial "to strengthen the relationships between the organisation and its employees and among employees themselves" (Santoso et al., 2023:200). Using a survey of 1,805 employees, Verčič et al. (2021) explored the relationships between internal communication satisfaction and employee engagement with mediating effects of social exchange quality indicators. From this perspective, internal communication satisfaction indeed led to higher employee engagement. Verčič and Men (2023), furthermore, examined how internal communication could help to create workplaces where employees are engaged and satisfied. This is important as employees act as brand ambassadors and advocates to the external environment. The business, therefore, needs engaged employees to promote a positive reputation. Internal communication impacts employee engagement through the mediating effect of perceived organisational support and employer attractiveness. Against this background, it is essential for managers to prioritise internal communication in organisational strategy (Verčič & Men, 2023).

As previously stated, for the purpose of this research, the concept communication climate is used to define internal communication. Communication climate, introduced by Redding (1972) and later refined by Dennis (1974), describes the character of an organisation's internal communication system. Dennis (1974:29) defines communication climate as "a subjectively experienced quality of the internal environment of an organisation". The communication climate influences the way in which people talk, whom they talk to and like, their feelings towards events, their work ethic, their creativity and their ability to innovate (Dennis, 1974).

Falcione et al. (1987:203) further argue that communication climate "also affects perceptions of work conditions, supervision, compensation, advancement, relationships with colleagues, organisational rules and regulations, decision-making practices, available resources, and ways of motivating an organisation's members". A positive communication climate can, therefore, be an important factor in the success of an organisation by functioning as a driver that improves employee engagement.

Redding (1972) and Dennis (1974) identify five dimensions to explain communication climate: superior-subordinate communication, quality of information, superior openness, opportunities for upward communication and reliability of information. Superior-subordinate communication refers to the level of support that employees receive from their managers that is communicated in the form of encouragement, understanding and fairness (Balakrishnan et al. 2013; Dennis, 1974; Redding, 1972; Rooney & Gottlieb, 2007). Quality of information pertains to employees' perception of the quality and accuracy of information they receive from their manager. This dimension focusses on whether employees are satisfied with their manager's way of communicating information and whether employees have a clear understanding of their job requirements and work objectives (Balakrishnan et al., 2013; Dennis, 1974; Karanges et al. 2015; Redding, 1972). Superior openness involves employees' perception of how open and honest they experience their manager to be when information is shared (Balakrishnan et al., 2013; Dennis, 1974;

Redding, 1972). Opportunities for upward communication show the extent to which employees feel that their views are being heard and whether these views are incorporated into the workplace, that is, whether their superiors are listening to them (Balakrishnan et al., 2013; Dennis, 1974; Macnamara, 2015; Redding, 1972). Reliability of information refers to whether employees feel that they can trust the information they receive from their manager, that is, the credibility of the information itself. Furthermore, the superior and subordinate need to trust each other so that information can be perceived as reliable (Balakrishnan et al., 2013; Barbera & Young, 2010; Dennis, 1974; Redding, 1972).

Conceptualising the expanded role of communication climate

As noted earlier, research indicates a positive relationship between job resources that include a positive communication climate and employee engagement (Bakker & Demerouti, 2008). However, a persistent challenge exists as non-managerial employees often demonstrate lower levels of engagement compared to their managerial counterparts (Reyneke, 2019). This article positions a positive communication climate as the foundational element that underpins all the other job resources and leads to improved levels of employee engagement.

For the purpose of this study and to conceptualise the proposed expanded position, the dimensions of communication climate are used. The point of departure is that all job resources require a positive communication climate to positively impact employee engagement. Figure 1 illustrates this process using three job resources: autonomy, performance feedback and opportunities for learning and development. The discussion that follows provides a brief explanation of each driver and explores how communication climate dimensions influence their effectiveness.

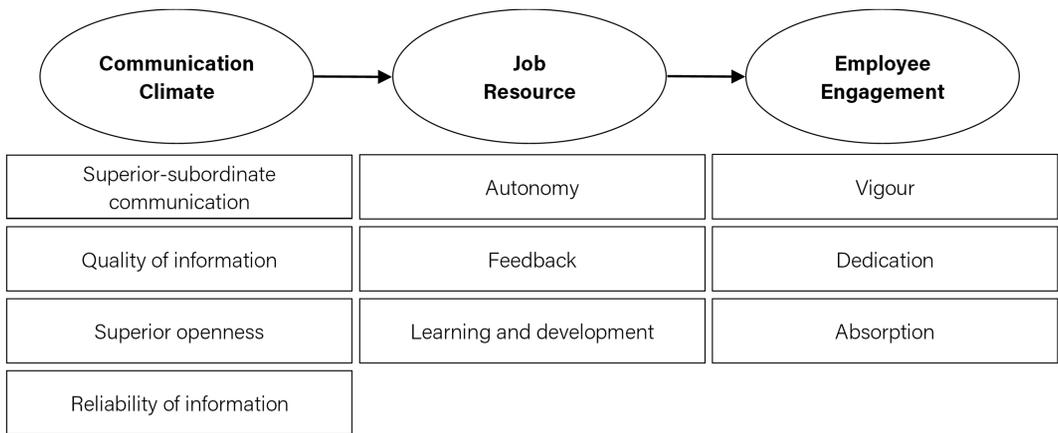


Figure 1: A conceptualisation of the factors of a positive communication climate that impact job resources and lead to higher levels of employee engagement (author created)

First, employees experience *autonomy* when they feel that they have a measure of independence, flexibility, discretion and control over how they perform their work (Menguc et al., 2013). This sense of control is crucial for growth and goal achievement. For employees to feel autonomous, there must be some degree of support from their manager (superior-subordinate communication) which enables them to take control of their work (Menguc et al., 2013). Even when having a fair degree of autonomy, employees still need information to perform their job and attain their objectives (Knutson, 2023). The quality of the information that employees receive from their manager, especially in terms of their work objectives, enables them to identify their objectives and how to achieve them (Knutson, 2023). If they do not trust their manager to share credible and reliable information (superior openness), their performance is negatively affected (Aguinis, 2013). Autonomy also fuels creativity. With opportunities for upward communication, this creativity can be used, for example, to solve problems (Gao & Jiang, 2019). To achieve autonomy, supportive dialogue is needed. Open dialogue, facilitated by opportunities for upward communication,

allows employees to share ideas, concerns and new approaches with managers (Knutson, 2023). This two-way communication ensures that employees' autonomy is used productively, fosters a sense of ownership over their work and, ultimately, contributes to improved performance (Akre et al., 1997; Stone et al., 2008). In summary, good information from a quality source that supports the employee, as well as the ability to share new and creative ideas with a manager, greatly enhance an employee's ability to work autonomously.

Second, *performance feedback* from managers is a crucial job resource that assists employees in improving their performance and reaching their full potential. Effective feedback should assess a range of employee behaviours, including persistence, proactivity and adaptability. Feedback can be delivered through both formal appraisals and informal sessions (Gruman & Saks, 2011; Schaufeli et al., 2009). A supportive environment fostered through good communication (superior-subordinate communication) allows employees to feel safe and receptive to critical feedback (Gruman & Saks, 2011). Employees expect quality information during feedback on their performance to know what is expected from them and to obtain the tools to effectively perform their work (Gopal, 2006). Employees must also trust that their manager will be open and honest (superior openness) during feedback sessions (Aguinis, 2013). During a feedback session, employees must be given the opportunity to provide their view on their own performance (opportunities for upward communication) and, in more formal performance appraisals, they need to be able to participate in setting their work goals (Gruman & Saks, 2011). Employees must be empowered through dialogue to share their opinions and ideas (Aguinis, 2013; Robertson-Smith & Markwick, 2009). They then feel heard and will take ownership of their work objectives (Baker et al., 2013). When information is credible and trustworthy (reliability of information), employees can improve their performance and reach their objectives (Dahling & O'Malley, 2011). In summary, a supportive feedback environment is characterised by high quality information delivered tactfully by the manager, with the latter being a knowledgeable and credible source of such information.

Lastly, *opportunities for learning and development* equip employees with the necessary skills and knowledge to perform their jobs optimally while managing the demands and stresses of the job (Gruman & Saks, 2011; Schaufeli et al., 2009). Managers need to support their employee's growth (superior-subordinate communication) through formal learning and development programmes as well as informal learning processes (Aguinis, 2013). Managers must, therefore, create a supportive environment for learning to take place (Aguinis, 2013; Mazutis & Slawinski, 2008). This can be done by cultivating a learning culture in which dialogue is used to transfer knowledge and skills (Berg & Chyung, 2008). Moreover, managers need to use open, honest and transparent dialogue to promote learning (superior openness) and encourage employees to question assumptions and ideas (opportunities for upward communication) (Mazutis & Slawinski, 2008; Robertson-Smith & Markwick, 2009).

RESEARCH OBJECTIVES

Two research objectives were formulated to investigate the potential expanded influence of communication climate on job resources to improve employee engagement:

- i. To determine whether communication climate influences specific job resources;
- ii. To determine whether specific job resources influence employee engagement.

METHOD

A quantitative research design was adopted to test the influence of communication climate on certain job resources and their subsequent influence on employee engagement.

The population consisted of four short-term insurance organisations in the South African financial sector (named organisations A–D). A limited number of organisations agreed to participate, despite numerous organisations being approached based on industry contacts. Consequently, the organisations were selected through a non-probability sampling technique. Human resource representatives were approached for consent to participate, and they provided the lists of names of employees working within the white-collar or knowledge-worker space – employees performing office-based jobs that generally

require formal education and are higher paid than their blue collar counterparts (Saraç et al., 2017). These lists were coded to conceal the individuals' identity. Each organisation consented to the study, and each individual participated voluntarily and anonymously.

A stratified random sampling technique (with the strata identifying employees as either managers or non-managers) ensured a representative sample of 600 non-management employees targeted across all departments and areas of the organisations. Random samples were drawn within each organisation using Microsoft Excel. Human resource departments at organisations A, B and C converted the anonymised samples back to non-managerial employee identities and invited them to participate. In organisation D, non-managerial employees on the provided list were directly emailed to invite participation. Of those invited to voluntarily participate in the study, 319 non-managerial employees completed the survey.

Data were collected via a self-administered survey using the online tool Qualtrics. The questionnaire consisted of four parts. The first section collected basic demographic information, including gender, age, race and organisational level. The second part used the validated 17-item Likert Utrecht Work Engagement scale to measure employee engagement levels (in terms of vigour, dedication and absorption). The standardised response categories included "never", "almost never" (a few times a year), "rarely" (once a month), "sometimes" (a few times a month), "often" (once a week), "very often" (a few times a week) and "always" (every day). The third part made use of the nine-item Likert Job Demand-Resource scale measuring job resources (autonomy, performance feedback and opportunities for learning and development). The standardised response categories included "never", "sometimes", "regularly", "often" and "very often". Finally, the Dennis Communication Climate scale, a 40-item Likert scale, assessed the employee's experience of the communication climate (superior-subordinate communication, quality of information, superior openness, opportunities for upward communication and reliability of information). The standardised response categories included "to no extent", "to a little extent", "to some extent", "to a great extent" and "to a very great extent".

The data analysis made use of the statistical software programmes SSPS and AMOS. Confirmatory factor analysis with appropriate fit indices was conducted to establish construct validity and reliability. Exploratory factor analysis was then performed to confirm the hypothesised structure of the measurement model. Finally, SEM was used to determine the strength and significance of the relationships between the constructs within the proposed model.

Mediation is defined as "a chain of relations by which an antecedent variable affects a mediating variable, which in turn affects a dependent variable" (MacKinnon et al., 2012:313). The above conceptual model presented itself as a mediation model. The role and impact of the mediator should be further investigated.

RESULTS

The statistical data analysis started with confirmatory factor analysis of the three existing measurement scales used. The results did not show a good model fit in most instances. Exploratory factor analysis subsequently revealed a new set of factors, probably as a result of the unique context (that is, knowledge workers in short-term insurance organisations in the South African financial sector) for which data had not yet been gathered for the identified themes. SEM was then performed to test the strength of the relationships between the newly identified factors.

Confirmatory factor analysis

Confirmatory factor analysis was conducted to determine how well the measurement models fit the data. The model adequacy (fit) was tested using goodness-of-fit measures. The set of measures included the fit indices comparative fit index (CFI), incremental fit index (IFI), normed fit index (TLI), root mean square error of approximation (RMSEA) and chi-square minimum divided by degrees of freedom (CMIN/df).

The results for the original models showed an unacceptable model fit for employee engagement. Acceptable values of 0.897 for the TLI and 0.912 for the CFI were found given the threshold of 0.9 (Raykov

& Marcoulides, 2006). However, the RMSEA was 0.094, which was above the acceptable threshold of 0.08, and the CMIN/df was 5.408, which was also above the acceptable value of 3 (Schreiber et al., 2006).

The job resources results showed an acceptable fit. The TLI and CFI had values of 0.969 and 0.979, respectively. The RMSEA of 0.075 indicated an acceptable fit, and the CMIN/df value was 2.798.

The communication climate results also showed an unacceptable fit. The values of 0.809 for the TLI and 0.828 for the CFI were below the acceptable threshold of 0.9. The RMSEA value of 0.103 showed an unacceptable fit, and the CMIN/df value was 4.393, which was above the acceptable value of 3. The data were subsequently subjected to exploratory factor analysis to determine the underlying factor structure for the instruments.

Exploratory factor analysis

The factor extraction method used was principal axis factoring, and the rotation method was promax with Kaiser normalisation. In terms of the Kaiser–Meyer–Olkin measure of sampling adequacy, all variables tested above the recommended threshold of 0.5 (Table 1). Bartlett's test of sphericity showed a statistical significance ($p < 0.000$) for all the constructs.

In terms of employee engagement, the factor analysis identified only two factors that explained a total of 61.79% of the variance. The Cronbach's alpha values for the two factors were above the acknowledged threshold of 0.7 (Table 1). In terms of job resources, the factor analysis identified a single factor that explained a total of 62.74% of the variance (Table 1). The Cronbach's alpha values for this factor were above the acknowledged threshold. Although the confirmatory factor analysis indicated a fit for job resources, multicollinearity was present between the three constructs. Lin (2007:13) states that "if the absolute value of Pearson correlation is close to 0.8 (such as 0.7), collinearity is likely to exist". Therefore, an exploratory factor analysis was also conducted on job resources. The factor analysis of communication climate indicated three factors, which explained a total of 72.9% of the variance. The Cronbach's alpha values for the factors were above the acknowledged threshold (Table 1).

Table 1: Summary of exploratory factor analysis for non-management employees

Construct	KMO & Bartlett's test	% Variance explained	Factor loadings			Cronbach alpha
			1	2		
Employee engagement	0.956	61.792				
	$p < 0.000$					
1. At work, I feel bustling with energy			0.767			0.942
2. I find the work that I do full of meaning and purpose			0.954			
3. Time flies when I am working			0.650			
4. At my job, I feel strong and vigorous			0.861			
5. I am enthusiastic about my job			0.877			
6. When I am working, I forget everything else around me				0.398		0.864
7. My job inspires me			0.740			
8. When I get up in the morning, I feel like going to work			0.670			
9. I feel happy when I am working intensely			0.529			
10. I am proud of the work that I do			0.639			
11. I am immersed in my work				0.542		
12. I can continue working for very long periods at a time				0.406		
13. To me, my job is challenging				0.491		

14.	I get carried away when I am working				0.784		
15.	At my job, I am mentally very resilient				0.517		
16.	It is difficult to detach myself from my job				0.638		
17.	At my work I always persevere even when things don't go well				0.689		
Construct	KMO & Bartlett's test	% Variance explained	Factor loadings			Cronbach alpha	
			1				
Job resources		9.900	62.741				
		p<0.000					
1.	I have flexibility in the execution of my job			0.602			0.925
2.	I have control over how my work is carried out			0.641			
3.	I can participate in decision making regarding my work			0.761			
4.	I receive sufficient information about my work objectives			0.766			
5.	My job offers me opportunities to find out how well I do my work			0.814			
6.	I receive sufficient information about the results of my work			0.765			
7.	In my work, I have the opportunity to develop my strong points			0.872			
8.	In my work, I can develop myself sufficiently			0.846			
9.	My work offers me the possibility to learn new things			0.768			
Construct	KMO & Bartlett's test	% Variance explained	Factor loadings			Cronbach alpha	
			1	2	3		
Communication climate		0.975	72.898				
		p<0.000					
1.	My superior makes me feel free to talk with him/her				0.463		0.945
2.	My superior really understand my job problems				0.549		
3.	My superior encourages me to let him/her know when things are going wrong on the job				0.581		
4.	My superior makes it easy for me to do my best work				0.646		
5.	My superior expresses his/her confidence with my ability to perform my job				0.583		
6.	My superior encourages me to bring new information to his/her attention, even when that new information may be "bad news"				0.491		
7.	My superior makes me feel that things I tell him/her are really important		0.488				0.979
8.	My superior is willing to tolerate arguments and give a fair hearing to all points of view		0.540				
9.	My superior has my best interests in mind when he/she talks to his/her bosses		0.521				
10.	My superior is a really competent expert manager		0.569				
11.	My superior listens to me when I tell him/her about things that are bothering me		0.661				
12.	It is safe to say to my superior what I am really thinking		0.898				
13.	My superior is frank and candid with me		0.676				
14.	I can "sound off" about job frustrations to my superior		0.935				

15.	I can tell my superior about the way (in my opinion) he/she manages our work group			0.861		
16.	I am free to tell my superior that I disagree with him/her			0.916		
17.	I think I am safe in communicating "bad news" to my superior without fear of any retaliation on his/her part			0.915		
18.	I think that my superior believes that he/she really understands me			0.830		
19.	I believe that my superior thinks that I understand him/her			0.846		
20.	My superior really understands me			0.865		
21.	I really understand my superior			0.763		
22.	In general, I think that people in this organisation say what they mean and mean what they say				0.771	0.967
23.	People in top management say what they mean and mean what they say				0.885	
24.	People in this organisation are encouraged to be really open and candid with each other				0.748	
25.	People in this organisation can freely exchange information and opinions				0.878	
26.	I am kept informed about how well organisational goals or objectives are being met				0.768	
27.	My organisation succeeds in rewarding and praising good performance				0.734	
28.	Top management provides me with the kinds of information I really want and need				0.937	
29.	I am receiving information from those sources (for example, from superiors, department meetings, co-workers, newsletters, emails) that I prefer				0.816	
30.	I am pleased with top management's efforts to keep employees up to date on recent developments that are related to the organisation's welfare – such as success in competition, profitability, future growth plan, etc.				0.887	
31.	I am notified in advance of changes that affect my job				0.695	
32.	I am satisfied with explanations I get from top management about why things are done as they are				0.885	
33.	My job requirements are specified in clear language				0.518	
35.	My opinions make a difference in the day-to-day decisions that affect my job				0.559	
36.	My superior lets me participate in the planning of my own work				0.344	
37.	Members of my work group are able to establish our own goals and objectives				0.462	
38.	My views have real influence in my organisation				0.684	
39.	I expect that recommendations I make will be heard and seriously considered				0.694	

Notes: KMO: Kaiser–Meyer–Olkin

Renaming the factors

The exploratory factor analysis indicated a different factor structure for the specific context in which the measurement instrument was used. The items that loaded onto each factor were studied and renamed (taking into account the current literature on the constructs). Table 2 compares these new naming conventions with the original constructs.

Table 2: Renaming of non-management employee factors

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Employee engagement original factors	Vigour	Dedication	Absorption		
Employee engagement new naming conventions	Taking initiative with persistent focus (EE1)	Energetically focused (EE2)			
Job resources original factors	Autonomy	Feedback	Opportunities for learning and development		
Job resources new naming conventions	Open knowledge sharing to empower (JobRes)				
Communication climate original factors	Superior-subordinate communication	Quality and accuracy of downward communication	Opportunities for upward communication	Superior openness/candour	Reliability of information
Communication climate new naming conventions	Superior-subordinate communication (Supsubcomm)	Quality and accuracy of downward communication (QualAcc)	Empathetic listening to encourage participation (EmpList)		

Factors needed to be renamed. Figure 2 below reflects these changes more accurately.

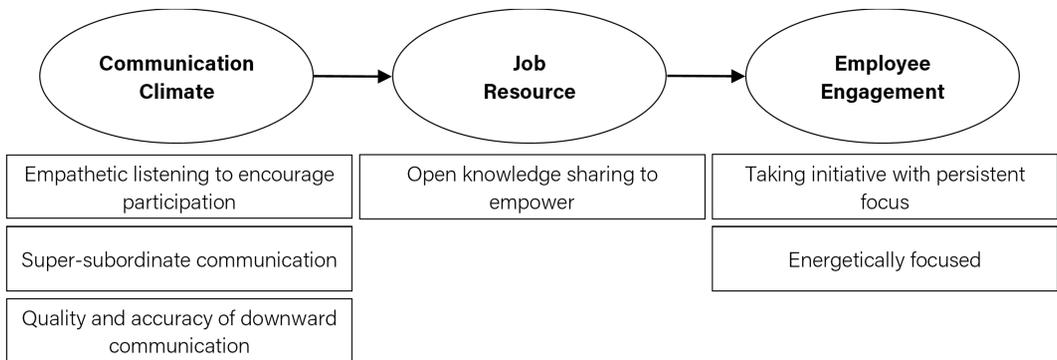


Figure 2: An updated conceptualisation of the factors of a positive communication climate that impact on job resources and lead to higher levels of employee engagement (author created)

Construct descriptors

The construct descriptive statistics, based on the three measurement instruments, are presented in Table 3. Three respondents did not answer question 8 and these answers have been replaced with the mean. According to Kline (2016), missing values of less than 5% of the total data set are negligible. One method to solve the problem is to “replace a missing score with the overall sample mean” (Kline, 2016:83).

Table 3: Construct descriptive statistics for non-management employees

Construct*	Mean**	Median	Std deviation	Skewness	Kurtosis	Min.***	Max.***
EE1	5.5409	5.8889	1.1481	-1.101	1.241	1	7
EE2	5.2833	5.5	1.06644	-.829	.356	2	7
JobRes	3.5733	3.6667	0.95249	-.301	-.836	1,22	5
Supsubcomm	3.6114	3.7333	1.02569	-.493	-.450	1	5
QualAcc	3.4049	3.5	0.91068	-.227	-.374	1	5
EmpList	3.8882	4	0.95802	-.666	-.261	1	5

Notes:

*See Table 2 for renamed constructs.

**The mean is the average score for each category.

***Likert scales used in the survey:

- Employee engagement parameters [1 = never; 2 = almost never (a few times a year); 3 = rarely (once a month); 4 = sometimes (a few times a month); 5 = often (once a week); 6 = very often (a few times a week); 7 = always (every day)].
- Job resources parameters [1 = never; 2 = sometimes; 3 = regularly; 4 = often; 5 = very often].
- Communication climate [1 = to no extent; 2 = to a little extent; 3 = to some extent; 4 = to a great extent; 5 = to a very great extent].

The descriptives indicate that the construct “taking initiative with persistent focus” (EE1) had the highest mean value of the three employee engagement constructs. The construct with the highest mean value for communication climate was “empathetic listening to encourage participation” (EmpList). The skewness and kurtosis values for employee engagement, job resources and communication climate concepts indicate that the assumption of normality could be made.

Structural equation modeling (SEM)

The following section shows the results of SEM conducted on the conceptual model for non-management employees. This relates to the influence of communication climate on job resources to improve employee engagement. The model adequacy (fit) was tested using goodness-of-fit measures. The set of measures included were the fit indices CFI, IFI, TLI, RMSEA and CMIN/df.

The first step was to determine how well the conceptual model fit the data. Two factors for employee engagement (EE1 and EE2), one factor for job resources (JobRes) and three communication climate factors (Supsubcomm, QualAcc and EmpList) were used. The structural model did not show an acceptable fit across the set of fit indices considered. Although the RMSEA and CMIN/df showed an acceptable fit with values of 0.074 and 2.296, respectively, the TLI, IFI and CFI values did not reach the acceptable threshold of 0.90. Improvements on the model were made by (1) deleting items with loadings of less than 0.5, (2) deleting non-statistical significant paths and (3) studying the modification indices for potential additional covariances with the condition that these needed to be theoretically justified. Table 4 shows this optimisation based on the above-mentioned criteria. The TLI, IFI and CFI values showed an unacceptable fit, whereas the RMSEA and CMIN/df values showed an acceptable fit.

Table 4: Goodness-of-fit indices

Model	TLI	IFI	CFI	RMSEA	CMIN/df
Goodness-of-fit indices	0.865	0.871	0.871	0.066	2.394
Indicate acceptable fit	≥0.9	≥0.9	≥0.9	≤0.08	≤3

Notes: CFI: comparative fit index; CMIN/df: chi-square minimum divided by degrees of freedom; IFI: incremental fit index; TLI: normed fit index; RMSEA: root mean square error of approximation

SEM was then performed to determine the strength of the relationships between the newly identified constructs. Given that in the structural model two fit statistics (RMSEA and CMIN/df) showed a model fit, the structural coefficient could be provisionally interpreted. A total of four statistically significant paths were identified, as represented in Figure 3 below.

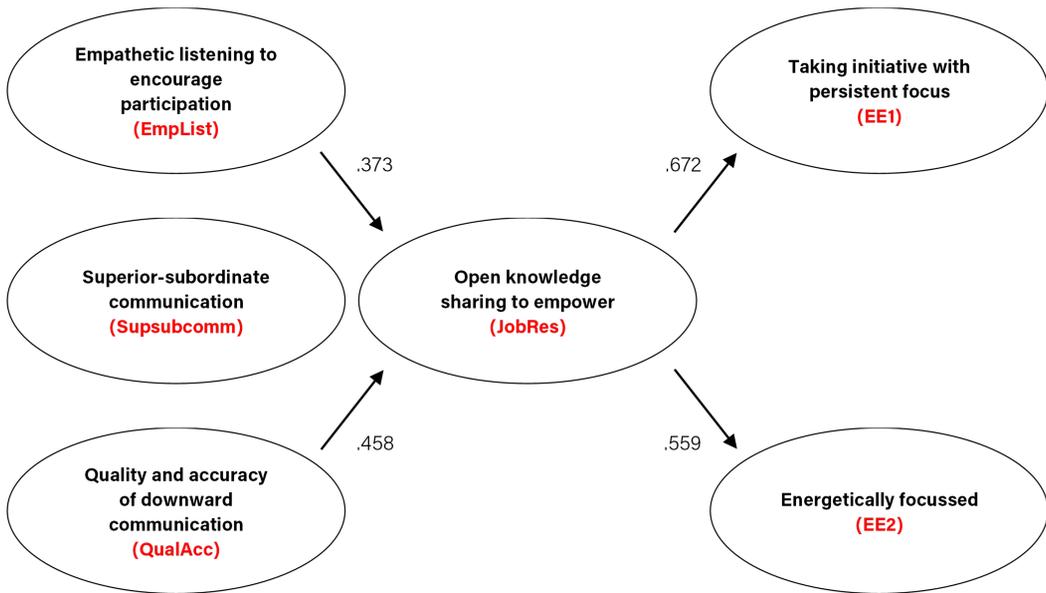


Figure 3: Structural equation modeling for non-management employees

The structural path coefficient from EmpList (empathetic listening to encourage participation) to JobRes (open knowledge sharing to empower, 0.373) was statistically significant, indicating a moderate positive significant relationship. Higher levels of EmpList were related to higher levels of JobRes. The structural path coefficient from Supsubcomm (superior-subordinate communication) to JobRes was not statistically significant. The structural path coefficient from QualAcc (quality and accuracy of downward communication) to JobRes (0.458) was statistically significant, indicating a moderate positive significant relationship. Higher levels of QualAcc were, therefore, related to higher levels of JobRes. The structural path coefficient from JobRes to EE1 (taking initiative with persistent focus, 0.672) was statistically significant, indicating a strong positive significant relationship. Higher levels of JobRes were, therefore, related to higher levels of EE1. The structural path coefficient from JobRes to EE2 (energetically focused, 0.559) was statistically significant. This indicated a positive significant relationship. Higher levels of JobRes were, therefore, related to higher levels of EE2.

DISCUSSION

The SEM analysis yielded a partial fit based on indices such as the RMSEA and CMIN/df. These results partially support the conceptual model, suggesting that communication climate may, within reason, influence job resources. In turn, this could contribute to improving employee engagement.

Addressing the first research objective (to determine whether communication climate influences specific job resources), the analysis reveals that several communication climate constructs potentially influence the identified job resource “open knowledge sharing to empower”. The results show that “empathetic listening to encourage participation” has a moderately positive significant relationship with “open knowledge sharing to empower”. This aligns with Baker et al. (2013) who highlight the importance of dialogue during feedback sessions for employee empowerment and autonomy. Superiors should, therefore, listen to the opinions of their subordinates, and their perspectives should be acknowledged

(Akre et al., 1997; Stone et al., 2008).

The construct of “superior–subordinate communication” is not significantly related to “open knowledge sharing to empower”. A moderately positive significant relationship exists between “quality and accuracy of downward communication” and “open knowledge sharing to empower”. This finding is supported by Yang and Choi (2009) who emphasise the need for accurate information flow from superiors to improve employee performance and decision making. The results suggest that for non-management employees to be engaged, a communication climate should exist where managers listen to them, encourage participation and share high quality information. Non-managers are, therefore, empowered through the knowledge that they receive.

Regarding the second research objective (to determine whether specific job resources influence employee engagement), the results suggest a positive relationship between certain job resources and employee engagement. The construct of job resources may influence both the employee engagement constructs “taking initiative with persistence focus” and “being energetically focused”. This finding aligns with prior research by Schaufeli and Bakker (2004), Schaufeli et al. (2009) and Maslach et al. (2001) who identify a positive relationship between job resources and employee engagement.

In terms of non-management, the results show that “open knowledge sharing to empower” is the only driver that could improve employee engagement. However, open knowledge sharing can only take place (1) when managers listen to their subordinates to encourage them to participate; and (2) where the information shared with subordinates by their managers is accurate and of a high quality (Aguinis, 2013; Gruman & Saks, 2011; Knutson, 2023; Mazutis & Slawinski, 2008; Robertson-Smith & Markwick, 2009). For management, these results emphasise the importance of fostering a communication climate that encourages active listening and knowledge sharing. By implementing these practices, managers can empower employees and improve their engagement levels.

In summary, while the SEM analysis did not reveal an absolute model fit, key fit indices provide evidence for a good model fit (RMSEA and CMIN/df). These findings suggest that communication climate, to some degree, has a positive influence on certain job resources. In turn, this contributes to employee engagement and highlights the importance of communication climate within organisations striving to improve employee engagement among non-management personnel.

CONCLUSION

Employees are among the most important stakeholder groups, and their performance is vital to the success of an organisation. Employee engagement is, furthermore, a leading factor in improving organisational performance, growth and success. Current models suggest that various job resources, which include a positive communication climate as one of many, contribute to improving employee engagement levels. Low employee engagement, particularly among non-managerial staff, remains a persistent challenge across the globe and particularly in South Africa, and leads to decreased productivity and talent retention. This study proposes that communication climate can play a more fundamental role in employee engagement. It could possibly act as a foundation for other job resources leading to higher employee engagement levels.

The statistical analysis for the study, using SEM, yielded a good model fit for some fit indices, which supported the research objectives. There is some evidence that communication climate influences job resources, which, in turn, contributes to employee engagement. These results highlight the importance of communication climate for organisations seeking to improve employee engagement, especially among non-managerial staff.

To address low engagement, managers should prioritise fostering a positive communication climate. This includes actively listening to employees, encouraging participation and ensuring accurate and transparent information flow. By implementing these practices, managers can empower employees, strengthen job resources and, ultimately, drive higher engagement levels.

LIMITATIONS

Literature acknowledges numerous other potential drivers of engagement beyond the scope of this investigation. However, only the specific job resources identified here were deemed applicable to the research problem investigated in this study. For example, while concepts such as organisational support and climate are recognised as contributors to employee engagement, they fall outside the scope of this investigation. Furthermore, this research was conducted within a limited context in South Africa and the findings can, therefore, not be generalised to a broader context and population.

RECOMMENDATIONS FOR FURTHER RESEARCH

This study paves the way for further research on the possible expanded role of communication climate in relation to employee engagement. More investigation is needed on this topic and it should be tested in broader settings in South Africa and internationally. In addition, examining alternative job resources could determine whether they would produce similar effects.

Finally, it is worth noting that many individual- and organisational-level factors influence both communication climate and employee engagement, including leadership strategies, employee satisfaction and commitment, and organisation climate. These concepts may also be investigated in relation to employee engagement.

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Complexities of fonts in disfluent experiments

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Abstract

This study focuses on how fonts selected from different families have been used to test for disfluency. The motivation and standard for choosing a particular font for an experiment are not yet clearly defined from past studies. Drawing on methods in a systematic review of 10 articles published between 2007 and 2020, this article shows that authors prefer to use sans serif fonts in fluent conditions and serifs, scripts or handwritten fonts in disfluent conditions. In this study, disfluency manipulations were limited to reducing font sizes and percentages of grey or black. The largest size used was 56pt (fluent) and 18pt (disfluent) while the smallest was 12pt (fluent) and 10pt (disfluent). We observed that the opacity values of disfluent fonts ranged between 10% and 60%, making it unclear how disfluent a font can be. Apart from font sizes, fixation time, familiarity with materials and other controls influenced the results. This article reveals that a major gap still exists in research because of a lack of standard methods for determining the fonts used for testing subjects.

Keywords

Complexities, disfluent, dual-process, fonts, fluent

INTRODUCTION

Typography is an indispensable element of design and an important medium for transferring information and knowledge. Typography cuts across all fields of communication, such as printing, advertising, television, film and other media. Typography has been a part of our lives since the 18th century, with visual and semiotic elements (Serafini & Clausen, 2012:31), and is linked to visual perception and memory (Rhodes & Castel, 2008:137). The human mind perceives several objects in the environment that influence perceptual judgement. The details of an object, such as luminance, size and weight, can determine how they are recalled later (Jacoby & Whitehouse, 1989:118).

Text and visual images are incorporated into books to present a multimodal interpretation (Kress, 2003:208). The legibility of a font (used in text and visual images) is important to educators and literacy theorists, making it crucial for cognitive development. While some educators and literary theorists have suggested the use of several fonts to facilitate and help to improve learning, other research suggests that using a hard-to-read font strikes a good chord in the cognitive process by activating a secondary phase of analytical and effortful reasoning (Alter et al., 2007:136, Alter & Oppenheimer, 2009:13). The theory of this cognitive process expounded by social theorists such as William James is the dual-process model that specifies two different modes of processing, namely Systems 1 and 2 (Kahneman & Frederick, 2002:103; Kahneman & Frederick, 2005:256).

System 1 is fast, associative and intuitive, while System 2 is analytical, slow and deliberate (Chaiken, 1980:39; Evans, 2006:13; Stanovich, 1999). An example of System 1 reasoning is when an individual decides to travel in an aeroplane or a car. The person may quickly imagine a wrong image of a plane crash and decide not to fly. In a typical System 2 scenario, a more thoughtful decision would be made by looking at safety and the number of accidents associated with travelling by car (Alter et al., 2007:136). By comparing what happens when an individual faces a difficult cognitive task to reading an illegible text, Bjork and Bjork (2011) argue that challenges in reading an illegible text or any cognitive task foster memory recall.

"Fluency" and "disfluency" are used in the literature to describe any information that is easy to read or difficult to read, respectively. Discrepancies in empirical studies cast doubt on whether enhanced learning can be achieved through a disfluent text (Alter et al., 2007:136). Kress (2003:208) contends that analytical processing in difficult reading tasks only worked for subjects with special reading skills, high memory capacities, previous experience and knowledge (Alter et al., 2007:136). Others attest that participants measure a likelihood of remembering information captured in bigger fonts (Rhodes & Castel, 2008:137).

DISFLUENCY, TYPOGRAPHY AND THE DUAL-PROCESS MODEL

The dual-process cognitive model is a two-system thinking process that coexists (Gronchi & Giovannelli, 2018:9). At the first level, quick representations or conclusions are made about a piece of information. The second level engages the brain in a deeper analysis that leads to enhanced memory (Alter et al., 2013:128; Weltman & Eakin, 2014:15). Fluency and disfluency are psychological conditions of speech or reading interference (Pieger et al., 2018:3). While developmental disfluency is normal for a growing child, other types of disfluency are caused by neurological factors (Cullatta & Leeper, 1990:17). Other terms for dual-process model include heuristic and systematic (Chaiken, 1980:39), intuitive and analytic (Sanderson, 1980:9), and reflexive and reflective (Lieberman, 2003:44).

Cognitive processes leading to System 2 processing vary for individuals (Geller et al., 2018:46; Yue et al., 2013:41). Lack of consistency in materials, methods and procedures makes it difficult to determine the benefits of subjective cues. A visual stimulus may be perceptually disfluent because the information is not readable or clear enough to understand. People usually find disfluent stimuli difficult to comprehend, but this does not have any effect on memory (Xie, Zhou & Liu 2018:30).

A person can sound disfluent or read disfluently because of disruptions in a visual stimulus such as an unclear font or text. Frederick (2005:19) and Seufert et al. (2016:45) studied font disfluency and its relation to the dual-process model. A font's disfluency depends on legibility (Arditi & Cho 2005:45). Font legibility dwells on how a font is structured (Arditi & Cho, 2007:47, Dillon et al., 2006; Tinker 1963:47). The font type, line width, leading, arrangement, colour and printing surface all affect legibility. Papadima and Kourdis

(2015) state that font selection, size, weight and colour contribute to text comprehension.

Serifs were used in the early days of printing until modern sans serifs were developed for display. Sans serifs are legible because of the absence of strokes or "serifs" (Arditi & Cho, 2005:45). Large fonts played a major role in the judgments of learning (JOLs) – a method of assessing how well a material is studied (Myers et al., 2020:48). Most educationists and graphic designers consider Tinker's (1963:47) factors for book production as important. The general rule regarding the legibility of a font is multi-faceted because of variables that include sex, age and visual problems (Dyson & Stott, 2012:20). Reading cursive and handwriting is difficult for adults and children (Perea et al., 2016). This article explores and discusses ideas and opinions expressed in the literature regarding font pairs and disfluency manipulations through a review of selected articles between the years 2007 and 2020. Two research questions arise from this objective: 1) What are the implications of different pairs in disfluent experiments; and 2) What is the solution for standardising font pairs in disfluent experiments.

METHODOLOGY

This article discusses the complex aspects of fonts in determining disfluency. Drawing from techniques used in systematic review analysis, our method employs standardised steps for data sampling or collection, known as PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) (Page M.J. et al., 2021). These steps include stating the research question, identifying databases, screening, inclusion and exclusion criteria, and extracting and interpreting data.

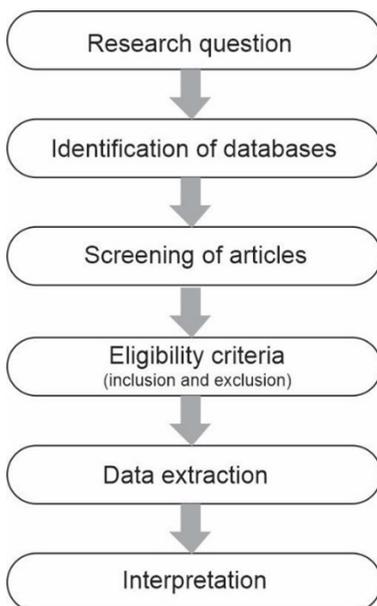


Figure 1: Research design adopted from PRISMA (Page, M.J. et al., 2021)

The initial search for articles on disfluency yielded more than 50 results through Google Scholar. The keywords used were "disfluent" and "fonts". Google Scholar was used in identifying repositories or databases like PubMed, Scopus, ScienceDirect, DOAJ, EBSCO and Web of Science for the search of articles. The abstracts of the articles from the initial search were screened by reading them to ascertain their relevance to the study. The screening reduced the number of articles to 40. Our inclusion criteria were all articles that focused on the subjects' design and those that employed two sets of font (fluent/disfluent) for testing. Articles excluded were those on other aspects of disfluency in psychology without any reference to fonts. Using the inclusion and exclusion criteria further reduced the number of articles to 10. The article by Alter et al. (2007) was selected first because it offered a good theoretical framework

for the study of disfluency and also had the highest number of citations. Codes identified in this research data are the type of experiments, reading comprehension or arithmetic, font type (whether serif or sans serif, font colour and size). Some font manipulations were changed in Adobe Illustrator, based on the experiments.

Table 1: List of articles

	Author(s)	Title of article	No. of citations	Link
1	Alter et al. (2007)	<i>Overcoming intuition: Metacognitive difficulty activates analytic reasoning</i>	1242	https://doi:10.1037/0096-3445.136.4.569
2	Song and Schwarz (2008)	<i>Fluency and the detection of misleading questions: Low processing fluency attenuates the Moses illusion</i>	303	https://doi.org/10.1521/soco.2008.26.6.791
3	Slattery and Rayner (2010)	<i>The Influence of text legibility on eye movements during reading</i>	91	https://doi.org/10.1002/acp.1623
4	Diemand-Yauman et al. (2011)	<i>Fortune favors the bold: Effects of disfluency on educational outcomes</i>	581	https://doi.org/10.1016/j.cognition.2010.09.012
5	Katzir et al. (2013)	<i>The effect of font size on reading comprehension on second and fifth grade children: Bigger is not always better</i>	85	https://doi:10.1371/journal.pone.0074061
6	Weltman and Eakin (2014)	<i>Incorporating unusual fonts and planned mistakes in study materials to increase business student focus and retention</i>	85	https://doi.org/10.1287/ited.2014.0130
7	Magreehan et al. (2015)	<i>Further boundary conditions for the effects of perceptual disfluency on judgments of learning</i>	23	https://doi.org/10.1007/s11409-015-9147-1
8	Seufert et al. (2016)	<i>The effects of different levels of disfluency on learning outcomes and cognitive load</i>	58	https://doi.org/10.1007/s11251-016-9387-8
9	Geller et al. (2018)	<i>Would disfluency by any other name still be disfluent? Examining the disfluency effect with cursive handwriting</i>	31	https://doi.org/10.3758/s13421-018-0824-6
10	Sirota et al. (2020)	<i>Disfluent fonts do not help people to solve math and non-math problems, regardless of their numeracy</i>	10	https://doi.org/10.1080/13546783.2020.1759689

FONT MANIPULATIONS

Previous studies have revealed various manipulations of font pairs in disfluent experiments. Researchers and scientists have employed different controls in each experiment that are targeted at specific cues. Despite these controls, an inconsistent pattern for fonts still raises a question of how disfluent a font can be in practice. The article titled 'Overcoming intuition: metacognitive difficulty activates analytic reasoning' by Alter et al. (2007:136) sets a precedent for our discourse because it provides valuable

information on the dual-process model of cognition. Furthermore, it provides evidence on how disfluency positively affects memory outcomes in the presence of different cues. Four experiments were conducted. The primary objective of Experiment 1 was to establish the fact that individuals may adopt a systematic reasoning approach when perceiving any disfluent information. Forty university students were tasked with completing a Cognitive Retention Test (CRT). Subjects were asked to read materials presented in fluent condition. The disfluent fonts were determined by another group on a 5-point Likert scale. As predicted, more questions were answered in the disfluent condition. The font parameters for Experiment 1 exhibit a very high level of disfluency because 10% black is almost white. This may have activated secondary cognitive resources.



Figure 2: Font pairs by Alter et al. (2007:136)

A second experiment was carried out to investigate other systematic cues in persuasive communication by adopting the heuristic-systemic model (Chaiken, 1980:39). According to Chaiken's analysis, a high level of involvement in persuasive communication makes recipients employ systematic processing. Heuristic processing is fast and exerts less cognitive effort because it depends on existing knowledge. Systematic processing is more analytical and depends on the facts presented. The stimulus presented was two advertisements for an MP3 player, as seen in Figure 3.

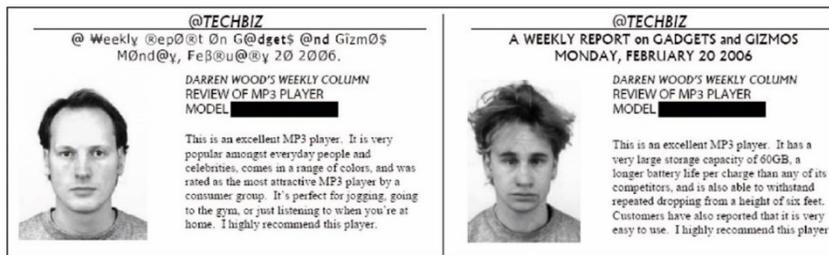


Figure 3: The stimulus presented by Alter et al. (2007) shows a strong heuristic (left slide with disfluent masthead) and systematic cue (right slide with fluent masthead)

The two advertisements in Figure 3 were about the same product and were all set in the same fonts. The left section had a positive heuristic (usual-looking face with a disfluent masthead) but a negative systematic condition (a review of irrelevant features of the MP3 player). On the right are the negative heuristic (non-conforming face) and positive systematic (details about relevant features of the MP3 player). In both conditions, participants' favorability ratings were influenced by the systematic cue in the disfluent condition.

In Experiment 3, participants adopted two different facial distractions, puffing cheeks (fluent) and furrowing brows (disfluent) to test the relationship between heuristic cues and representativeness. As predicted, participants in the disfluent condition were less confident in answering the questions whereas those in the fluent condition were more confident in a pilot study. Even though participants in the experiment with puffed cheeks were more confident in answering questions, this could also allude to the fonts presented in the experiment.

The fourth experiment by Alter et al. (2007:136) tested whether participants would easily answer syllogisms in disfluent fonts. As expected, more questions were answered correctly in disfluent fonts. Again, the font manipulation had no impact on the mood of the participants. All four experiments are insightful but raise questions about the level of disfluency experienced. For example, the first experiment used 10% black while the second created a distortion by mixing alpha-numeric characters.

Following these findings, a similar study was conducted using undistorted and distorted questions

(Song & Schwarz, 2008). The questions were: "Which country is famous for cuckoo clocks, chocolate, banks, and pocket knives?" (undistorted), and the second distorted question read: "How many animals of each kind did Moses take on the Ark?" (Erickson & Mattson, 1981). The questions were set in two different fonts, namely Arial (fluent) and Brush Script (disfluent) set in 12 pt.

Switzerland is famous for cuckoo clocks, banks, and pocket knives.
Switzerland is famous for cuckoo clocks, banks, and pocket knives.

Figure 4: Font pairs by Song and Schwarz (2008)

In the first distorted question, more participants answered correctly in the fluent condition. In the second distorted question, more subjects answered "2" to the first question about the Ark without noticing that Moses did not build an Ark. Even though font sizes played a role in Song and Schwarz's case, other variables such as familiarity can influence participants in such conditions. A person who is familiar with the "Moses illusion" question may notice the distortion in the fluent condition. From this experiment, we can assume that an illegible font may be difficult to read but may not be a hindrance to comprehension if the reader is very familiar with the text. Conversely, a legible font may not guarantee memory outcomes if the reader is not familiar with the text.

Apart from other cues such as relatedness that may influence memory recall, large font sizes played a major role in the judgment of learning (JOL) (Rhodes & Castel, 2008:137). Participants were exposed to words set in 18pts and 48pts in three different experiments. In all three, the large fonts made a positive impact on recall, with a disregard of all other cues. In addition, Slattery and Rayner (2010:24) presented passages on a computer monitor (1280 by 1024px) to participants in the popular Times New Roman, Harrington and Script MT Bold typefaces. In that experiment, subjects' fixation on monitors was recorded. Even though the fonts did not dramatically influence comprehension, they found that reading in Times New Roman took a shorter fixation duration. This was consistent with similar experiments by Alter et al. (2007:136) in which words that were presented in a clearer format without slanted strokes and curves were processed faster than words typed in script fonts.

Times New Roman
 Harrington
Script MT Bold

Figure 5: Fonts by Slattery and Rayner (2010:24)

Interestingly, Diemand-Yauman et al. (2011:118) and Jacoby and Whitehouse (1989:118) combined Comic Sans and Bodoni in 12pt with a 60% grey in the disfluent condition and an Arial black font in 16pt for the fluent condition. Participants were tasked with studying three unfamiliar alien species. This task prevented a condition of prior knowledge from influencing retention outcomes. While in some previous experiments manipulations were obvious in the disfluent condition, it was the same condition in this case. Font pairs were all sans serif. They were all legible, despite their font sizes and colour, and there were no obvious discrepancies in memory retention between participants in the fluent and those in the disfluent condition. The results from this experiment agree that not all difficult-to-read fonts lead to System 2 processing.

Arial, 16pt
 Comic Sans, 12pt
 Bodoni' 12pt, 60% black

Figure 6: Fonts by Diemand-Yauman et al. (2011:118)

In one of three studies, Thompson et al. (2013:128) investigated the role of perceived effort and competence in disfluency. In the fluent condition, Arial 12pt in black was presented on a white background. In the disfluent condition, the font colour was changed to light blue on a white background. The exact colour values for the light blue colour were not stated, but participants found it difficult to read them. The authors concluded that there was a positive impact on expected value when readers of a target service experience some difficulty in reading information about the service.

Katzir et al. (2013:8) found that the effects of font manipulations vary across different age groups. In the first experiment with second-grade students, it was observed that reducing the font size and increasing the length of lines led to significantly poorer comprehension scores, while altering the spacing between lines did not have any impact on performance. In the second experiment with fifth-grade students, a decreased font size resulted in improved comprehension scores, but no significant effects were found for line length and line spacing. These findings point to the fact that disfluency cannot always be a "desirable difficulty". For second graders (Experiment 1), decreased font size and increased line length yielded significantly lower comprehension scores. Line spacing did not affect performance. For fifth graders (Experiment 2), decreased font size yielded higher comprehension scores, yet there were no effects on line length and line spacing. Results are discussed within a "desirable difficulty" approach to reading development.

Weltman & Eakin (2014:15) conducted a test that provides support for the notion that difficult-to-read fonts enhance learning. In an experiment involving 155 undergraduate students, the researchers presented materials in three different forms, both fluent and disfluent. The control and pedagogically modified materials were set in Gill Sans 16pt font, black. The disfluent set was presented in Dakota 12pt font in 50% grey colour. The mean scores obtained from the disfluent set were higher. Interestingly, the presence of pedagogical errors did not have an impact on the results, as they were not overtly noticeable.

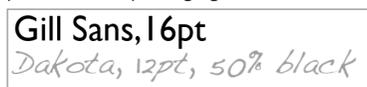


Figure 7: Weltman and Eakin (2014:15)

Magreehan et al. (2015:11) repeated the experiment by Rhodes and Castel (2008) to further understand how perceptual disfluency influences JOLs. The materials presented were unrelated and related word pairs. The experiments were done in an isolated lab cubicle. Words presented were set in an Arial bold (56pt) for the fluent set and in 32pt italicised Times New Roman on a white background for the second level of disfluency. The third level was the same 32pt Times New Roman on a grey background. Words in the disfluent condition were tinted in grey colour. Results from this study showed that participants in both conditions spent an equal amount of time studying. However, study time was higher for the related pairs. The recall was better for the related word pairs than for the unrelated word pairs. The participants had trouble reading, but did not recognise that the font was disfluent until it was on a grey background.

Further, a word set in an italicised 32pt Times New Roman in a grey-on-white background is quite legible, as seen in Figure 8. People only notice the font is disfluent when it has been adjusted to a certain level.

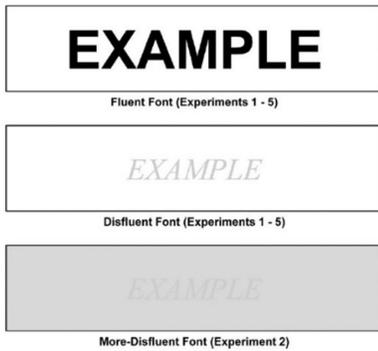


Figure 8: Fluent and disfluent manipulations by Magreehan et al. (2015:11)

Seufert et al. (2016:45) examined four learning materials at different levels of font manipulation. In the first experiment, materials presented were in a 12pt Times New Roman for the first level of disfluency, 14pt Haettenschweiler black for the second level, 14pt Haettenschweiler in 25% grey for level three and 15% grey for level 4. The participants were asked in the first experiment to read a 270-word passage about a chocolate factory. Disfluency influenced learning outcomes significantly but this was attributed to the simplicity and familiarity of the material. Participants' perceived legibility was highest in the fluent condition.

In the first disfluent condition (12pt Times New Roman), the highest learning outcomes were observed. Interestingly, the third level of disfluency (14pt Haettenschweiler' in 25% grey) resulted in a high level of concentration that led to slower reading. Building upon these preliminary findings, a second experiment involving 73 students was conducted. The participants were presented with a 1,100-word scientific text about time zones, and the test duration was limited to 13 minutes.

The fonts and sizes used were of third level disfluency. The results from the second experiment recorded significantly high scores for comprehension in the third level of disfluency (Monotype Corsiva 12pt in 25% grey). Again, in Experiment 2, participants scored highest for comprehension in the first level of disfluency (Monotype Corsiva black 12pt), and the best recall results were in the second level (Monotype Corsiva 12pt in 25% grey). The investigators attributed the high memory recall scores to other resources such as motivation and concentration during the test but give credence to the fact that a cognitive load triggers the second level of reasoning (Alter et al., 2007:136).

Times New Roman, black, 12 pt	Arial, black, 12 pt
Haettenschweiler, black, 14 pt	<i>Monotype Corsiva, 12pt</i>
Haettenschweiler, black, 14 pt 25% black	<i>Monotype Corsiva, 12 pt 25% black</i>
Haettenschweiler, black, 14 pt 15% black	<i>Monotype Corsiva, 12 pt 25% black</i>

Figure 9: Fonts by Seufert et al. (2016: 45)

Three variations of a cursive font were employed in three levels of legibility, namely type print, hard-to-read and easy-to-read cursive. The cursive fonts were created by a Livescribe digital pen – almost equal to a 44pt Courier New font. The materials presented had 198 words (Geller et al, 2018:46). From the experiment, cursive words were found to stimulate better memory recall than the type printed ones, which was consistent with other studies. In agreement with Thompson et al. (2013:128), it was observed that disfluency was consistently determined by the level of font manipulation.



Figure 10: Fonts by Geller et al. (2018:46)

A recent study by Sirota et al. (2020) disagreed that disfluency helps in analytical reasoning. About 311 participants were tested in two experiments by employing a numerical and verbal CRT test. The numerical test involved 11 simple mathematical problems, which required subjects to understand basic concepts such as percentages. In the verbal CRT, participants were asked to solve simple word problems that did not require any calculation. Font manipulation in this study was similar to the one used by Alter et al. (2007:136). The results of Experiment 1 showed that there was no significant effect of the test on cognitive reflection.

In the disfluent condition, more questions were solved by the subjects than in the fluent condition. No significant relationship was found between disfluency and subjects with high numerical skills. In the fluent font condition, participants correctly answered more word problems. In Experiment 2, with the introduction of an additional manipulation (explicit instructions), participants spent more time answering questions in the disfluent condition. However, this outcome was not attributed to the disfluent font. Determining the cognitive impact of the presented font sizes proved challenging, despite participants rating the fluent font as easier to read.



Figure 11: Font pairs by Sirota et al. (2020)

DISCUSSION AND IMPLICATIONS FOR THEORY AND PRACTICE

In all the experiments analysed in this paper, we discovered that different methods and procedures were exploited to understand and support or refute the disfluency effect. The fonts presented are also varied in every instance. To say that disfluency is a “desirable difficulty” that improves learning outcomes remains questionable (Taylor et al., 2018). Disfluency has different levels, therefore, certain levels of manipulation can impede the learning process (Seufert et al., 2016:45). Discrepancies in font manipulation also influence the outcome of experiments. There is no standardised method of selecting font sizes in disfluency experiments, which could be a reason the test results are different. A font may be legible in a particular font size but is disfluent when changed to another font. Typical examples are the Arial and Times New Roman fonts (Magreehan et al., 2015:11).

These two fonts are very legible by default. This was clear because participants in that experiment did not recognise the disfluency manipulations without the grey background. The opacity values of the disfluent fonts were observed to range from 10% to 60%. Variations in opacity during font display must be considered in the analysis of font disfluency. By using different opacity levels, it becomes unclear how much disfluency a font possesses. For example, there is a noticeable difference between a 25% grey rendering of Monotype Corsiva and a 60% grey representation of Comic Sans. This difference may be due to the possibility of disfluency being connected to particular fonts as proposed in other studies but may not be as strong as first thought. An interesting pattern employing sans serif fonts in the fluent condition was found.

Arial was the most used font in the fluent condition because of its legibility. While fonts in the disfluent condition were mostly san serifs and scripts or handwritten fonts, a few authors employed fonts that seem legible in both conditions. The highest font size was 56pt (fluent) and 18pt (disfluent) in the examples discussed in this article. It was found that disfluency manipulations are mostly limited to making the fonts grey. In some experiments, participants were keen on recognising and memorising information despite the font type and sizes presented (Thompson et al., 2013).

Disfluency is very subjective. Therefore, materials presented are processed across a broad range of variables (Seufert et al., 2016:45). Whereas some were presented with mathematical problems, others solved word problems. Some experiments had materials that required more time to study. Cognitive load cannot be measured by any instrument because people have different IQ levels that do not work in the same condition every day. The time allocation and interaction during every task led to different outcomes

of cognitive load. Therefore, disfluency cannot be adapted to normal learning environments because of the complexities involved. Even though metacognitive loads lead to deeper processing, they may not help a class of students to perform well.

CONCLUSION

Fonts play a central role in these experiments, yet researchers have not discovered standard parameters (such as size, width, serif, sans serif, bold, italic, cursive) for defining an easy-to-read or difficult-to-read font. This article discussed the complexities associated with fonts in experiments conducted to test disfluency in text-based research. It established that improved memory outcomes are not always a direct result of perceptual disfluency. Attempts to generalise findings related to disfluency have proven unsuccessful, indicating the need for further research in this area. The study also highlighted the intricate nature of disfluent experiments on fonts. While this study uncovered an unexplored avenue for researchers studying disfluency, it cannot propose an ideal font for conducting disfluency experiments.

Using different fonts by authors in research makes it challenging to assess individuals' cognitive loads accurately. To bridge the gap between psychologists and typographic designers, there must be collaboration in knowledge sharing, designing of stimuli and interpretation of results so disfluency experiments can take on a holistic approach that integrates psychological theory and typographic expertise. This will help to foster a holistic methodological approach to experiments. It would also enhance the validity and impact of the research findings and contribute to advancing knowledge in the field.

CONFLICT OF INTEREST

The authors admit that there is no conflict of interest regarding this manuscript.

DISCLOSURE

The authors declare that this is an original article, which is not in consideration for publishing by another journal.

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Breaking through the clutter and the impact of ambiguous arguments on consumers' purchase decisions

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Abstract

The study explored the proliferation and codification of discursive resources related to ambiguous arguments. This has led to a point of clarification. Marketing communication scholars have purposefully neglected the impact of ambiguous arguments, focusing instead on strategic clarity. As a result, there is a lack of conceptualisation and clarity surrounding this topic. Nonetheless, studies about ambiguous arguments are still nascent because of the overbearing criticisms that ambiguity hinders effective communication and persuasion. The study experimented to investigate the impact of ambiguous arguments on consumers' purchase decisions and demonstrated that ambiguous arguments elicit favourable purchase decisions (participants (N=260): ambiguous 130 high and 130 low). The findings reveal that highly ambiguous arguments were rated significantly more with relevance, actuality, accuracy and comprehensiveness. In addition, individuals exposed to highly ambiguous argument advertisements elicited more favourable purchase decisions than those exposed to low ambiguous argument advertisements. The findings suggest that highly ambiguous argument (ads) undoubtedly affect consumers' purchase decisions because of the newness, complexity and irresolvable argument presented. The motivation could not predict the relationship between ambiguous arguments and consumers' purchase decisions. The study tested some of the key predictions of the elaboration likelihood model and strategic ambiguity model with the cues; and discovered that individuals are persuaded by central or peripheral routes based on their capacity to elaborate. The implications and future studies concerning the current theoretical framework and verifiable findings on the impacts of ambiguous arguments are carefully discussed, based on the findings.

Keywords

Ambiguous arguments, billboard advertisement, discursive resources, elaboration likelihood model, strategic ambiguity

INTRODUCTION

Marketing messages play a crucial role in enhancing brand communication. Their effectiveness depends on whether they resonate with the target audience. However, weak messages and inadequate stimuli

in advertisements discourage individuals who are highly involved in processing information, thereby reducing the likelihood of persuasion (McAlister & Bargh, 2016). Brand messages should provide specific information about the benefits and risks of the products. Unfortunately, this requirement is often ignored due to the time constraints imposed by various media platforms. Strategic ambiguity, as a discursive resource (Johansen, 2018), provides advertisers and brands with an opportunity to withhold important information about their products by blurring the product details or providing insufficient information (Nasr, 2023). This is achieved through the use of polysemy, tropes and unconventional wording arrangements in the form of ambiguous cues or discursive resources (Kokemuller, 2021). However, marketing communication scholars have purposefully neglected the impact of ambiguous arguments, focusing instead on strategic clarity. As a result, there is a lack of conceptualisation and clarity about this topic. Studies about ambiguous arguments are still nascent because of the overbearing criticisms that ambiguity hinders effective communication and persuasion.

Based on the conceptual nomenclature of ambiguity in billboard advertising and its influence on consumers' purchase decisions, ambiguity refers to a lack of sufficient information or imagery in a presentation (Han & Hong-Lim, 2015). Ambiguity can be seen as vagueness that arises from limitations in the available information on a specific subject (Eisenberg, 1984; Simonovic & Taber, 2023). When individuals perceive ambiguity about a particular subject, they may engage in doubtful assessment and behavioural circumvention or they might rely on prior knowledge to interpret the subject matter if they perceive creativity in the conceptual nomenclature of ambiguity (Simonovic & Taber, 2022). It is important to note that there is no conclusive evidence that ambiguity always hinders effective communication; ambiguity can sometimes be used as a strategy to facilitate organisational communication and goals. Therefore, information regarding ambiguity as an impediment to effective communication is conflicting because specific advertising content has yet to completely avoid the use of ambiguity in its execution and presentation (Simonovic & Taber, 2023).

Advertisers and companies often intentionally use ambiguous arguments and rhetorical elements to set their brand apart from competitors. This is achieved through the use of rhetorical devices such as phrases, gestures, images, digital effects and colours, which can have different meanings for different individuals. For instance, an advertisement may claim to offer the "hottest and spiciest burger" or be touted as the "best candy", which emphasises qualities such as being "big, strong and reliable" (Kokemuller, 2021). These ambiguous arguments rely on polysemy, tropes and unconventional wording arrangements that lack sufficient information and allow for multiple interpretations among different individuals (Eisenberg, 1984; Gordon, 2022; Han & Hong-Lim, 2015; Park & Shapiro, 2023).

Previous studies have demonstrated the impact of ambiguous messages on audiences in various fields, such as health communication, political communication, marketing communication and medicine. For instance, Nasr (2023), Park and Shapiro (2023), Kellner et al. (2022) and Holford et al. (2022) all emphasise the use of ambiguity to effectively convey meaning and promote openness among different individuals in order to achieve organisational objectives. Strategic ambiguity, as outlined by Simonovic and Taber (2023), involves openly inferring meaning on a specific subject and it remains a central strategy. Despite the increasing use of strategic ambiguity in advertising, empirical literature in this area is limited. There is a need to adequately conceptualise ambiguous arguments in order to bridge the gap and enable inadvertent advertisers and scholars to better understand their effects.

Despite the dimensions and space occupied by billboard advertisements, their strategy of concise messages (consisting of nine words) alongside striking visuals presents a significant degree of ambiguity. This is primarily due to the fact that the majority of brand communications displayed on billboards lack adequate detailed information regarding the associated products and services. As a result, a comprehensive examination of this approach to ambiguity is warranted. Therefore, this study aims to better understand the impact of ambiguous argument on consumers' purchase decisions and how consumers exposed to high ambiguous argument differ from those exposed to low ambiguous argument in their purchase decisions. In addition, one could as what is expected from using ambiguous argument and the impact this offers to companies and practitioners. The study identifies consumers' desirability

and tolerance of ambiguous argument in billboard advertisements in terms of their purchase decisions.

This study contributes to existing research by addressing the influence of ambiguous arguments on consumers' purchase decisions. By focusing on this topic, we hope to fill the gaps in the literature and methodology and add to the growing interest in understanding ambiguous arguments. Moreover, we examine the differences in purchase decisions between individuals exposed to highly ambiguous arguments and those exposed to low ambiguous arguments. In addition, we explore the role of motivation as a mediator in the relationship between ambiguous arguments and purchase decisions. Given the current era, with numerous advertising and media platforms, competition is fierce and it is increasingly challenging to capture consumers' attention.

This article is structured in the following order. First, we begin with a literature review to establish the connection between ambiguous argument cues and consumers' purchase decisions. Next, we outline the methodological perspective used to address the research objectives. Furthermore, we present the study outcomes and emphasise the objectives that support the theory of strategic ambiguity. This theory provides an excellent opportunity to conceal crucial information about products by using blurred or insufficient information, relying on techniques such as polysemy, tropes and unconventional wording arrangements. In addition, we discuss the elaboration likelihood model, which categorises and classifies how individuals process persuasive communication.

LITERATURE REVIEW

Ambiguous arguments

According to Branković and Žeželj (2016) and Pand and Gui (2016), the argument epitomises the provision of livelihood for refuting an unverifiable assertion with the intention of persuading a rational detractor about the appropriateness of the assertion. It is important to note that the argument used in persuasion is either logical or pragmatic. It aims to present information that is evaluated based on the desirability of the outcomes. Accordingly, Pand and Gui (2016) articulate that messages are created to fulfil the purpose of advertising while keeping the brand in mind. The advertisement focuses more on the organisation and structure of the information than the content of the message. The thoughtfulness of message organisation includes argument settings, in which the message has to be convincing to consumers from the very beginning, message sending and related arrangement. At the same time, Flanagan et al. (2020) and Kulkarni et al. (2020) suggest that messages are considered more credible and convincing to individuals who have a high need for cognition. Meanwhile, Kao and Du (2020) mention that argument quality is perceived as the distinction of information received by an audience and is judged based on its effectiveness, relevance and persuasiveness to the recipient.

The new argument refers to a situation or process in which an individual comes across new and uncategorised information (Xu & Tracey, 2015). Previous studies have examined how new arguments in advertisements elicit emotional responses, as shown by Jacobs et al. (2021), Luttrell and Petty (2021), Barrera et al. (2020) and Nye et al. (2008). These studies have found that novel arguments can trigger both positive and negative emotions, as well as cognitive processes that lead to uncertainty and further processing of stimuli. Blair (2020) suggests that individuals are motivated to acquire knowledge and evaluate new cues in order to interpret the context correctly. When encountering and processing unconventional or new ideas or information, individuals tend to form attitudes based on their affective reactions. Luttrell and Petty's (2021) study found that participants rated messages as more persuasive when they were concerned about the safety of others in relation to public health directives. Therefore, a new argument must resonate with consumers' values in order to elicit their affective reactions. Furthermore, Espinoza (2021) explains that rhetorical arguments include threats, which impose sanctions when the opponent does not accept the proponent's proposal; rewards, which are used to entice the opponent to take a specific action by offering another action as a reward or by providing something the opponent needs; and appeals, which aim to persuade the opponent by offering a reward.

Several previous studies have examined strategic ambiguity and its impact on ambiguous arguments.

For instance, Holford et al. (2022), Koniak and Cwalina (2022), Shishkin and Ortoleva (2023), Hopkins et al. (2023) and Simonovic and Taber (2023) have all conducted research in this area. According to Simonovic and Taber (2023), ambiguous health information may not always result in maladaptive effects or behaviour. Participants with a high level of understanding of the information did not generally report differences compared to those with a low level of understanding. Similarly, Holford et al. (2022) found that risk messages that clarified the risk event reduced misinterpretations. However, existing misinterpretations of coronavirus risks, for example, remained resistant to correction due to ambiguity. Participants recognised that the risk involved experiencing severe symptoms, but over half of them also believed that the risk was related to infection. Consequently, nonvulnerable individuals were perceived as less likely to be infected than vulnerable individuals.

Meanwhile, Koniak and Cwalina (2022) demonstrated that the use of argumentative ambiguity by senders can be beneficial for avoiding recipients' objections. However, it can have undesirable consequences for the appraisal of the sender's trustworthiness and the electors' intentions. Shishkin and Ortoleva (2023) discovered that, in standard models, ambiguity-averse agents experience a dilation of belief sets and a decline in the value of bets, while ambiguity-seeking agents saw an increase in the value of bets. Interestingly, they also found that ambiguity-averse individuals did not experience a change in the value of bets, whereas ambiguity-seeking individuals saw a substantial increase. In addition, test bets on ambiguous urns elicited a significant reaction to ambiguous information. Similarly, Hopkins et al. (2023) revealed that individuals who receive ambiguous messages about COVID-19 interpret correct behaviour in a manner similar to those who receive no message, suggesting no evidence of an impact on interpretations. Furthermore, ambiguous messaging increased intentions for insecure socialisation, particularly among individuals aged 18-39 who socialised prior to the pandemic. These studies imply that the use of ambiguous messages to convey meaning among people was counterproductive at the time. These studies failed to acknowledge strategic ambiguity as a discursive resource and the effect of ambiguous arguments in creating unity and expansion of meaning and interpretation to achieve organisational goals. Moreover, Zeng et al. (2020) assert that arguments are linked statements presented for reasoned judgement to defend or refute a viewpoint. They are critical for decision making, knowledge building and bringing forth truths and better ideas.

In conclusion, according to Forster et al. (2010), Brone and Coulson (2010), Broecks et al. (2016) and Feathers (1969), the novel categorisation theory states that events are perceived as new when they do not fit into existing categories. When faced with unfamiliar situations, individuals naturally strive to understand them, leading to comprehensive handling and the creation of stylish and novel content. Broecks et al. (2016) further argue that familiarity with information can sometimes delay or negate the expected response. Overall, this research indicates that consumers are interested in messages that introduce novel or unfamiliar situations.

Relevance of arguments

Consumers perceive the relevance of arguments presented in advertising and marketing campaigns based on various factors. Research suggests that the structure of the argument, including the presence of irrelevant but representative conditionals, hierarchically related claims and multiple data propositions supporting a single claim can significantly influence claim acceptance (Charles & Areni, 2008). Moreover, the cultural congruence between the appeal and argument in an advertisement plays a crucial role in consumer response, especially in a competitive environment (Jain et al., 2020). In addition, Weber et al. (2020) showed that the use of microblogs such as Twitter (now X) for hashtag campaigns can impact brand engagement differently across international and Indian brands, highlighting the influence of cultural differences and the medium of communication on information diffusion. These findings emphasise the importance of considering argument structure, cultural nuances and medium richness in shaping consumer perceptions of advertising arguments.

The relevance of arguments influences consumer attitudes towards products or services. Previous studies indicate that strong argument quality impacts consumer attitudes towards brands, particularly

sincere brands, more positively than weak argument quality (Jinfeng et al., 2022). In addition, in the context of online reviews, the relevance of arguments plays a crucial role in enhancing the filtering of useful information for consumers. This affects their decision-making process in e-commerce platforms (Anirban, 2016). Furthermore, structuring statements into arguments can aid in understanding customers' dispositions towards products, highlighting the importance of argumentation in comprehending consumer opinions and preferences (Lah et al, 2019). Therefore, the quality and relevance of arguments significantly impact consumer attitudes and decision-making processes in various contexts. This emphasises the importance of persuasive and relevant messaging in influencing consumer perceptions.

Actuality of argument

The perception of the truthfulness of an argument significantly impacts consumer behaviour. Consumers react differently based on their perception of the authenticity of information presented to them (Beisecker et al., 2024). When consumers perceive a company as being hypocritical, displaying inconsistency between claims and actions, they tend to engage in protest behaviours such as boycotts and negative word-of-mouth (Khan et al., 2023). Consumer cynicism, characterised by a lack of trust in the marketplace, influences consumer activism, criticism behaviours and even marketplace withdrawal behaviours (Mohammad et al., 2023). Culture also plays a vital role in shaping consumer behaviour, as cultural factors deeply influence how consumers use and consume products (Rai & Tripathi, 2020). Furthermore, word-of-mouth communication has a significant positive correlation with consumer buying behaviour, particularly in terms of brand perception, search efforts and risk reduction (Iwama, 2022).

Accuracy of an argument

The accuracy of an argument plays a crucial role in consumer decision-making processes. Extant research suggests that deviations from normative decision making models such as utility theory may not necessarily indicate poor decisions but rather reflect inaccuracies in decision making (Yun et al., 2018). In socio-economic systems, argumentative approaches are used to address decision-making problems, which highlights the importance of defining attack relations for effective decision making (Kretiková & Fašková, 2016). Moreover, in marketing communications, appeals based on behavioural economics and psychology influence consumer decision-making processes, which emphasises the significance of understanding psychological appeals in consumer behaviour (Dellaert et al., 2020). In addition, intelligent argumentation systems aid in collaborative decision making by identifying and clustering arguments based on credibility factors. This ensures that decisions are not negatively impacted by less credible arguments (Liu, 2017). Ultimately, accurate and credible arguments are essential to guiding consumer decisions effectively.

Comprehensiveness of argument

The comprehensiveness of an argument plays a crucial role in consumer decision making (Christina, 2014). Assessment of comprehensiveness moderates the impact of review length and extremity on helpfulness, with more comprehensive reviews being perceived as more helpful (Codou et al., 2021). In the realm of online consumer reviews, the richness of content beyond just length influences decision making, as different aspects of information in a review can efficiently assist consumers in making choices (Yi & Han-fen, 2021). Furthermore, studies on e-commerce consumer review platforms emphasise the importance of argument quality in enhancing information acceptance, which highlights the need to filter useful information based on relevance criteria to meet consumer needs effectively (Anuja & Anubhav, 2021). Therefore, a comprehensive and well-structured argument can significantly influence consumer perceptions and choices in various decision-making scenarios.

THEORETICAL BACKGROUND

A theoretical framework serves as a guide for conducting a study. It provides a structure that outlines the philosophical, epistemological, methodological and analytical approach to the study area in general

(Grant & Osanloo, 2014; Varpio et al., 2020). It is a framework that directs academic research by relying on an established theory and is developed through the use of reputable and understandable explanations of specific phenomena and relationships (Grant & Osanloo, 2014). In order to gather essential information and examine the impact on consumer purchase decisions of ambiguous argument in billboard advertisements, it was necessary to have a theoretical framework that enabled an understanding of how consumers process such cues (argument).

Advertisers strategically employ ambiguous arguments to enhance the persuasiveness of their campaigns. They capitalise on the malleability and interpretive nature of ambiguous messages. Research indicates that this strategic use of ambiguity grants organisations greater flexibility and facilitates the alteration of messages or the disavowal of specific interpretations when necessary (von der Wense & Hoffjann, 2024). Ambiguity can deter opposition from the audience, as higher levels of ambiguity often result in greater agreement among recipients, mainly when their prior attitudes are not strongly divided (Dobrosz-Michiewicz, 2017). Furthermore, the source's credibility is crucial; advertisements sponsored by unknown interest groups tend to be perceived as more persuasive, suggesting that ambiguity can confer legitimacy to a message when the source is less identifiable (Weber et al., 2012). However, the ethical implications of these strategies are intricate, as they can be viewed as both protective and intentionally deceptive. This underscores the dual nature of ambiguity in communication (von der Wense & Hoffjann, 2024). The strategic use of ambiguity in advertising creates a nuanced narrative that can shape the audience's perceptions and behaviours.

Companies deliberately use ambiguity to evoke emotions and enhance creativity in their campaigns. Ambiguity can take various forms, such as lexical, referential and syntactic ambiguities. These result in multiple interpretations of an advertisement message (Cahyani & Islam, 2020). This multiplicity enables consumers to engage emotionally, project their meanings onto the ambiguous content and foster a deeper connection with the brand (Mzoughi et al., 2018). Research suggests that advertisements with higher levels of ambiguity tend to be more persuasive, particularly in cross-cultural contexts, such as comparing American and Korean advertisements, where ambiguity is more common in award-winning campaigns (Han & Choi, 2015). However, the effectiveness of ambiguity can vary depending on the audience's tolerance for ambiguity, which moderates their emotional responses and understanding of the message (Mzoughi et al., 2018). Therefore, while ambiguity can enhance emotional engagement, it also requires careful consideration of the target audience's characteristics to maximise its persuasive potential (Hedlund et al., 2020). For instance, Donald J. Trump's slogan "Make America great again" is a high level abstract message that is ambiguous, as the words "great" and "again" are intangible phrases used to create a sense of belonging in the audience without directly touching it in reality.

Elaboration likelihood model

The elaboration likelihood model (ELM), developed by Petty and Cacioppo in 1986, provides an integrative framework for understanding individual persuasive communication processes. According to the ELM, the persuasiveness of a message is determined by the individual's ability and motivation to engage with the message. High levels of elaboration occur when individuals allocate significant time and effort to scrutinising the message and its arguments. In contrast, low elaboration occurs when little time is devoted to this process (Susmann et al., 2022). The ELM distinguishes two types of cognitive processing of persuasive messages: central processing, which involves high levels of cognitive thinking and consideration of arguments, and peripheral processing, which involves minimal cognitive elaboration (Carpenter, 2020).

Information recipients differ extensively in capability of and enthusiasm towards processing information. The central route is active when an individual exhibits greater motivation, knowledge and thoughtfulness in scrutinising messages received (Cao et al., 2017; Gao et al., 2021; Kim et al., 2016; Zhou, 2022). The central route centres on the argument quality to influence consumers and requires an analytical consideration of information implanted in the advertisement, examining the relevance and merits of the arguments. On the contrary, peripheral route processing relies on shortcuts to assess the

value of cues in an advertisement. In this approach, individuals rely on emotional shortcuts to evaluate persuasive advertisements, requiring minimal cognitive effort to assess the messages (Markowitz, 2020). For instance, individuals may make purchasing decisions based on the product's shape and colour without considering other technical details because analysing the presented information requires more energy and expertise.

Previous studies have identified the pathways by which people are persuaded as the central and peripheral routes. For instance, Chen et al. (2022), Chang et al. (2020) and Liao and Huang (2021) found two distinct routes through which consumer trust is established and which influence their intention to purchase and willingness to pay more. Consumers who evaluate messages using the central route respond to a post before developing a purchase intention. In contrast, consumers who evaluate messages using the peripheral route tend to form a purchase intention directly if they perceive the post positively. Social media marketing events that aim to introduce content enhance purchase intent through the central route, while events that provide additional information promote purchase intent through the peripheral route. Movie attributes and marketing intensity also impact customers' purchase intention. These studies offer valuable insights into the different ways persuasive communication influences individuals.

The ELM has limitations in predicting consumer behaviour in advertising. Despite its popularity, the ELM faces challenges such as conceptual deficiencies and the need for replication and further development (Nilesh et al., 2017; Yen-Chun et al., 2021). Studies have shown mixed findings regarding factors that influence information processing using the ELM in electronic word-of-mouth (eWOM) communications, indicating a need for a consolidated view of these factors (Elvira et al., 2021). When analysing online customer reviews, existing studies need to pay more attention to the endogeneity of quality indicators, which can lead to potential biases in understanding review helpfulness (Kamel & Haithem, 2022). These limitations highlight the necessity for a more comprehensive and updated approach to using the ELM to predict consumer behaviour in advertising.

Conversely, the ELM accurately predicts consumer behaviour in advertising across various contexts. Research indicates that central cues, such as the persuasiveness of advertising, significantly impact consumers' engagement with advertising, while peripheral cues, such as the social climate, also play a crucial role in shaping consumer attitudes towards advertising (Elvira et al., 2021; Nilesh et al., 2017). The ELM has also been applied to understand how consumers process information online, particularly in electronic word-of-mouth (eWOM), which highlights the distinction between central and peripheral routes of information processing (Masoud & Fereshteh, 2022). Furthermore, studies on advertising effectiveness demonstrate that the ELM-guided analysis can reveal differences in consumer responses based on factors such as levels of engagement and the type of spokes characters used in advertisements (Piao & Hao, 2023). Overall, the ELM framework provides valuable insights into consumer behaviour in advertising by considering both central and peripheral cues.

Studies have shown that advertisements which use informative and comparative content engage consumers through the central route. This leads to deeper cognitive processing and stronger purchase intentions. Emotional and socially responsible advertising often relies on the peripheral route, where consumers are influenced by indirect cues such as brand impressions and emotional responses rather than detailed product information. Strategic ambiguity in taglines can effectively capture consumer attention by prompting cognitive engagement. Consumers deliberate over the ambiguous messages. This engagement is enhanced by positive attitudes and perceptions towards the brand, which are crucial to determining the effectiveness of ambiguous taglines. Therefore, ELM provides a framework for understanding how strategic ambiguity can be used in advertising to influence consumer behaviour. It highlights the importance of both cognitive processing routes in shaping consumer responses (Hasan et al., 2022; Nwankwo-Ojionu et al., 2021; Pan, 2024).

Strategic ambiguity

Strategic ambiguity is a linguistic tool used to influence people's actions and create different interpretations that lead to a sense of unity amid diversity (Eisenberg, 1984). According to Hoffjann (2021) and Eisenberg

(1984), strategic ambiguity encompasses various personal, relational, political and advertising factors that create a suitable environment for ambiguity in communication. By harnessing strategic ambiguity, individuals can better achieve their objectives and foster unity in diversity. This approach allows for the preservation of advantageous and deniable positions while facilitating organisational change.

Strategic ambiguity plays a significant role in shaping consumer perception of advertising messages. Research indicates that deliberate ambiguity in messages can enhance consumer attention, promote cognitive thinking and improve brand recall and recognition (Zaki et al., 2022). Strategically ambiguous messages can lead to diverse interpretations among different audience segments, ultimately fostering positive corporate images (Paweł & Wojciech, 2021). However, the impact of ambiguity on consumer perception can vary based on the context. While argumentative ambiguity may help in avoiding objections, it can have negative consequences on the evaluation of the sender's credibility and voters' intentions (Sohn & Heidi, 2018; Vibhanshu et al., 2014). Overall, strategic ambiguity in advertising messages can be a powerful tool for marketers to engage consumers, evoke curiosity and influence perceptions effectively.

Individuals differ in reaction, interpretation and perception, irrespective of their ideology, exposure, education, background and field of endeavour (Childers et al., 1985; Khoshshima & Toroujeni, 2017). How we perceive an object or an idea differs from that of millions of people around us who have been exposed to the same idea or stimuli (Arjulayana & Enawar, 2022). Indeed, the reason is that our level of desirability and acceptance of ambiguous situations interacts with sets of short, novel, contradictory, irresolvable and questioning stimuli that have tampered with our behavioural situation or phenomenon (Marc et al., 2023; Norton, 1975). McLain (2009) notes that the result is acceptance or aversion, which depicts individual differences in most cases.

Previous studies have shown that strategic ambiguity can lead to multiple interpretations and the achievement of various goals for an organisation. For instance, Fitts (2010), Atkin et al. (2008), Oryila and Umar (2016), Arquero et al. (2017) and Arquero and McLain (2010) found that ambiguous advertisements play a significant role in influencing alcohol consumption, but they have limited exposure and may not necessarily result in behavioural intentions. These advertisements have been found to generate various meanings and intentional campaign derivatives, especially among less sophisticated teenagers. The sponsors and message ratings were optimistic. Advertisements promoting alcohol moderation are perceived as more ambiguous than product advertisements. Consequently, consumers may view the advertiser's motives as self-serving, potentially impacting the organisation's reputation. The studies also emphasised that vagueness and ambiguity are employed in advertisements due to factors such as lack of knowledge, errors, chance or intentional purposes. These tactics are used to misinform, complicate, entertain, evade the truth, persuade and make sure ideas, products and services appear more plausible or credible, even if they are not. It goes against the prevailing expectation of clarity and openness in public communication. In conclusion, individuals who perceive ambiguous stimuli as threatening tend to avoid such advertisements, while those who appreciate ambiguity ensure that they decode the messages conveyed in the advertisement.

These theories provide valuable insights that have informed the current study but they have failed to address the role of ambiguous cues as discursive resources in previous scholarly works. For instance, the ELM suggests that persuasive communication involves two routes of information processing: peripheral, which requires effortless processing, and central, which involves scrutinising the details and relevance of the message and which requires effort and cognitive ability. ELM has been applied to analyse consumer interest in products based on factors such as information quality, product diversity and packaging, thus highlighting its relevance in understanding consumer behaviour (Chou et al., 2021; Kim et al., 2020; Nowghabi & Talebzadeh, 2019; Shahab et al., 2021; Teofilus et al., 2023). Strategic ambiguity refers to how organisations use ambiguity to prime communication contexts and create multiple interpretations among individuals to achieve their goals. Similarly, it is essential to note that individual prior knowledge of the context, subjective beliefs and other factors influence how people interpret insufficient and ambiguous information, especially regarding behavioural change (Herz et al., 2023; Li & Wagner, 2020; Neta et al., 2021; Singh et al., 2023; Szubielska et al., 2021). For example, the billboard advertisement for

Formula toothpaste featured an image of a man using his teeth to tear a canvas and the message “Builds Strong Teeth” was persuasive due to its high level of abstraction and the use of imagery in encoding the advertisement. This study integrates these theories and examines how strategies using ambiguous arguments impact consumer purchase decisions. This was accomplished by thoroughly reviewing the relevant theories as a discursive resource.

H₁: People exposed to high ambiguous arguments elicit more favourable purchase decisions than people exposed to low ambiguous arguments.

H₂: Motivation mediates the relationship between ambiguous arguments and consumer purchase decisions.

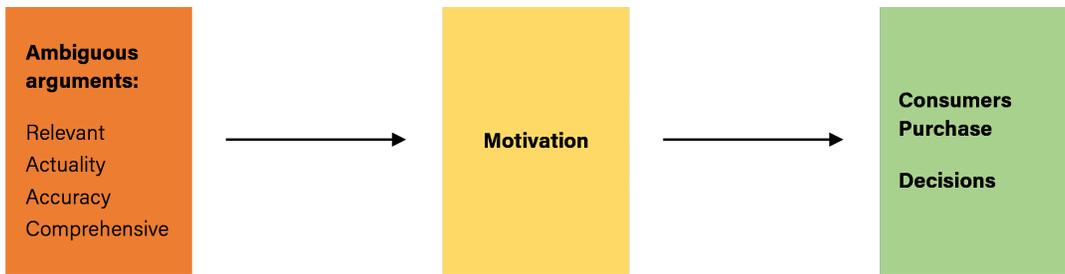


Figure 1: Research framework

METHOD AND MATERIALS

Stimuli, participants and procedure

We used a post-test-only-between-subject design in an online survey-embedded experiment. We manipulated ambiguous arguments into (high vs. low). The high group received treatment and the low group (control) received a kind of placebo that did not evoke cognitive processing. This enabled investigating (1) the impact of ambiguous arguments on consumers’ purchase decisions and (2) the mediation role of motivation on the relationship between ambiguous arguments and consumers’ purchase decisions. The high or low of ambiguous arguments and consumers’ purchase decisions represents the post-test-only-between-subject design experiment.

The experiment stimuli were two versions of billboard advertisements. We used Adobe Photoshop CS5 to edit, trace and crop the images and increase hue, saturation, luminance and brightness to create detailed variations before the complex layout design (Dalrymple et al., 2013). We adhered to principles of designing billboard advertisement layout, which include (1) simplicity, (2) extensive and bold text, (3) sticking to one message for consistency, (4) short and sweet message, (5) colourful, (6) readability, (7) avoidance of white backgrounds, (8) use bright, bold colours, (9) design with high contrast, (10) no white space. We started by cropping the background colour to the layout, the most crucial aspect of designing a billboard. Then, we created a restaurant logo and brand name with unique fonts to match the specific context of the fast-food restaurant advertisements. The highly ambiguous arguments billboards were designed using polysemy, weasel words and grammatical deviation that were intended to increase participants’ processing, elicit multiple interpretations and influence the participants’ decision based on relevance, actuality, accuracy and comprehensive arguments that would engage participants’ cognitive processing, as outlined by Pieters et al. (2010) and Puškarević et al. (2018): “BBQ Chicken, less Cholesterol... Taste GRreat...Healthier”. The low ambiguous arguments billboard stimulus was designed with a simple layout, irrelevant, bogus, inaccurate, incomprehensive arguments that would not make the participants think about the product on the billboard advertisement, thus, “BBQ Chicken, Barbeque chicken is cooked directly on the Fire and most times burnt!” (Figure 2 below).



Figure 2: High ambiguous argument (left) and low ambiguous argument (right)

A total of 260 participants (130 high and 130 low) were placed in two different conditions (treatment and control). We used convenience sampling to recruit postgraduate and academic staff from a public university with a large number of both foreign and local students. We identified potential participants for this study through social media platforms within the university. To gather participants, we placed an advertisement for an upcoming experiment, clearly stating the type of experiment and the eligibility requirements for this study. Studying university staff and postgraduate students offers several advantages and opportunities for research on the impact of ambiguous cues in billboard advertising on consumers' purchasing decisions. University staff and postgraduate students often represent diverse demographic backgrounds, including age, gender, income levels and educational attainment. This diversity allows for a more comprehensive understanding of how different demographic groups interpret and respond to ambiguous cues in billboard advertising. University staff and postgraduate students typically have higher levels of education compared to the general population. Their higher education levels influence the cognitive processing of advertising messages and their ability to discern ambiguous cues, making them an exciting demographic to study in the context of advertising effectiveness (Crew, 2022; Hurst, 2015).

In order to strengthen the data, participants were required to meet specific criteria. All participants were asked to provide personal information in order to determine their eligibility for the experiment. To be included in the study, participants had to be postgraduate students or academic staff. We specifically focused on working-class participants due to their activities and purchasing power, as the billboard advertisement was related to fast-food restaurants. The data collection was conducted through an online survey with an embedded experiment. Prior to receiving the digital billboard advertisement and completing the questions, participants were randomly assigned to either the high or low ambiguous argument conditions using the Microsoft Excel (Rand) formula.

MEASURES

The survey for the ambiguous arguments consisted of four measures: relevance, actuality, accuracy and comprehensiveness. In addition to these measures, participants were asked to provide their demographic information and indicate if they had seen a billboard before and the number of times they had seen a billboard in a week.

Relevance

The scale was adopted by Bhattacharjee & Sanford (2006), Larasati and Yasa (2017) and Pand and Gui (2016). For example, "Given your experience with the appropriate message on the billboard advertisement you saw, what number would you rate your decision to buy the product?"

Actuality

The scale was adopted from Wixom and Todd (2005), Larasati and Yasa (2017), Bhattacharjee and Sanford (2006) and Pand & Gui (2016). For example, "Given your experience with the brand facts on the billboard advertisement you saw, what number would you use to rate your decision to buy the product? Given your experience with the concise message actuality on the billboard advertisement you saw, what number would you rate your decision to buy the product?"

Accuracy

The scale was adopted from Cheung and Thadani (2012), Larasati and Yasa (2017), Xu and Yao (2015) and Pand and Gui (2016). For example, "Given your experience with the brand's precise messages on the billboard advertisement you saw, what number would you use to rate your decision to buy the product? Given your experience with the accurate messages on the billboard advertisement you saw, what number would you rate your decision to buy the product?"

COMPREHENSIVENESS

The scale was adopted from Cheung and Thadani (2012), Larasati and Yasa (2017) and Bhattacharjee and Sanford (2006). For example, "Given your experience with the comprehensive messages on the billboard advertisement you saw, what number would you use to rate your decision to buy the product? Given your experience with the product exhaustive information on the billboard advertisement you saw, what number would you use to rate your decision to buy the product?"

All were assessed using 7-point extreme adjectival bipolar (1=very unlikely and 7=very likely).

The mediation variable, motivation, was measured with eight constructs from Hung et al. (2017) and Cheng (2017) consisting of relevance, accuracy, realistic, attention, recall, wording arrangement, images and urgent needs. A 7-point extreme adjectival bipolar (1=very unlikely and 7=very likely) was used. For example, "Does relevant information on the billboard advertisement motivate your attention? What number would you use to rate your decision to buy the product? Does useful and accurate information on the billboard advertisement you saw motivate your attention to buy? What number would you use to rate your decision to buy the product?"

The dependent variable, consumers' purchase decisions, was measured with four items (search, evaluation, purchase product, satisfied) (Karimi et al., 2015) using 7-point extreme adjectival bipolar (1=very unlikely and 7=very likely). For example, "Did you evaluate the product information on the billboard advertisement you saw; what number would you use to rate your decision to buy the product?" We used Cronbach's Alpha to determine the reliability of scales and to measure the internal consistency of a group of items, for example, the items used to measure ambiguous arguments, motivation and consumers' purchase decisions. All of the items for this study depicted satisfactory coefficient alpha.

RESULTS

Manipulation check

As a manipulation check, the participants were asked how many times they had seen a billboard advertisement in a week. A significant number agreed to having seen a billboard four to five times a week (88%).

The descriptive statistics of the data collected from participants are in four dimensions of argument (relevance, actuality, accuracy and comprehensiveness), motivation and consumers' purchase decisions (n=260). The findings showed a positive mean score on the consumer purchase decisions in relevance of 17.57 (*SD* = 8.76), actuality 18.02 (*SD* = 9.03), accuracy 18.02 (*SD* = 9.03) and comprehensive 18.00 (*SD* = 9.02). This shows favourable purchase decisions among the participants, which indicates the effect of ambiguous argument cues on consumer purchase decisions. Blair (2020) avers that arguments signify either a kind of expressive entity or an incident of a definite type of collaborating communication. Arguments are efforts at persuasion and advertisers depend on them (see Table 1 below).

Table 1: Descriptive statistics for ambiguous arguments on ads high and low (n=260)

Variables	N	Mean	SD
Relevance	260	17.57	8.76
Actuality	260	18.02	9.03
Accuracy	260	18.02	9.03
Comprehensive	260	18.00	9.02
Motivation	260	35.69	18.09
Consumer purchase decision	260	17.85	9.05

The study corroborated whether consumers exposed to highly ambiguous arguments differed from those exposed to low ambiguous arguments. An independent sample t-test was conducted to verify the experimental manipulations' effectiveness. The result revealed that there was a significant difference in the score for high ambiguous arguments advertisements ($M = 178.608$, $SD = 37.414$) when compared to low ambiguous arguments advertisements ($M = 70.400$, $SD = 25.298$). This demonstrates that a statistical significance was evident between high ambiguous arguments and low ambiguous arguments ($t(258) = 27.317$, $p < .001$). The result advocates that highly ambiguous arguments affect consumers' purchase decisions. Specifically, our result showed that the likelihood of an increased purchase decision was evident when consumers were exposed to ambiguous arguments. Thus, it supports H1. In their study, Barrera et al. (2020) discovered that alternative (unconventional) facts were highly persuasive. Meanwhile, in their research on billboards, Murwonugroho and Yudarwati (2020) revealed that the newness of the advertisement's visual element structure by reversing outdoor media design principles and the intentional convention of reversed messages evoked a more interactive public response (see Table 2 below).

Table 2: Independent sample t-test for ambiguous arguments (ad1 and 5) (n=260)

Groups	N	Mean	SD	T	P value
High Amb. Arg (ad1)	130	194.25	2.38	6.41	.001
Low Amb. Arg (ad5)	130	140.13	23.75		

Mediation analysis for ambiguous arguments

We evaluated the mediation role of motivation in the relationship between ambiguous arguments and consumers' purchase decisions. We conducted mediation analysis using the Process v2.15 macro in SPSS (Hayes, 2013; model 4) to substantiate whether motivation positively and significantly affected the relationship between ambiguous arguments and consumer purchase decisions (H2). Table 3 shows direct and indirect models for high and low ambiguous arguments. The result of the indirect effect based on 1000 bootstrap samples revealed a significant indirect positive relationship between ambiguous arguments (high and low advertisements) and consumer purchase decisions mediated by motivation ($a*b = .3189$, Bootstrap CI 95% = .1823 and .9416). In other words, we accept the hypothesis that there is a relationship between ambiguous arguments (high and low) and that consumer purchase decisions have an indirect effect because we noticed that there is no "zero" digit within the 95% confidence interval (.1823 to .9416), that is, $a*b$ is not statistically significant. Conversely, there was no statistically direct effect between ambiguous arguments (high and low) and consumers' purchase decisions ($b = .952$, $t = 10.636$, $p > .343$). It posits that the deliberate divergence and innovative nature of ambiguous advertisements direct consumers towards visual indicators without dependence on extrinsic variables in the assessment of advertisements. In this context, complexity directs visual focus towards intricate entities, ensuring their prominence amid uninspired distractions in visual exploration compilations (Sun & Firestone, 2021). Accordingly, Kochoian et al. (2017), Wilson and Suh (2017) and Daugherty et al. (2008) all agree that when a task is seen as prized, the more the motivational consequences are essential. These comprise interest, utility, importance and relative cost. Thus, engaging in activities that earn personal recognition or identity is essential (see Table 3 below).

Table 3: Direct Model and Indirect Model for High and Low Ambiguous Arguments

Variable/Effect	b	SE	t	P	95% Confident Interval	
Arg → CPD	.952	.090	10.636	> .343	-15.663	5.835
Arg → Mot	.335	.110	3.054	< .009	.098	.572
Arg → Mot → CPD	-.002	.111	-.0193	> .985	.28	.56
Effect						
Direct	-.0022	.1107	-.0199	> .98	-.2413	.2370
Indirect	.3189	.1477			.1823	.9416
Total	.3167	.0464	6.8268	> .001	.2172	.4162

DISCUSSION

Based on the discursive resources and nomenclature of ambiguous arguments studied in this article and the purposeful neglect by scholars in the field of communication and advertisement in pursuit of strategic clarity, we experimented to investigate the impact of ambiguous arguments on consumers’ purchase decisions. The findings showed that high ambiguous arguments (rather than low ambiguous arguments) were rated significantly more in terms of relevance, actuality, accuracy and comprehensiveness. In contrast, low ambiguous arguments (rather than high ambiguous arguments) were rated less in terms of relevance, actuality, accuracy and comprehensiveness.

The study examined the impact of highly ambiguous arguments (ad1) versus low ambiguous arguments (ad5) on consumers’ purchase decisions. Results showed a significant difference between high and low ambiguous arguments, indicating that highly ambiguous arguments had a more favourable effect on purchasing decisions. It contradicts earlier findings by Choi and Hwang (2011), which suggest that ambiguity hurt the effectiveness of advertisements. The study suggests that complexity in arguments can encourage adaptive investigative behaviour and curiosity about the relevant presentation in our environment. The likelihood of increased purchase decisions is evident when consumers are exposed to highly ambiguous, relevant, accurate, actual and comprehensive arguments. Breves’s (2021) study also found that individuals experiencing high dimensional or spatial presence assessed the content of messages more positively because of heuristic processing. Therefore, unconventional or artful deviation embedded in an argument may encourage the audience to decode using heuristics and save time and energy instead of scrutinising the message systematically.

The findings of the present study support the results of the previous investigations conducted by Fitts (2010) and Konovalova and Petrova (2022) regarding the impact of ambiguous advertisements. Previous studies indicate that unclear advertisements could influence people’s opinions on alcohol consumption, but they may not have a significant effect on behavioural intentions with minimal exposure. Overall, alcohol advertising exposure had a positive effect on desirability. In contrast, Pieters and Wedel (2004) discovered that the brand, pictorial and textual elements of advertisements significantly impact capturing and transferring attention, which is equivalent to the commonly held beliefs in advertising practices.

Conversely, the study investigated the effect of motivation on the relationship between ambiguous arguments (high and low) and consumers’ purchase decisions. The findings showed a significant indirect positive relationship between ambiguous arguments (high and low) and consumer purchase decisions mediated by motivation. In order words, there was an indirect effect because we perceived no “zero” digit within the 95% confidence interval. Meanwhile, there was no statistically direct effect between ambiguous arguments (high and low) and consumers’ purchase decisions. It affirms that artful deviation and creativity of ambiguous advertisements lead consumers to visual cues without relying on third-party variables to evaluate advertisements. This, complexity leads visual attention to complex objects such that they are evident among artless distractions in visual quest collections (Sun & Firestone, 2021). More so, ambiguity can enhance the appeal and effectiveness of advertisements. However, it can also result in different consumer reactions based on their attitudes towards ambiguity. For example,

individuals who are neutral towards ambiguity tend to ignore vague signals and are less likely to engage with ambiguous advertisements than those who dislike ambiguity. The latter group may require a higher level of certainty before being persuaded. This dual nature of ambiguity suggests that while it can grab attention and generate curiosity, it can also lead to scepticism, especially if consumers are uncertain about the intended message. Ultimately, the impact of ambiguous advertisement statements depends on the target audience's attitude towards ambiguity and their existing beliefs. Therefore, we accepted the hypothesis that a relationship exists between ambiguous arguments (high and low) and consumer purchase decisions.

Theoretical implications

This study applied strategic ambiguity as an excellent opportunity to conceal vital product information with reliance on blurring the product information. Alternatively, insufficient information about the product built on good words such as polysemy, tropes and unconventional wording arrangements invoked multiple interpretations and dilation across various individuals (Eisenberg, 1984; Gordon & Wu, 2015; Han & Hong-Lim, 2015; Park & Shapiro, 2023). In addition, the ELM categorises and classifies how individuals process persuasive communication (Petty & Cacioppo, 1986). This study has contributed to the knowledge under ambiguous arguments, especially regarding elements used in billboard advertisements, strategic ambiguity and the ELM. Many previous studies have studied the specific impact of billboard advertisements on consumers' purchase decisions in various spheres. However, ambiguous cues as discursive resources have been neglected by previous studies, perhaps due to the controversial nature of ambiguity regarding advertising ethics and clarity - viewed as an impediment to communication. Thus, billboard advertising is organised under distinct routes of the ELM and strategic ambiguity situation due to the insufficient information and more imagery usually seen on billboards. The ELM was combined with strategic ambiguity and applied in this study as an underpinning theory to examine the effects of ambiguous cues. The ELM has repeatedly been proven to assist researchers in understanding different routes to consumer persuasion. In contrast, strategic ambiguity has been used as a discursive resource to explain how organisations communicate and achieve multiple goals by creating diverse meanings and interpretations. In other words, motivation is the mediation variable that explains the craving and the individuals' innermost need to comprehend and make sense of their experiences in the advertisement.

These findings suggest that consumers exposed to highly ambiguous arguments elicit more favourable purchase decisions because of the newness, complexity, insoluble artful deviation and creativity applied to the highly ambiguous arguments. The results showed that highly ambiguous arguments made consumers elicit more favourable purchase decisions because of the advertisements' relevance, accuracy, actuality and comprehensiveness of the message. Ambiguous arguments are strategic and intentionally use rhetorical devices such as good words, polysemy and tropes on billboards to increase the openness in meaning and interpretations towards achieving multiple goals for the organisation.

The study expanded the theories to include ambiguous and specific attribute arguments significantly affecting consumers' purchase decisions. The findings provided compelling evidence that highly ambiguous arguments positively affect consumers' purchase decisions. In addition, highly ambiguous arguments fall under the central routes of the ELM and have proven to be an efficient way of getting consumers' attention to the brand message, given the strategic ambiguity application of creating various interpretations and openness. However, high arguments have been identified as the most crucial construct that influences consumers' purchase decisions. It is understood that the messages are rated more because of the relevance, accuracy, actuality and comprehensiveness which facilitate the processing of the brand message and purchase decisions.

Practical implications

The findings of this study offer an exceptional opportunity for managers to attract potential consumers and sustain actual consumers of the brand. Billboard advertisement is one of the most effective means of attracting potential consumers to a product by using unconventional approaches and applying

ambiguous stimuli in billboard advertisements. The empirical evidence of this study provided an avenue for managers and advertisers to leverage ambiguous arguments to differentiate and create a niche for their brand that sustains consumers, achieves loyalty and increases profitability and market share when consumers' attention is fully captured. The rhetorical manipulation of linguistic and visual properties makes the difference from one advertisement to another based on consumers' sophistication and demands. Practitioners need to embrace ambiguous stimuli to increase their earnings and advertising accounts. The findings of this study could serve as a strategy to facilitate the designing of a billboard advertisement that communicates and unifies diversity across the different facets of consumers to achieve the organisational goals of a particular advertisement. Mainly, advertisement in a diversified environment has been challenging given that different thoughts present complicated and complex demands, and correlating with the ideological differences could only be conceivable through artful deviation, creativity and ambiguous cues that would harmonise the ideology and communicate effectively.

Furthermore, practical strategies for advertisers to use ambiguous arguments in their marketing campaigns include leveraging rhetorical ambiguity to enhance emotional engagement and persuasion. Ambiguous messaging can be beneficial in avoiding direct objections from the audience, which improves the sender's image and encourages agreement with the message, especially when the audience's initial views are not strongly polarised. The Münchausen Effect emphasises the potential for ambiguity to obscure the truth, making messages more appealing but possibly misleading. Therefore, advertisers should balance ambiguity with clarity to maintain credibility while effectively engaging their audience.

Limitations and future study

The study encountered several limitations. First, there were methodological limitations and construct exclusions in this study. Specifically, a post-test-only-between-subject design was used, which limited the ability to collect and analyse cutting-edge data. This design did not allow for pre-test and repeated measures in data analysis, which could have provided a different perspective on data collection and analysis. Future studies should consider employing more sophisticated research designs, such as factorial designs, to ensure comprehensive data collection and analysis. These designs would help to enhance the robustness of the research process and further explore the constructs examined in this study, such as the colour, size and slogans of billboards, which are crucial elements in billboard advertisements. In addition, the methodological perspective of this study could be improved by incorporating other methods that would ensure more robust data analysis, such as factorial design, pre-test and post-test design linked to repeated measures and advanced statistical analysis.

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Tanzanian journalists in countering fake news: disinformation and misinformation

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Abstract

The widespread dissemination of fake news, "disinformation and misinformation", is an ongoing issue that has garnered significant attention from scholars and media professionals due to its contribution to public distrust of the credibility of news provided by media outlets. This article explores Tanzanian journalists' efforts to combat fake news by assessing their awareness, challenges and strategies. A quantitative approach was employed to gather data from a sample of 306 journalists from radio, television, newspapers and online/digital media across various parts of Tanzania's mainland. Data collection was facilitated through a questionnaire that incorporated closed-ended and open-ended questions, distributed via Google Forms to various online journalists' platforms, including WhatsApp and email groups. The findings indicate that an impressive 77.8% of these journalists possess a strong understanding of "fake news" and related concepts such as disinformation and misinformation. Over 70% of respondents encountered fake story sources in their daily journalistic pursuits, with the majority acknowledging its detrimental impact on media organisation credibility. The research also revealed a reliance on traditional methods by Tanzanian journalists to counter fake story sources used. Challenges were identified, including delayed responses from experts or government officials to validate the authenticity of a given story, pressure to report breaking news, a lack of fact-checking software, unreliable Internet connectivity for verifying facts online, and a shortage of trained journalists and news gatekeepers capable of identifying fake news sources.

Keywords

Fake news, journalism, media, disinformation, misinformation, Tanzania

INTRODUCTION

In our rapidly evolving world of mass media and the global information landscape, the proliferation of fake news has emerged as a critical issue that demands attention from both scholars and media practitioners. This phenomenon has taken centre stage in contemporary discussions, and has been intensified by the unprecedented growth of information dissemination through both traditional and emerging communication channels (Wahutu, 2019; Wasserman & Madrid-Morales, 2019). Within contemporary newsrooms, the pervasive influence of fake news, predominantly propagated through social media, has sparked ongoing debates regarding how media organisations can effectively combat the spread of misinformation and disinformation (Chien et al., 2022; Tran et al., 2021). These debates have assumed paramount importance for journalists and other media professionals, as the rapid dissemination of false or misleading information jeopardises the integrity of journalism and the credibility of news sources (Ireton & Posetti, 2018). In this context, newsrooms confront the dual challenge of navigating the rapid pace of social media and upholding their commitment to delivering accurate and reliable information to the public

(Allcott & Gentzkow, 2017). In this dynamic environment, journalists bear an increasingly substantial responsibility for engaging in rigorous fact-checking and information verification, even when faced with the urgency of reporting breaking news (Stroud, 2019). In this regard, various initiatives have been undertaken by media organisations and governments worldwide to address this challenge. For instance, global news organisations have actively invested in digital tools and cutting-edge technologies designed to detect and counteract falsehoods. Notable initiatives include that of Agence France-Pres (AFP), which has established a dedicated global fact-checking unit committed to scrutinising misinformation shared on social media (Ghani & Khan, 2020). Similarly, Reuters has partnered with Facebook to launch an e-learning course tailored for journalists that is aimed at enhancing their ability to identify manipulated media and “deep fakes” (Ghani & Khan, 2020). Globally, 78 countries have enacted laws since 2011 to curb the dissemination of false or misleading information (Lim & Bradshaw, 2023). In the Middle East, the Egyptian parliament passed a media law in 2018 that granted the government the power to pull down and block any social media account that was deemed to publish fake news, and penalised the journalists who operated them (Stroud, 2019). Similarly, in Africa, several measures are being taken to prohibit the publication of false and misleading information in the media and any other platforms. For instance in East Africa, Kenya, Uganda and Tanzania introduced anti-fake news legislations and measures. In Tanzania, the Cyber Crime Act in 2015 aimed to prohibit the publication of false and misleading information in the media and any other platforms. To compound the issue, bloggers, whom the Tanzanian government accuses of spreading “lies” on the Internet, need to pay US\$920 to post content online. In Kenya, in 2018, the Computer Misuse and Cybercrimes Act was established to specifically target cyberbullying and social media abuse, while a daily “social media tax” of US\$0.05 is being charged to Twitter, Facebook and WhatsApp users in Uganda (Mutsvairo & Bebawi, 2019). Likewise, in Ghana, several journalists and other citizens have been arrested for publicising and disseminating fake news. These arrests were due to the country’s Electronic Communications Act (Act 775, Section 76, of 2008) and the Criminal Offences Act of 1960, which criminalise the production of fake news (Kwode & Seleka, 2023). In South Africa, the South African National Editors’ Forum (SANEF) has actively warned about the sources of fake news, including websites, and has urged the public not to spread false information (Lunga & Mthembu, 2019). In addition to the battle between the government and the media over countering fake news, promoting media literacy and critical thinking among audiences has emerged as a crucial element in this ongoing struggle (Tran et al., 2021). However, a pressing concern persists, especially in African countries, regarding how prepared journalists are to counter fake news in their newsrooms in the African context. This article explores Tanzanian journalists’ efforts to combat fake news by assessing their awareness, challenges and strategies.

Fake news in Tanzania newsrooms

In Tanzania, as in other African nations, the pervasive issue of fake news has firmly taken hold, resulting in numerous incidents of misleading news coverage across both mainstream and social media platforms. On 10 July 2020, the Tanzanian government suspended Kwanza Online TV’s license for 11 days, citing the publication of an unbalanced, biased and misleading story regarding the state of COVID-19 in the country. This report, which referenced an alert from the United States (US) government about the spread of COVID-19 in Dar es Salaam, was deemed false and intended to incite panic, potentially harming the country’s economic activities such as tourism (MISA Zimbabwe report, July 2020). Similarly, in 2017, TBC television and radio aired a news segment suggesting that US President Donald Trump had praised President John Magufuli (a former Tanzanian president) as a model of African leadership – a claim later revealed to be based on fabricated information from a non-existent website (The Citizen newspaper, 12 March 2017). Likewise, in August 2021, the Tanzanian government suspended the local newspaper “Uhuru” for 30 days for publishing a story claiming that President Samia Suluhu Hassan had no intention of running for the presidency in 2025, marking the first instance of a newspaper suspension due to fake news during President Hassan’s tenure (The East African newspaper, 12 August 2021). In addition, Prime Minister Kassim Majaliwa directed the Tanzania Communication and Regulatory Authority (TCRA) on 21

March 2020 to monitor and apprehend individuals spreading fake news about COVID-19 (Media Council of Tanzania, MCT report, 2022). Tanzania's Cyber Crime Act of 2015 seeks to prohibit the dissemination of false and misleading information through media and other platforms. In addition, bloggers are required to pay a fee of US\$920 to post content online – a measure the government asserts is aimed at curbing the spread of falsehoods on the Internet (Mutsvairo & Bebawi, 2019:144). Conversely, a report by the Media Council of Tanzania (MCT, 2022) underscores the transformation of fake news and disinformation from sporadic incidents to troubling norms, often perpetuated with malicious intent by certain media outlets. The report emphasises the critical need for credible and meticulously fact-checked reporting to combat the dissemination of false information and to advocate responsible journalism that serves the public interest. Despite various efforts taken by media practitioners and the government to address fake news and related phenomena, there remains a research gap in understanding the ability of Tanzanian journalists to counter fake news in the Tanzanian context. This article examines how journalists perceive their role in countering fake news. It sheds light on their strategies for verifying information and the challenges they encounter. These findings contribute to informed decisions in addressing the ongoing battle against the spread of false information in the Tanzanian media landscape.

LITERATURE REVIEW

Conceptualising fake news

Lunga and Mthembu (2019) provide a comprehensive definition of fake news, characterising it as the deliberate dissemination of false information through various media channels, including print, broadcast and online platforms. They highlight that fake news can arise intentionally (as disinformation) or inadvertently (as misinformation) and it covers a spectrum of deceptive practices. Wardle and Derakhshan (2018) further categorise fake news into three distinct classifications: disinformation, misinformation and malformation. Disinformation involves the deliberate creation of false information with the explicit aim of causing harm, while misinformation refers to inaccurate information spread without malicious intent. Malformation involves the manipulation of factual events to harm individuals, organisations or nations. In addition, Tandoc et al. (2018) argue that fake news has evolved into an umbrella term encompassing various types of false content, including satire, parody, fabrication, manipulation, propaganda and advertising. President Donald Trump notably used the term “fake news” to criticise mainstream traditional media, such as newspapers and television, which he perceived as reporting negatively about those who disagreed with their political ideologies (Farkas & Jannick, 2018). However, in Africa, the production of fake news must be understood within the context of media repression, digital literacy (or lack thereof), resource-constrained newsrooms and the use of popular communication channels (Mare et al., 2019). Media repression in Africa, through the enactment of draconian legislation and the blatant capture of traditional media infrastructures by political and economic elites, has led to the proliferation of fake online news sites (Moyo et al., 2019). Wasserman and Madrid-Morales (2019) contend that misinformation in African countries has also manifested as extreme speech that incites violence or spreads racist, misogynistic and xenophobic messages, often through popular mobile apps such as WhatsApp. Thus, fake news in the African context can be defined as the deliberate production and sharing of misleading and false information, whether through social media or mainstream press, for political, economic and ideological gains. It includes various forms of misinformation and disinformation specific to the region, such as politically motivated propaganda, rumours and misleading narratives (Mare et al., 2019; Wasserman and Madrid-Morales, 2019). Although the dominant literature on fake news typically focuses on distinguishing between “truthful” and “false” information, for this article, fake news is defined following the perspectives of Wardle and Derakhshan (2018) and African scholars, but with a focus on two aspects – misinformation and disinformation – that result in purely fabricated, misleading and inaccurate information that is spread online or via traditional media.

While there are various assumptions about the history of fake news worldwide, in Africa, its history can be traced back to the colonial era, where fake news proliferated through propaganda, with the state

as the primary producer of fake news. Mare et al. (2019) note that fake news in Africa predates the era of online news, as African journalists have long understood that journalism is a contested field susceptible to manipulation by governments and powerful social elites. Historically, the state was the primary producer of fake news, a trend that has persisted into the postcolonial era in many sub-Saharan African countries. Consequently, journalists have always needed to approach journalism as a contested area that is prone to influence by those in power (Mare et al., 2019). Conversely, the current growth of the Internet and social media has accelerated the widespread dissemination of fake news more than ever in world history. The proliferation of fake news is facilitated by "social media entrepreneurs" aligned with politicians, who exploit political biases and pre-existing narratives to create or respond to false information (Wang et al., 2021). Chien et al. (2022) and Moravec et al. (2018) contend that fake news spreads rapidly on social media platforms due to factors such as unclear sources, algorithm-generated content and the use of news bots. Jacob et al. (2023) argue that the prevalence of fake news saw a significant increase during the COVID-19 pandemic, characterised by a phenomenon known as "silence resistance" (Abed, 2021). This resistance was marked by widespread scepticism about established assumptions related to various aspects of COVID-19, including vaccination, disease severity, government responses, origins and containment protocols. As a result, speculation and the propagation of conspiracy theories fuelled confusion, influenced public figures' statements and shaped public opinion as individuals absorbed misleading news tailored to fit their circumstances. In turn, this formed their interpretations of the pandemic, which became a significant platform for fake news.

Fake news and media credibility

Scholars widely acknowledge the detrimental impact of fake news on the credibility and integrity of media institutions that are essential for fostering an informed society. Stroud (2019) underscores the complex challenges posed by fake news, emphasising its adverse effects on the ability to express views persuasively and the demand for truthful information. The ramifications extend beyond individual expression, impacting democracy and societal well-being. Habermas (1998) argues that democracy relies on fair and honest information that is accessible to all and that is essential for informed decision making. However, the proliferation of fake news distorts this flow of information, undermining trust in media and democratic processes (Stroud, 2019). McNair (2018) highlights the fundamental role of unbiased press in a democracy, stressing that fake news disrupts this by misleading citizens, particularly during elections. Consequently, citizens' decision-making processes are compromised, which poses a significant threat to democratic principles. Collins et al. (2021) expands on this, noting that fake news not only influences political discourse but also exacerbates social conflicts and fosters distrust among citizens, potentially inciting protests and violence. Tsarwe (2019) observes a concerning trend in which politics increasingly manipulates media narratives and erodes the traditional standards of truth and objectivity. Arguing that the rise of online content creators and citizen journalists further complicates matters, as the absence of authoritative oversight allows for the dissemination of false information, the credibility of journalism is undermined. Asak and Molale, (2020) assert that the credibility of mainstream media is at risk, with trust in the media diminishing to varying degrees across different countries due to fake news. Wasserman and Madrid-Morales (2019) explain that the short- to long-term consequences of rising levels of disinformation and misinformation include the erosion of trust in journalism and citizens' inability to access reliable political information necessary for making informed decisions, which are fundamental to the democratic system. They argue that disinformation and misinformation have led to a global decline in trust in the news media, and they attribute this decline to factors such as a perceived lack of accuracy and biases in news reporting. Their study found that higher levels of perceived exposure to fake news are associated with lower levels of media trust, particularly in Africa. In the same line, Mare et al. (2019) note that the percentage of people who believe that the media can report news accurately, fairly and truthfully has declined significantly over the past decade, indicating a dramatic drop in public trust in traditional media. They add that fake news has weakened the gatekeeping mechanisms of mainstream media and has led to an overreliance on online sourcing practices and cultures.

Addressing fake news in the newsrooms

To combat fake news, scholars propose various strategies, including manual and automatic fact-checking methods. Collins et al. (2021) categorise approaches for fact checking into manual and automatic. Manual approaches involve expert and crowdsourced verification and automatic approaches use machine learning algorithms. However, they contend that while manual fact checking can be effective, it is labour intensive and time-consuming, especially when dealing with large volumes of information. Automatic fact checking offers scalability but with limitations due to reliance on specific textual cues and styles. According to Wang et al. (2021), audiences can also play a crucial role in debunking fake news by using external sources and internal clue platforms but also through linguistic cue approaches and network analysis methods. However, detecting fake news requires a proper understanding of various forms and techniques used to spread fake news, including knowledge-based, style-based, user-based, propagation-based and credibility-based analyses (Zhou & Zafarani, 2018). Klyuev (2019), Oshikawa et al. (2018) and Kansara and Adhvaryu (2022) explore semantic approaches, such as natural language processing and machine learning for fake news detection, focusing on verifying authenticity through text mining. Saldaña and Vu (2021) suggest the need for media organisations to set up independent professional fact-checking teams affiliated with their organisations as part of their media production processes to debunk fake news. Similarly, Kwode and Selekane (2023) advocate self-regulation of the media as another way to limit fake news. They explain that media organisations can adopt self-regulatory measures to ensure the accuracy and integrity of their reporting by implementing fact-checking processes, adhering to ethical guidelines and holding journalists accountable for the accuracy of their stories. Moreover, Lunga and Mthembu (2019) add that the government should work with the media to strengthen media regulation and uphold ethical standards. They add that this process should include monitoring the dissemination of fake news and taking appropriate action against those who propagate false information. They also suggest that the government and responsible authorities should provide accurate and timely information to reduce speculation and the spread of fake news as part of traditional measures to address the issue. While these studies provide valuable insights into addressing fake news, there remains a gap in Tanzania regarding journalists' preparedness to tackle this issue in newsrooms, especially considering the growing attention to this phenomenon from scholars and media professionals in the country. Therefore, this research is essential for suggesting interventions needed to combat fake news in Tanzania's diverse media landscapes.

THEORETICAL BACKGROUND

The theoretical framework for this study is rooted in the Gatekeeping Theory by Lewin (1947), a concept proposed to explain how news and information in the media can be filtered before reaching the audience. Gatekeeping Theory posits that gatekeepers, whether individuals or entities within a media network, wield substantial influence in determining the passage or blocking of information within a communication network (Lewin, 1947). The term gatekeeper or door holder refers to those individuals who handle the messages distributed to receivers through a mass communication outlet, such as news editors, managers, producers, reporters and other professionals involved in the media content chain (Güçdemir & Özsali, 2018). In other words, gatekeeping implies controlling the contents and coding of messages by selecting the information to be disseminated and making choices about a message's display and presentation (Farid & Ziad, 2019). The theory argues that, acting as gatekeepers, journalists are responsible for making critical decisions regarding the inclusion or exclusion of information from news sources (Farid & Ziad, 2019). This theory underscores the power of gatekeepers to ensure the quality of news and information before dissemination, thus contributing to the fight against misinformation (Deluliis, 2015). According to the theory, newsroom gatekeepers are primarily responsible for filtering information and using their expertise to differentiate between fake news and reliable sources (Carter, 1958). Furthermore, Gatekeeping Theory suggests that gatekeepers are crucial in determining the prominence and presentation of news stories by exercising editorial judgement to prioritise substantiated news over sensationalised or fake stories, thereby mitigating the influence of fake news (Tandoc, 2018). The theory calls for media gatekeepers to be

informed about ethical guidelines and to have professional experience. In this manner, gatekeepers such as journalists and editors have to ensure that fake news does not penetrate the newsrooms of Tanzania. They must use their experience and knowledge to understand the sources of fake news, and they need to have technological skills to identify fake news from news sources. Likewise, Olsen and Solvoll (2022) highlight that journalists, as gatekeepers, should perform four key functions: quality control of information, selectivity, provision of useful information and provision of knowledge to the public. According to them, quality control of information by trained journalists serves as a counterweight to misinformation and disinformation. Selectivity involves the news media's role in bringing the most significant news to the public. Usefulness means that people value journalism as it helps them to solve problems or understand phenomena through the information provided. Finally, knowledge implies that journalism is a specific form of knowledge production that aims to provide a "truthful account" of the world. Gatekeeping Theory has been used by various scholars (Güçdemir & Özsalih, 2018; Olsen & Solvoll, 2022; Tandoc, 2018) to examine the influence of media gatekeepers (editors and journalists) in monitoring and filtering media content to ensure the public receives accurate information. In the context of this article, the author explores the roles of journalists as gatekeepers in addressing fake news, considering their responsibilities and the challenges they face in this endeavour. Therefore, the key assumptions of Gatekeeping Theory, including gatekeeper's professional experience, awareness, responsibility in controlling the quality of and their roles in filtering information, form the core assumptions of this article.

METHODOLOGY

The article employed a quantitative approach to collect data from a sample of 306 journalists who represented various roles such as editors, reporters, programme producers, presenters and online content creators. This sample included 90 journalists from radio, 83 from newspapers, 74 from television and 59 from online digital media. A questionnaire containing both closed-ended and open-ended questions was distributed via Google Forms to gather data. The questionnaires were randomly disseminated to journalists over a month, using WhatsApp groups and email networks associated with different journalist networks in the country. This ensured a convenient and representative sampling of participants. A total of 306 journalists were able to complete the questionnaire online. The online questionnaire primarily consisted of closed-ended questions selected for their simplicity and ease of response. In addition, a selective set of open-ended questions encouraged respondents to provide more detailed insights. Subsequently, the collected data underwent quantitative analysis, in which responses to both closed-ended and open-ended questions were categorised through coding before being analysed using descriptive statistics. IBM Statistical Package and Service Solutions (SPSS) version 20 software was used to generate statistics, including frequencies, percentages and other descriptions relevant to the article's objective.

RESULTS

The findings and discussion have been collated into various sections of this article. These sections include media type and demographics, journalists' awareness of fake news, strategies to combat fake news and the challenges journalists encounter in addressing fake news in Tanzania.

Media types and demographics

Journalists were categorised into four distinct groups based on their affiliated media forms: newspapers, radio, television and online/digital media. Among the 306 participants who participated in this study, 90 journalists were affiliated with radio, representing 29.6% of the total sample. Journalists from newspapers constituted 83 respondents (27.1%), while television was represented by 74 journalists (24.1%) and online media by 59 journalists (19.2%). Radio-affiliated journalists formed the largest group in this study, probably because there are more radio stations available than other types of media in the country (Ssenabuly & Katunzi, 2022).

Table 1: Type of media platform represented

Media type	Frequency	Percentage
Radio	90	29.6%
TV	83	24.1%
Newspaper	74	27.1%
Online/Digital media	59	19.2%
Total	306	100.0%

Designation of journalists

Although the questionnaires were distributed randomly, a clear pattern emerged regarding the job titles among Tanzanian journalists who participated in this study. The predominant job title was that of a reporter (44.8%), signifying a significant portion of the participants. This was followed by editors (22.2%), digital content producers (12.8%) and programme producers (10.3%). The least represented group in this distribution was presenters or news anchors, who accounted for 7.4% of the total sample, as indicated in Table 2. The findings in this aspect reflect the prevailing reality within newsrooms, wherein the majority of media staff occupy the reporter position. This position encompasses both junior and experienced journalists, as also highlighted by Ssenabuly and Katunzi (2022).

Table 2: Designation of respondents

Designation	Frequency	Percentage
Reporter	137	44.8%
Editor	68	22.2%
Online/Digital content producer	39	12.8%
Program producer	31	10.3%
Presenter/Anchor	23	7.4%
Others	8	2.5%

Journalists' understanding of fake news concept

This aspect explored journalists' understanding of the concept of fake news and its related dimensions, including disinformation and misinformation. It also examined how frequently journalists encountered fake news sources in their roles within the Tanzanian media landscape. As depicted in Figure 1, a significant 77.8% of journalists demonstrated a strong understanding of the term "fake news" and its associated concepts. Conversely, only 22.2% of respondents possessed a basic grasp of the term. Concerning the frequency of encountering online fake news sources in their daily journalistic activities, the findings indicate that a substantial portion of participating journalists (more than the average) frequently encountered instances of fake news sources, with an additional 13.8% reporting very frequent encounters. These results highlight a prevalent awareness of fake news issues among the majority of Tanzanian journalists, alongside a notable frequency of encountering sources of fabricated stories in their work.

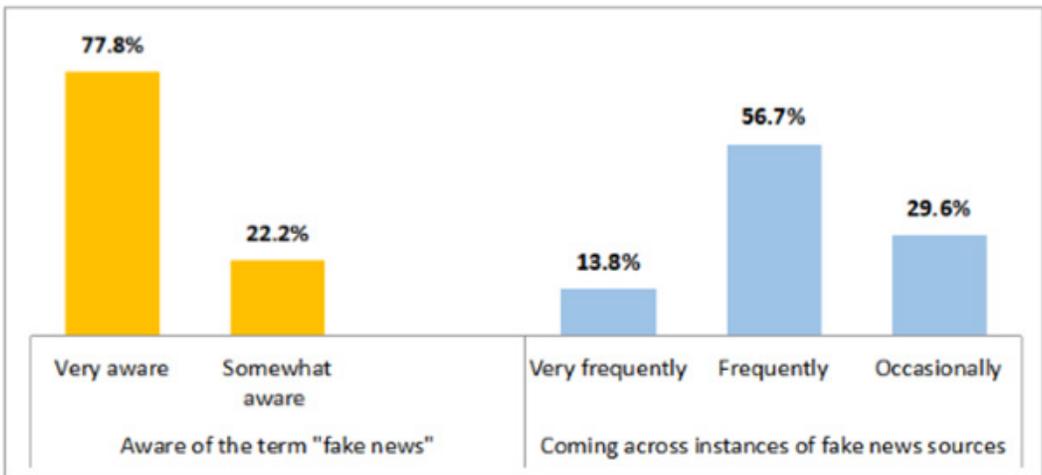


Figure 1: Awareness of fake news

Ability to identify fake news sources

Journalists were asked about their confidence in discerning various forms of fake news sources when presented from different sources while crafting stories. A notable majority of respondents (74%) asserted their confidence in being able to identify whether a news item or story was indeed fake or originated from an unreliable source. Conversely, 9% of all participants acknowledged their lack of confidence in distinguishing the authenticity of the news source, as indicated in Figure 2. To address the 9% with a total deficiency in this area, comprehensive training is needed to equip these individuals with the skills required to discern the authenticity of the news and its sources.

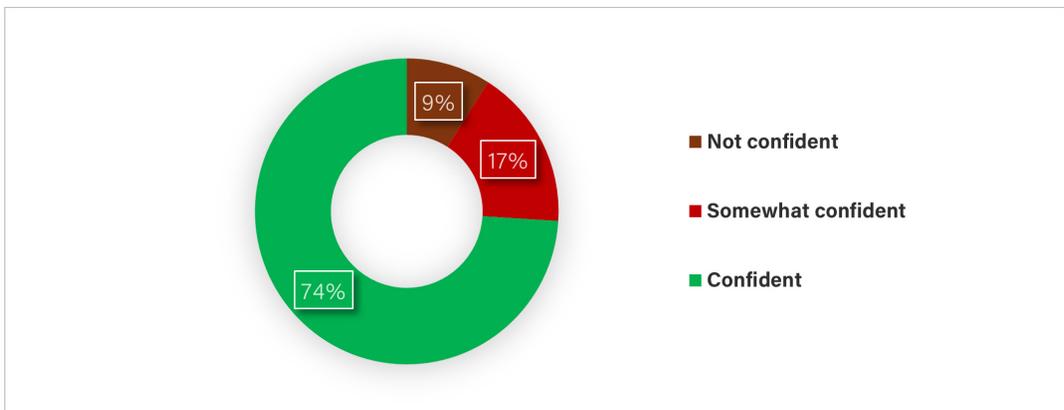


Figure 2: Confidence in realizing fake news sources

Ability to identify fake news sources by media platforms

A cross-tabulation was done to assess journalists' ability to identify fake news based on different media platforms. As depicted in Figure 3, journalists affiliated with online and digital media expressed a high confidence level (100%) in discerning fake news sources. Conversely, journalists from the television sector exhibited the lowest ability, with a confidence rate of 63% in identifying fake news sources. Newspaper and radio journalists demonstrated comparable scores, hovering around 72% and 70%, respectively, indicating their confidence in identifying fake news sources. This underscores the need for more training, particularly in areas with lower scores. The digital media scoring 100% in this aspect implies a significant

investment in tools and technology to ensure the credibility of online news. This has been cited by Kožuh and Čakš (2023) who emphasise the importance of professional digital media houses in providing factual information to the audience.

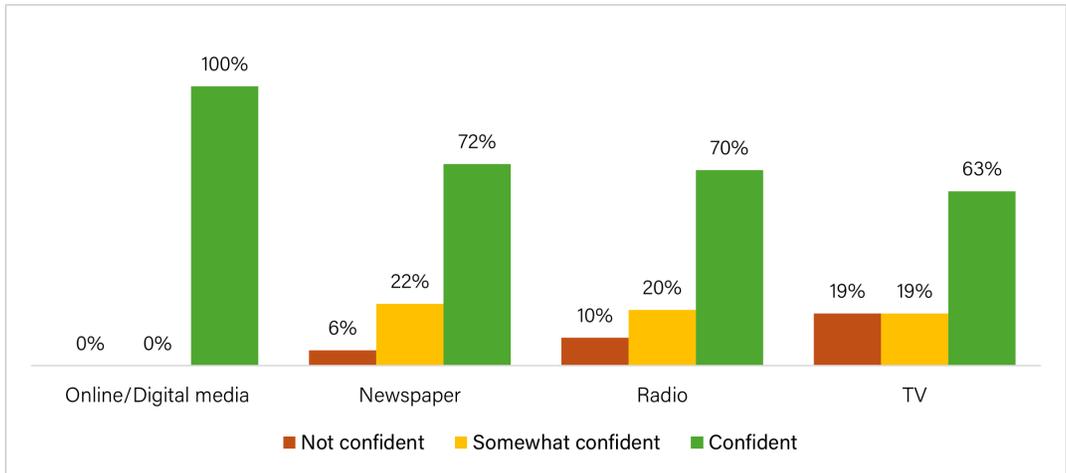


Figure 3: Ability to identify fake news by media platforms

Official training to counter fake news

Respondents were asked whether they had undergone any official training or guidance provided by their employers or other organisations aimed at recognising and addressing fake news and misinformation within the newsroom. Among the journalists surveyed, 51% indicated that they had not received any formal training, while 49% reported having undergone such training. These findings indicate that a notable proportion of journalists have not been exposed to official training in countering fake news, as illustrated in Figure 4. This statistic unveils a potential gap in journalist education and training programmes focused on enhancing media professionals’ capacity to scrutinise sources, verify information and distinguish between reliable and unreliable content.

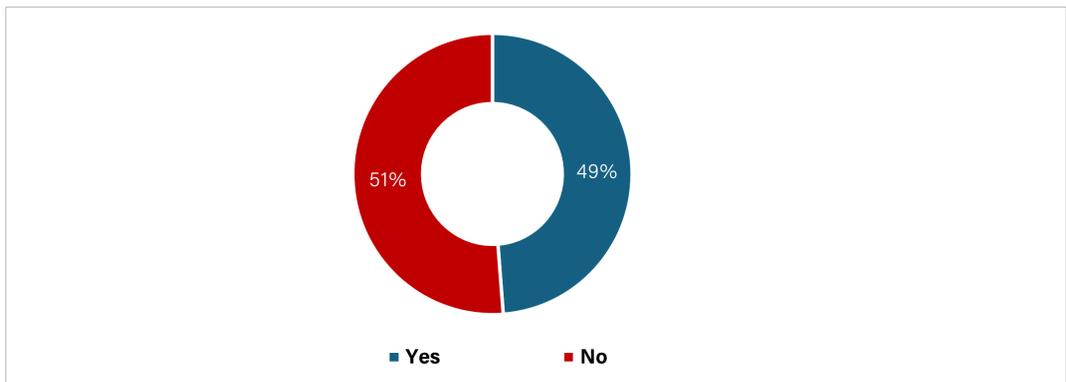


Figure 4: Official training on countering fake news

Training of fake news recognition by media platforms

Similarly, a cross-tabulation was conducted to compare the extent to which journalists from different media forms had received training in countering fake news. The results revealed that online/digital media journalists were notably ahead in terms of training, with a substantial 64% affirming that they had received such training. Following closely were television journalists at 53%, radio journalists with an average of

50% and newspaper journalists being the least trained in this category, with only 32.7% of respondents indicating that they had received training.

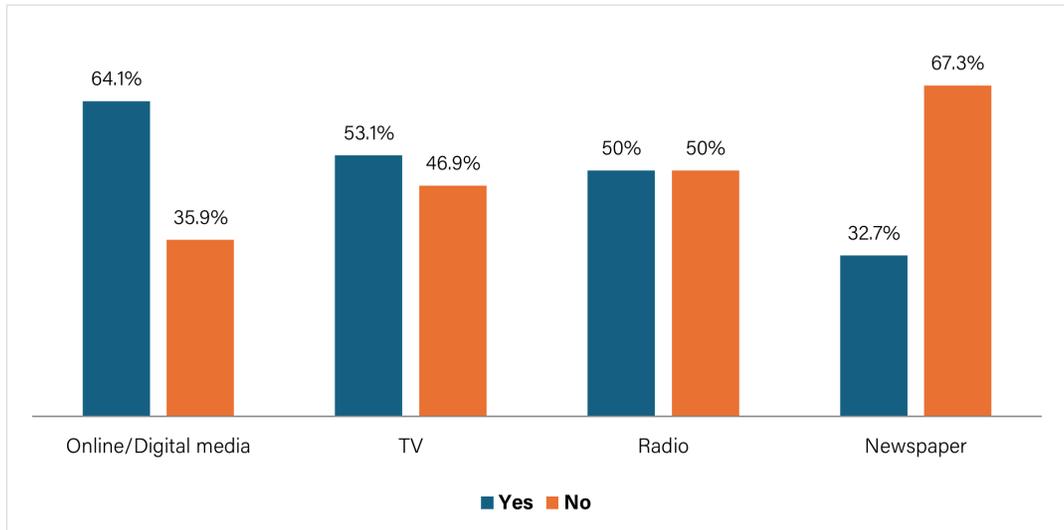


Figure 5: Training on countering fake news by media forms

DISCUSSION ON JOURNALIST AWARENESS OF FAKE NEWS

Generally, the findings on the level of awareness of journalists of fake news were determined across various aspects, including their ability to discern fake news concepts, encounter deceptive sources, detect fake news sites and the availability of training to combat misinformation. The findings shed light on Tanzanian journalists' awareness levels regarding fake news, encompassing misinformation and disinformation. A significant proportion of journalists, including both editors and reporters, demonstrated familiarity with the term "fake news" and its associated dimensions. A considerable number of journalists reported encountering fake news sources in their professional pursuits, with 56.7% encountering them frequently and 13.8% encountering them very frequently. This heightened exposure to deceptive sources underscores the prevalence of misinformation in journalistic work in Tanzania. Impressively, 74% of respondents expressed confidence in their ability to identify fake news sources, with online or digital media journalists exhibiting higher confidence levels. These findings suggest that instances of publishing fake news may not solely stem from a lack of awareness among journalists but rather from negligence in fact checking or external influences such as political agendas, as pointed out by Hassan and Hitchen (2019). In addition, the power of social media to present fake news sources as genuine stories, as articulated by Tran et al. (2021) and Chien et al. (2022), is noteworthy. However, the study revealed a notable gap in formal training to equip journalists to combat fake news. Only 49% of respondents had received official training aimed at countering fake news, indicating a potential deficiency in journalist education and training programmes. UNESCO (2018) advocates frequent training among journalists to enhance their ability to scrutinise sources and verify information, while Kwode and Selekane (2023) emphasise the importance of providing periodic training to less resourced media houses to identify and flag fake news, as many lack the necessary resources for this task.

Strategies used to combat fake news

The findings of the study uncovered a noticeable inclination by Tanzanian journalists towards the use of traditional methods to discern and address instances of fake news. While these traditional methods have historical precedence and are rooted in established journalistic practices, the study raises concerns about their effectiveness in fully combating the contemporary complexities of fake news in the digital age. Among the traditional methods examined, the study revealed that multiple-source verification emerged

as the prevailing approach, capturing the favour of an overwhelming 94% of respondents. This technique underscores the significance of cross-referencing information from various reliable sources as a means to authenticating the accuracy of news stories. The prominence of this method implies that Tanzanian journalists place a high value on the practice of corroborating information before disseminating it – a principle that remains central to the ethos of credible journalism (Ghan & Khan, 2020). In a similar vein, the study underscores the reliance on official statements as a means to substantiate the authenticity of stories, with 87.2% of respondents endorsing its efficacy. This approach also resonates with the age-old practice of seeking confirmation from authoritative sources, which remains integral to the journalistic process of fact checking and verification. Expert interviews, too, emerged as a significant tool in the realm of Tanzanian journalists, with 78.3% acknowledging their effectiveness in clarifying the accuracy of information. Relying on experts’ insights not only lends credibility to news stories but also provides valuable context that aids in dispelling misinformation (Aljaž et al., 2022). Interestingly, the findings expose a discrepancy between the adoption of traditional and modern approaches. While traditional methods garnered high preference, the use of modern tools, such as fact-checking websites, scored 61%. Domain analysis, a technique employed to assess website credibility, received recognition from 59.1% of participants. The least favoured method in this category was the use of automated fact-checking tools/software, which was endorsed by only 23.2% of all respondents. This divergence between the adoption of traditional and modern strategies points to a potential gap in leveraging advanced technological tools to effectively counter fake news. The relatively low acceptance of automated fact-checking tools/software indicates a need for further exploration of how technology can enhance the speed and accuracy of information verification in an age characterised by the rapid dissemination of information.



Figure 6: Strategies for countering fake news

Challenges encountered and journalists’ requirements

The challenges encountered by journalists in addressing fake news within the Tanzanian media landscape offer valuable insights into the complex dynamics of media integrity and reliability. From the perspective of journalists, these challenges underscore both the evolving nature of misinformation and the critical role that traditional methodologies play in the realm of combating fake news. As it indicated in Figure: 7, one of the major challenges highlighted by journalists pertains to the delayed response from experts or government

officials required to validate the authenticity of a given story. This challenge, accounting for 25.2% of responses, illuminates the practical hurdles journalists face in seeking timely verification and validation of information. This can be particularly problematic in a rapidly evolving news environment, where accurate and swift reporting is crucial. Following closely, at 18.1%, is the issue of government authorities failing to respond to information suspected to be fake. This reveals a challenging landscape in which journalists may struggle to engage with relevant authorities to clarify or debunk false information, potentially leading to the perpetuation of misinformation. The pressure of breaking news or looming deadlines, identified by 17.2% of respondents, further adds to the intricate matrix of challenges. This finding sheds light on the tension between the demand for timely reporting and the need for thorough fact checking and verification. Additional challenges frequently mentioned underscore the technological and resource limitations journalists face. The absence of fact-checking software and reliable Internet connections for cross-referencing information were cited as hindrances. Moreover, concerns related to the manipulation of stories using Artificial Intelligence (AI) reveal the sophisticated nature of contemporary misinformation tactics. In light of these challenges, journalists emphasised a range of interventions required to fortify their efforts in tackling fake news effectively. This is reflected in Figure 8. Foremost, the importance of training and mentorship to enhance media literacy and fact-checking skills emerged as a key request. The integration of fact-checking software directly within newsrooms was also highlighted, underlining the potential of technology to expedite the verification process. In addition, seeking collaboration with experts or government officials for fact-checking purposes when needed reflects a proactive approach to ensure the accuracy of news content.

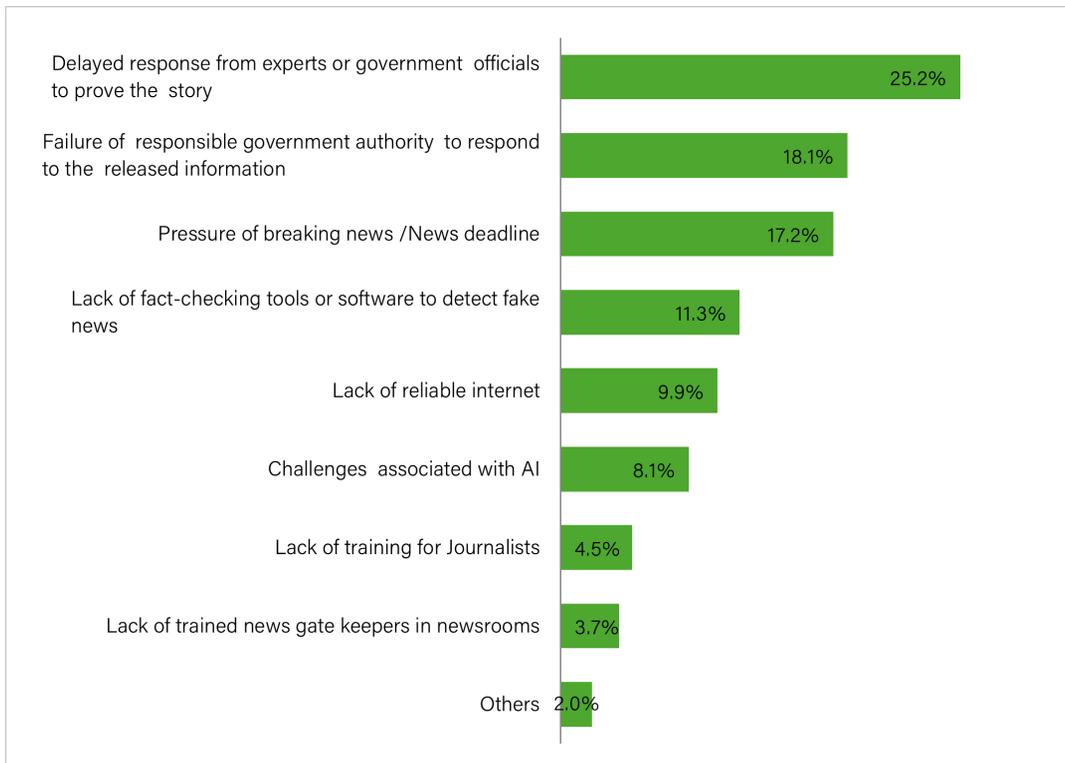


Figure 7: Challenges facing Tanzanian journalists

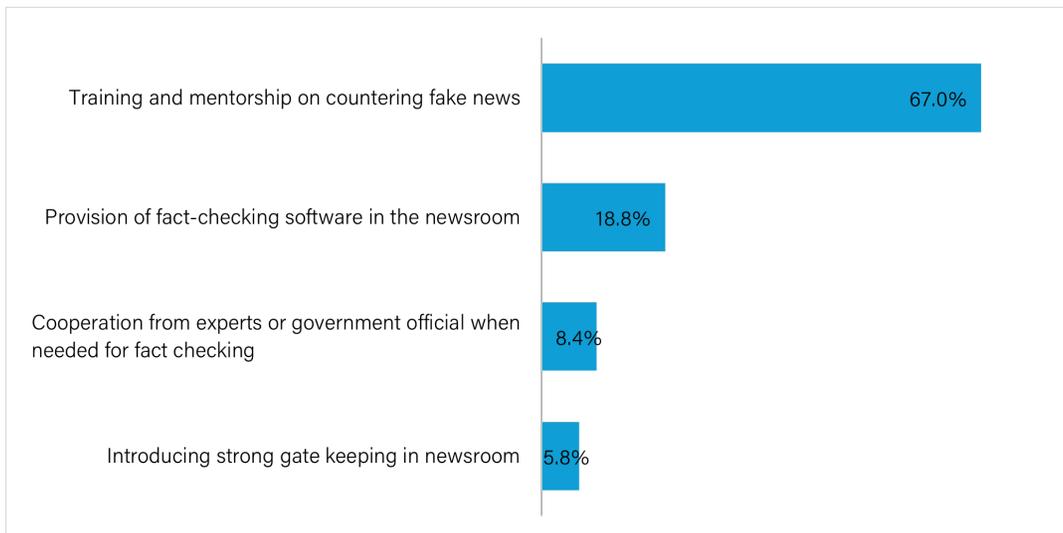


Figure 8: Assistance needed by journalists

As depicted in Figure 8, the findings highlight the recurring responses given by the respondents. Among these, a significant majority (67%) emphasised the importance of training and mentorship to effectively counter fake news within newsrooms. Additional proposed solutions included the integration of fact-checking software in newsrooms (18.8%), seeking collaboration with experts or government officials for fact-checking purposes (8.4%) and the implementation of robust gatekeeping policies within newsrooms. Notably, these solutions are grounded in the journalists' insights, and their successful implementation is expected to yield positive outcomes. However, responding to challenges that hinder media professionals in addressing fake news is one of the major concerns of various scholars, such as Mare et al (2019), Collins et al. (2021), Lunga and Mthembu (2019) and Wasserman and Madrid-Morales (2019). These scholars explain the consequences of increased levels of disinformation and misinformation, especially in African media with its impact on the erosion of trust between journalism and citizens in various contexts. They suggest that the government and other stakeholders intervene to strengthen media capacity and they emphasise regulation and upholding ethical standards to limit false information in the newsrooms.

CONCLUSION

The findings reveal a multifaceted landscape in which Tanzanian journalists demonstrate a strong understanding of fake news concepts. However, concerns about industry preparedness and formal training highlight the need for greater investment in media literacy initiatives and institutional support to ensure effective gatekeeping of the media in limiting the spread of misinformation. The article's insights into strategies for countering fake news sources emphasise the enduring relevance of traditional practices, such as cross-referencing sources, relying on official statements and conducting expert interviews. Yet, the evolving nature of fake news necessitates integrating modern tools and technologies to address the growing challenges of misinformation and disinformation effectively. Achieving a balance between traditional and modern approaches is pivotal in combating fake news within the Tanzanian media landscape. Amid contemporary challenges, the persistence of traditional methodologies signifies their enduring value. The calls for training, fact-checking tools and collaborative efforts among journalists highlight the need for a collective endeavour from various stakeholders to establish a media environment characterised by accuracy, credibility and responsible reporting. As Tanzania's media navigates this evolving landscape, addressing fake news remains a collaborative mission essential to preserving reliable and truthful journalism.

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Digital divide: a phenomenon of unequal adoption of technology by SMMEs in the agribusiness sector in South Africa

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Abstract

The digital evolution and the adoption of technology have made it possible for information access and management to improve the social and economic impacts of the tourism sector globally. Technology has undoubtedly become the prime driver of modern e-commerce. This article examines the digital divide as a barrier to the adoption of technology by small, medium, and micro enterprises (SMMEs) in the agribusiness sector in the city of Tshwane, South Africa. The study adopted a quantitative approach and data were collected through a self-administered questionnaire. The data were subsequently analysed by using descriptive statistics. The relationships between variables were compared and interpretations were made. The results showed that a digital divide is hampering the adoption of technology by SMMEs in the agribusiness sector. The results further revealed that the high cost of technology/online platforms, limited funds and a lack of technical know-how are some of the obstacles faced by SMMEs in the adoption of information and communication technologies. However, the study also established that if these obstacles could be addressed, the benefits would be substantial. It is concluded that empirical work is required to investigate the extent to which SMMEs in South Africa are adapting to the challenges posed by the digital divide.

Keywords

Agribusiness, barriers to ICTs, digital divide, diffusion and adoption of technology, e-commerce, information and communication technology, innovation, social inclusion

INTRODUCTION AND BACKGROUND TO THE STUDY

There is no escaping the fact that information and communication technologies (ICTs) offer many advantages, such as greater access to information, cost reduction in the labour sector and greater connectivity between people. However, digitalisation is not happening equally all over the world because imbalance exists – this is known as the digital divide. The current statistics show that inequality relating to the Internet and ICT access, popularly known as the digital divide, affects 52% of women and 42% of men worldwide. It is important to note that this gap becomes even wider when one look at the regions. For instance, in 2024 in Africa only 43.1% of its inhabitants had Internet access, compared to 88.4 % of Europeans and 93.4 % of Americans (Statista, 2024). The digital divide is a serious challenge that affects several people from all walks of life. It is defined by experts as the gap that exists between those who have access to the Internet and reliable devices and those who do not (Ragnedda & Muschert, 2013; Van Dijk, 2020). Some experts argue that it is a multifaceted issue. However, there are two key characteristics that describe this gap, namely access to high-speed Internet and access to reliable devices (Lai & Widmar, 2021; Ramsetty & Adams, 2020). It has been observed that several people who struggle with the digital divide face both these challenges. In some areas, Internet access is limited, unavailable or unaffordable to

those who could be equipped. Even with a reliable Internet connection, access to certain digital spaces can remain a challenge and always just out of reach for those who cannot afford costly tools such as laptops and software. This leaves several individuals reliant on public computers or their mobile devices as their only tools to exist in an increasingly digital world. It leaves many more, including those living in rural areas or under the poverty line, without even that. Several scholars argue that there is no one digital divide. At a high level, the digital divide is the gap between those with Internet access and those without it. But the digital divide is multifaceted and includes many factors, such as access, affordability, quality and relevance (Lai & Widmar, 2021; Ragnedda & Muschert, 2013; Ramsetty & Adams, 2020; Van Dijk, 2020).

It has been observed that South Africa's agricultural sector is one of the world's most diverse, consisting of corporate and private intensive and extensive stock and crop-farming systems. These systems include vegetable, fruit, nuts and grain production. Sectors related to agriculture include food and beverage manufacturing; food and beverage stores; food services and eating/drinking places; textiles, apparel and leather products; and forestry and fishing. Grains and cereals are South Africa's most important crops, occupying more than 60% of the land under cultivation in the 1990s and beyond (Calzadilla et al., 2014; Mbatha & Masuku, 2018; Ndhleve et al., 2017; Zwane, 2019). Undoubtedly, agriculture is central to fostering economic growth, reducing poverty and improving food security in the Southern African region. This is attributed to the fact that it provides most of the world's food and fabrics. For instance, cotton, wool and leather are all agricultural products. In addition, agriculture provides wood for construction and paper products. It has been observed that South Africa has a highly diversified agricultural sector, which includes the production of all the major grains, oil seeds, deciduous and subtropical fruits, sugar, citrus, wine, most vegetables, cattle, pigs, sheep, broilers, ostriches, and eggs and dairy (Calzadilla et al., 2014; Mbatha & Masuku, 2018; Ndhleve et al., 2017; Zwane, 2019). In 2021, agriculture contributed around 2.47% to the gross domestic product (GDP) of South Africa, whereas industry and services contributed 24.5% and 63.02% of the total value added, respectively (Zwane, 2019; Ndhleve, Obi & Nakin, 2017; Mbatha & Masuku, 2018; Calzadilla et al., 2014). Technology has a distinct role in transforming the agricultural sector in South Africa. In the current tough economic climate, it is vital that South Africa's small businesses embrace the relevant technology to remain competitive and enhance work productivity and creativity. The problem investigated in this article stems from the reality that several small, medium and micro enterprises (SMMEs) in South Africa face numerous challenges emanating from the digital divide. Several studies confirm that many businesses in South Africa are failing to participate in the digital economy due to the digital divide (Lai & Widmar, 2021; Ragnedda & Muschert, 2013; Ramsetty & Adams, 2020; Van Dijk, 2020). This is attributed to the fact that most businesses lack proper ICT infrastructure that is crucial for participating in the digital economy.

This article examines the digital divide as a barrier to the adoption of technology by SMMEs in the agribusiness sector in the city of Tshwane, South Africa. To realise the aforementioned aim, the following questions were answered: (a) What types of ICTs are adopted by SMMEs and how frequently do they use them? and (b) What ICT-related challenges do SMMEs face in their operations? The researcher reviewed previous studies on the role of the digital divide in hampering the complete adoption of ICTs by SMMEs. The research methodology that was adopted to conduct the study is explained, followed by the results and a discussion. This article ends with concluding remarks and recommendations for further studies.

LITERATURE REVIEW

The Food and Agriculture Organization of the United Nations estimates that the world's population will increase by 2 billion by 2050, and during the same period the amount of land under cultivation will surge by 4% (Dharmaraj & Vijayanand, 2018). It has been observed that fostering sustainable agricultural practices is fundamental to eliminating hunger in South Africa. The agribusiness sector has the potential to contribute towards GDP. Notwithstanding its insignificant contribution towards GDP, agriculture plays a crucial role in economic development in South Africa (Tennant, 2018). In addition, it is a crucial provider of employment in South Africa. It is estimated that approximately 8.5 million South Africans are directly

or indirectly reliant on the industry for their income and job opportunities (Tennant, 2018). In 2019, South Africa's agriculture sector comprised 35,000 registered commercial farmers, 40% of whom were engaged in field-crop farming and 60% of whom were focused on livestock farming (Gillwald et al., 2019).

Undeniably, recent transformations and development in technology have transformed how people live, conduct business and engage with one another. Since the complexity of systems upsurges, new and innovative strategies and management approaches are fundamental to cope (Malinga & Oosthuizen, 2021). Various scholars argue that the Fourth Industrial Revolution plays a distinct role in transforming the agricultural sector in South Africa (Nkosi & Agholor, 2021). However, it is important to note that SMMEs face several challenges that hinder their growth, and these include the digital divide. For instance, it has been found that because of the digital divide small businesses are struggling to sustain cash flows with which to survive, in the face of tardiness on the part of their bigger counterparts to pay them for work done (Savrul et al., 2014; Tolstoy et al., 2022; Zaied, 2012). Consequently, several small businesses are being forced to close after struggling to remain in operation for as long as possible (Dal-Tayyar et al., 2021; Nkosi & Agholor, 2021). Technology is transforming the way business is conducted in all sectors, while also fostering opportunities for businesses. As a result, it is crucial for small businesses to adopt technology in order to enjoy its benefits for expanding when presented.

In their study, Ngcobo and Sukdeo (2015) argue that a lack of jobs is a serious challenge faced by several countries across the globe. South Africa is no exception. Consequently, SMMEs have been identified as vehicles for driving economic growth and job creation in South Africa. However, because of numerous challenges, including the digital divide, very few small businesses experience success such that they can significantly contribute to the alleviation of unemployment in South Africa.

Even though SMMEs are faced with a myriad of challenges in the adoption of ICTs, many experts regard e-commerce as a new driver of economic growth all over the world (Savrul et al., 2014; Tolstoy et al., 2022; Zaied, 2012). The SMME sector plays an important role in contributing to the national economy through the wealth created and through the people employed. We live in an era of globalising economies where several markets are increasingly becoming international and competitive. ICTs enable businesses to procure, sell and co-operate on a global scale. In fact, several SMMEs prefer to operate in a global context to survive in this new and challenging business environment. Unfortunately, more often than not, globalisation exposes small businesses to numerous challenges emanating from the impact of the digital divide. Although South Africa boasts the most developed startup ecosystem in Africa, many South African startups fail to pass the three-year mark as there are specific contextual constraints in the region, such as the digital divide. It has been noted that businesses that can innovate are more likely to grow quickly than those that cannot. Interestingly, several SMMEs in South Africa are established by individuals who are looking to find an alternative to unemployment, rather than as a way to access more opportunities while they are already gainfully employed (Abd Hamid et al., 2019; Dahbi & Benmoussa, 2019; Eliaet al., 2019; Foya & Garikayi, 2021; Mohan & Ali, 2019).

Theoretical framework

This article is informed by the Unified Theory of Acceptance and Use of Technology (UTAUT), which was proposed by Venkatesh, Morris, Davis and Davis in 2003. It explains how individuals adopt technology based on several social factors. The theory describes four major determinants of technology adoption, as well as four moderators of key relationships, namely performance expectancy, effort expectancy, social influence and facilitating conditions.

a. Performance expectancy

This is the degree to which a person believes that using a specific system will enhance their job performance (Venkatesh et al., 2003). This is based on the ideas advanced by Davis (1989) and Davis, Bagozzi and Warshaw (1989), which focus on the individual perceiving that engagement in an activity will lead to advantageous gains. In the context of this article, one can argue that the reason SMMEs adopt technology is because there is an expectation of enhanced work productivity and creativity. If business owners perceive technology as a tool that can increase

productivity and creativity, they are more likely to adopt it for business purposes.

- b. Effort expectancy
This moderator refers to the extent to which technology is perceived as superior to its predecessor (Moore & Benbasat, 1991). This means SMMEs adopt technology to enhance previous ways of doing business. In addition, SMMEs need to perceive technology as user-friendly before they can adopt it to enhance business processes.
- c. Social influences
Social influences deal with the degree to which an individual believes that using a specific system will be hassle-free. In addition, individuals take their cue from other important people who believe that they should be able to use a new system (Venkatesh et al., 2003). SMMEs adopt technology, hoping that it will only improve business processes. However, the digital divide is prohibiting the complete adoption of technology by several small businesses. It is important that those hired in the SMMEs will be motivated to adopt technology to improve business operations, as intended by business owners.
- d. Facilitating conditions
This refers to the perceptions of internal and external constraints on behaviour and encompasses self-efficacy and resource and technology-facilitating conditions. The provision of computer support is also a determining factor in getting individuals to use a new system (Venkatesh et al., 2003). Small business owners who believe that they have relevant and sufficient IT infrastructure and resources to enhance their business operations will be more likely than others to adopt technology.

UTAUT's relevancy of the study

As a theory, UTAUT explains the user's intentions to use technology and, subsequently, usage behaviour. In addition, this theory provides constructs that assist in understanding factors that allow for the use of new innovations and those that hamper the utilisation and adoption of such. According to the performance expectancy, one can argue that the reason SMMEs adopt technology is because they expect to enhance work productivity and creativity. If business owners perceive technology as a tool that can enhance work productivity and creativity, they are more likely to adopt it for business purposes. Regarding the effort expectancy element, it can be deduced that SMMEs adopt technology to improve traditional methods of doing business. Thus, SMMEs need to perceive technology as user-friendly before they can adopt it to enhance business processes. Social influences relate to the degree to which an individual believes that using a specific system will be hassle-free. With regard to the facilitating conditions, small business owners who believe that they have relevant and sufficient technological infrastructure and resources to enhance their business operations will be more likely use technology.

RESEARCH METHODOLOGY

The study was conducted in the city of Tshwane, South Africa, targeting SMMEs in the agribusiness sector. A quantitative approach was adopted and data were collected by means of a self-administered questionnaire. The researcher decided on a survey method because it is a relatively quick and cheap way of obtaining data from a target population (Kara, 2015). It is also an effective and reliable quantitative method of obtaining data (Adams et al., 2014). This approach allowed the researcher to carefully choose the population and organise and present the data systematically. The target population consisted of 76 SMMEs that were selected using simple random sampling. Descriptive statistics were used to analyse the data, compare relationships between variables and interpret the data (Hanushek & Jackson, 2013). Ethical clearance was granted by the University of South Africa's Research Ethics Committee. The research respondents took part in the study voluntarily. An information leaflet was provided to them to ensure that they knew what the study was about. Respondents had to complete a form giving their informed consent to participate in the study. The research results obtained from the SMMEs owners were kept confidential and treated anonymously.

The validity of the data collection instrument was enhanced by the fact that questions were based on the objectives of the study. Each question was checked to determine whether it contributed to the research objectives. As far as internal validity was concerned, the researcher critically scrutinised the work to ensure that the study measured what it was intended to measure. Internal validity was also ensured by reviewing studies by other researchers in the same field. Regarding reliability, the research instrument was pre-tested in a pilot study for clarity, completeness, relevance and shortcomings. The pilot study aimed to test the subject matter of the current research, the population it was to cover, its spatial variability and the possible reactions of respondents to questions. The reliability of the research instrument was improved by including closed-ended and open-ended questions in the survey. The researcher ensured that the wording of the questions was simple, direct and unbiased.

RESULTS AND DISCUSSION

The results below are presented under the following headings: the demographic profile of SMMEs, the frequency at which SMMEs were using ICTs and how they were using them, and challenges faced by SMMEs in their operations.

Demographics of the SMMEs

As indicated in Table 1 below, the 76 SMMEs who participated in the study were in the agriculture sector and were located in various regions of the city of Tshwane. Most of the firms were located in central Pretoria (the city of Tshwane). In addition, the majority of the SMMEs (49; 64.4%) had 10 or fewer employees. Most of the SMMEs (44; 57.8%) had an annual revenue of R5 million or less and only 2 (2.6%) had a revenue of between R20 million and R30 million. It was found that 34 (44.7%) had been in existence for between five and 10 years. Furthermore, 54 (71.0%) of the SMMEs owners were males, while 22 (29.9%) were females.

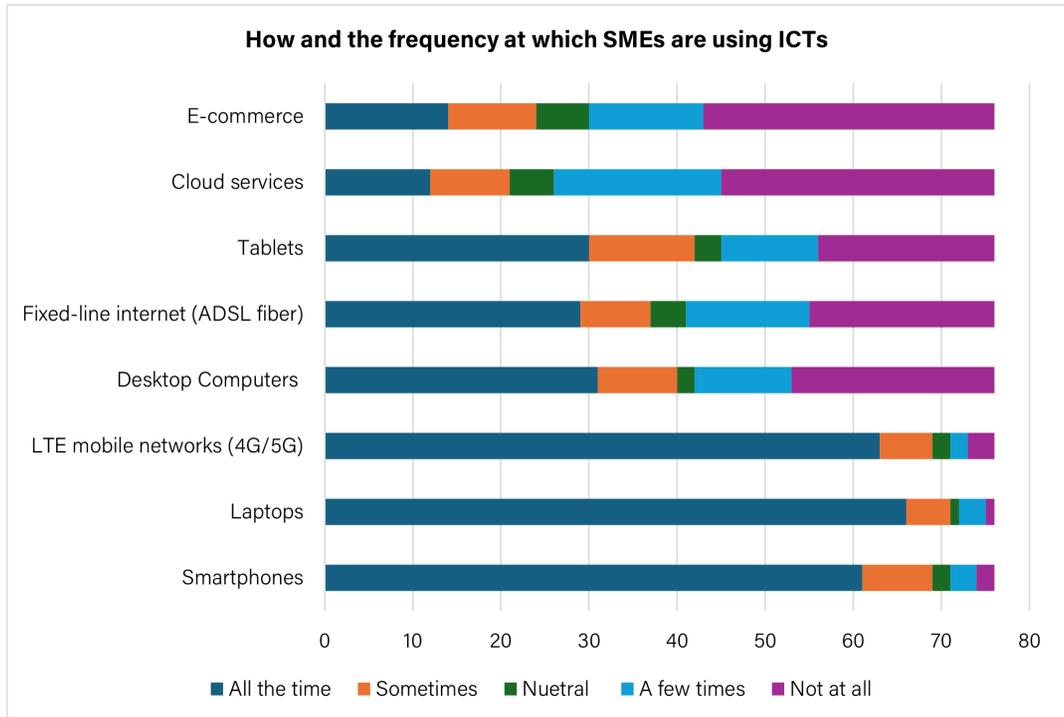
Table 1: Firm characteristics (n = 76)

	Details and description	Frequencies
Industry	Agriculture	76
Location	Pretoria North	5
	Wonderboom	19
	Pretoria Central	21
	Pretoria West	11
	Centurion	3
	Cullinan	9
	Pretoria East	3
Number of employees	Bronkhorstspuit	2
	10 or fewer	49
	11-49	22
	50-99	3
Annual firm revenue	100-200	2
	R5 million or less	44
	R5-10 million	30
Age of firm	R20-30 million	2
	5 years or less	13
	5 to 10 years	34
Gender of respondents	10 years and above	29
	Male	54
	Female	22

The frequency at which SMEs are using ICTs and how they are using them

Respondents were asked to indicate the frequency at which they were using selected ICT tools and services. A Likert scale ranging from "Not at all" to "All the time" was used to measure their responses. Figure 1 below presents the results.

Figure 1: The frequency at which SMEs are using ICTs and how they are using them (n = 76)



The results in Figure 1 show that 14 (18.4%) of the SMMEs were using e-commerce all the time, while 10 (13.1%) used it sometimes, 6 (7.8%) were neutral, 13 (17.1%) used it a few times and 33 (43.2%) did not use e-commerce it at all. Cloud services were used all the time by 12 (15.7%) SMMEs, while 9 (11.8%) used it sometimes, 5 (6.5%) were neutral, 19 (25%) used it a few times and a significant number – 31 (40.7%) – never used it. Furthermore, the results showed that many SMMEs (30; 39.4%) were using tablets all the time, while 12 (15.7%) sometimes used it, 3 (3.9%) were neutral, 11 (14.4%) used tablets a few time, and 20 (26.3%) never used tablets. Many (29; 38.1%) used ADSL fibre all the time, while 8 (10.5%) sometimes did, 4 (5.2%) were neutral, 14 (18.4) used it a few times and 21 (27.6%) never used ADSL fibre. Figure 1 also depicts that a significant number (31; 40.7%) of SMMEs were using desktop computers regularly, while 9 (11.8%) were using them sometimes, 2 (2.6%) were neutral, 11 (14.4%) used them a few times and 23 (30.2%) never used desktop computers. Insofar as long-term evolution (LTE) mobile networks such as 4G and 5G were concerned, the majority of SMMEs (63; 82.8%) were using them all of the time, followed by those who were using them sometimes, while 2 (2.6%) were neutral, 2 (2.6%) used them a few times and 3 (3.9%) did not use LTE at all. It can also be seen in Figure 1 that the majority of the SMMEs (66; 86.8%) used laptops all the time, followed by 5 (6.5%) who used them sometimes, while 1 (1.3%) was neutral, 3 (3.9%) used them a few times, and only 1 (1.3%) did not use laptops. Most of the SMMEs (61; 80%) used smartphones, followed by those who sometimes used them (8; 10.5%), while 2 (2.6%) were neutral, 3 (3.9%) used them a few times and only 2 (2.6%) did not use smartphones at all.

Digital divide faced by SMMEs

The respondents were asked to indicate the types of digital divide they were facing as a business. A Likert

scale of “Strongly disagree 1 (SD); disagree 2 (D); neutral 3 (N); agree 4 (A); and strongly agree 5(SA)” was used to measure their responses. Table 2 below presents the results.

Table 2: Challenges faced by SMMEs (n=76)

	SD	D	N	A	SA	Mean	Level
Costly ICT infrastructure	8	10	2	18	38	3.8	5
Accessibility and use	6	4	5	21	40	4.1	
Lack of ICT infrastructure	10	9	3	19	35	3.7	5
Lack of digital literacy	12	7	1	15	41	3.8	5
Wealth and income divide	4	5	7	15	45	4.2	5
Racial divide	10	6	5	19	36	3.8	5
Widespread inequalities	2	3	2	22	47	4.4	5
Lack of education	5	8	9	19	35	3.9	5
Political instability	12	10	8	15	31	3.5	5
Gender divide	9	7	10	18	32	3.7	5
Social divide	11	5	9	21	30	3.7	5
Universal access divide	5	7	5	25	34	4.0	5

It can be seen in Table 2 that 8 (10.5%) of the SMMEs strongly disagreed that costly ICT infrastructure was one type of digital divide they were facing as a business, while 10 (13.1%) disagreed, only 2 (2.6%) were neutral, 18 (23.6%) agreed and a significant number (38; 50%) strongly agreed. In addition, Table 2 depicts that 6 (7.8%) of the businesses strongly disagreed that they were facing a digital divide relating to accessibility and use, 4 (5.2%) merely disagreed, 5 (6.5%) were neutral, 21 (27.6%) agreed and a large number of 40 (52.6%) strongly agreed. Table 2 further shows that 10 (13.1%) of the SMMEs strongly disagreed that they were facing a digital divide relating to a lack of ICT infrastructure, while 9 (11.8%) disagreed, 3 (3.9%) were neutral, 19 (25%) agreed and 35 (46%) strongly agreed. The results also show that 12 (15.7%) of the SMMEs strongly disagreed that lack of digital literacy was a challenge they were facing, while 7 (9.2%) merely disagreed, only 1 (1.3%) was neutral, 15 (19.7%) agreed and the majority (41; 53.9%) strongly agreed. Regarding wealth and income divide, 4 (5.2%) strongly disagreed that it was a challenge they were facing, while 5 (6.5%) disagreed, 7 (9.2%) were neutral, 15 (19.7%) agreed and 45 (59.2%) strongly agreed. It can also be seen that 10 (13.1%) of the SMMEs had no issues with racial divide (strongly disagreed), while 6 (7.8%) disagreed, 5 (6.5%) were neutral, 19 (25%) agreed and the majority (36; 47.3%) strongly agreed that racial divide was a challenge.

Of the SMMEs surveyed, 2 (2.6%) strongly disagreed that widespread inequalities were a problem, while 3 (3.9%) disagreed, only 2 (2.6%) were neutral, 22 (28.9%) agreed and the majority (47; 61.8%) strongly agreed that this was a problem. With regard to a lack of education, 5 (6.5%) SMMEs had no issues with this (strongly disagreed), while 8 (10.5%) disagreed, meaning they also had no problem in that respect, 9 (11.8%) were neutral, 19 (25%) agreed and 35 (46%) strongly agreed that lack of education was an issue. Among the SMMEs, 12 (15.7%) strongly disagreed that political instability was a challenge and 10 (13.1%) disagreed, while 8 (10.5%) were neutral, 15 (19.7%) agreed and 31 (40.7%) strongly agreed that political instability was a problem. Table 2 depicts that 9 (11.8%) of the businesses strongly disagreed that gender divide was a problem, 7 (9.2%) disagreed, 10 (13.1%) were neutral, 18 (23.6%) agreed and a large number strongly agreed (32; 42.1%). It can be seen from Table 2 that 11 (14.4%) of the SMMEs strongly disagreed that social divide was one form of the digital divide they were facing as a business, while 5 (6.5%) disagreed, only 9 (11.8%) were neutral, 21 (27.6%) agreed and a significant number (30; 39.4%) strongly agreed. Regarding universal access divide, 5 (6.5%) strongly disagreed that this was a challenge they were facing, while 7 (9.2%) disagreed, 5 (6.5%) were neutral, 25 (32.8%) agreed and 34 (44.7%) strongly agreed.

DISCUSSION OF FINDINGS

The digital divide exists globally and has impacted people of different ages, races, genders, education levels and economic standing. As a result, the divide has exacerbated existing inequities, which makes it more difficult for disadvantaged groups to improve their circumstances. For example, a lack of access to ICTs could limit businesses' access to the digital economy and prevent them from accessing information that could help with economic advancement. It is a well-known fact that small business owners often lack the capital to fund their efforts and do not have a convincing enough credit profile to receive funding. These issues are exacerbated by cycles of social injustice and income inequality emanating from South Africa's history. Added to this mix is a culture of conservatism among many major banks in South Africa. Financial institutions are not keen to issue loans to start-ups established by younger persons, because they are perceived as a risky investment. In addition, acquisition costs are extremely high, and SMMEs often lack the same spending power as larger and more established firms.

Significantly, the study also revealed the lack of digital literacy in most SMMEs – a problem that hampers their full adoption of technology. In support of these results, numerous studies confirm that one of the areas where SMMEs struggle is losing their skilled workforce to competitors, especially the bigger ones in the same industries (Dahbi & Benmoussa, 2019; Rahayu & Day, 2015). In addition, hardworking employees can be the making of a business, but it is not as easy for small businesses to attract good human resources as it is for more established firms. It has also been observed that most people starting a new business lack proper and relevant skills to run the business. For instance, many business owners do not have any background in accounting or bookkeeping (Elia et al., 2019; Kartiwi et al., 2018; Lestari et al., 2021; Mohan & Ali, 2019). As a result, keeping on top of finances can be time-consuming and stressful.

The results show that most of the SMMEs lacked funds for ICT infrastructure. Every business needs capital to operate. Often, however, small businesses find it hard to secure funding, regardless of whether the idea is good or not (Esmailpour et al., 2016; Tolstoy et al., 2021; Yang et al., 2015). It is important to note that, for any business to succeed, relevant resources are required. These resources help the business to increase its ability to deliver on its mandate, efficiency and quality. Regrettably, access to many of these resources can be realised only by having capital. The surveyed SMMEs reported that a lack of capital or cash flow was their main obstacle. Most SMMEs mentioned that inadequate ICT infrastructure was a serious challenge that impeded their complete adoption of technology. Other than ICT infrastructure, having reliable and constant access to water, electricity, proper roads, affordable communication services, and safe and reliable public transport were extremely crucial factors for business success and growth. Several SMME owners start operating in their households and, if they lack sufficient and relevant utilities, they fail to produce goods, conduct services, or effectively communicate with existing and potential customers, including business partners.

The results in Table 2 show that most of the businesses are facing infrastructure divide. A lack of modern infrastructure in different regions plays a big part in the digital divide. For example, rural communities often lack access to high-speed internet and other telecommunications services in their towns and communities. Businesses that lack the proper infrastructure to support broadband and other ICT needs are unable to take advantage of modern economic opportunities. In addition, the results show that most of the SMMEs are facing a wealth and income divide. Similarly to the infrastructure of different regions, wealth and income play determinative roles in businesses' access to ICT. Racial divide was reported as a stumbling block to the growth of SMMEs. The racial digital divide gives name to ICT access divide between white people and people of colour. For instance, a study conducted by the Pew Research Centre established that while 8 in 10 white households reported owning a laptop or desktop computer, only 69% of Black adults and 67% of Hispanic adults reported the same (Pew Research Centre, 2021).

Although the digital divide remains an important challenge to overcome around the world in developed and developing countries alike, the impact on developing countries differs from the impact on developed countries. For instance, compared to developed countries, developing countries are more likely to experience numerous challenges. One of these challenges relates to widespread inequalities. Scholars argue that in developed countries, access to resources such as computers is typically available

through public institutions such as libraries (Elia et al., 2019; Kartiwi et al., 2018; Lestari et al., 2021; Mohan & Ali, 2019). In developing countries, inequalities from a lack of Internet connectivity or because of 5G deployment challenges could cause divides across a larger percentage of the population. Resources are not available through alternative means, so many people simply do not have any access. The results further show that most SMMEs strongly agreed that lack of education contributes to maintaining the digital divide. This is attributed to the fact that, in developed countries, individuals may struggle to get an adequate education, but public education is available, and there are programmes to help children catch up (Esmailpour et al., 2016; Tolstoy et al., 2021; Yang et al., 2015). In developing countries, individuals might not have access to education for any number of reasons, including a lack of transportation. The majority of SMMEs revealed that political instability was also a challenge. Experts argue that in developing countries, political limitations on technological access and unstable governments could prevent individuals from having consistent access to the resources needed to close the digital divide (Esmailpour et al., 2016; Tolstoy et al., 2021; Yang et al., 2015).

The results further show that the majority of SMMEs felt that gender divide was a challenge that affected them. It has been observed that women were less likely to own a phone or have access to the Internet, illustrating a gender gap in mobile connectivity. The results also show that social divide was reported as a challenge. Social divide is defined by experts as unequal access to the Internet which contributes to social stratification, as groups without Internet access cannot reap the benefits of interaction with online peer groups (Dahbi & Benmoussa, 2019; Rahayu & Day, 2015). It can be seen in Table 2 that a significant number of businesses strongly agreed that they were facing a universal access divide. This kind of digital divide refers to individuals with physical disabilities not having access to or the ability to use hardware and software. The reasons for this type of divide could include digital illiteracy, low education levels and poor broadband infrastructure.

Interpreted in light of UTAUT, it is worth noting that although SMMEs are facing several challenges emanating from the digital divide, at least they understand the significance of technology integration in their operations. For instance, the performance expectancy element suggests that the main reason SMMEs adopt technology is because they want to transform and improve work productivity and creativity. This is because business owners perceive technology as a critical tool for transforming business operations. Regarding the effort expectancy element, it can be deduced that SMMEs adopt technology to improve traditional methods of doing business. Therefore, SMMEs perceive ICT as a tool that is not complex to operate for enhanced business operations. In addition, the social influences element suggests that SMMEs are using technology because it is hassle-free. Although the results show that the majority of SMMEs lack relevant ICT infrastructure, it is important to note that the facilitating conditions element implies that business owners who have relevant and sufficient technological infrastructure are most likely using technology to enhance business processes and improve work productivity and creativity.

CONCLUSION AND RECOMMENDATIONS

This article sought to examine the digital divide as a barrier to the adoption of ICTs by SMMEs in the agribusiness sector in the city of Tshwane, South Africa. To realise the aforementioned aim, the paper answered the following questions: (a) What types of ICTs are adopted by SMMEs and how frequently do they use them? and (b) What kinds of digital divide are faced by SMMEs in their operations? Although a variety of ICTs were being used by SMMEs in the agribusiness sector to enhance their business processes, many of these tools were not optimally used for a variety of reasons mainly emanating from the digital divide. The ICTs tools that were adopted included cloud services, tablets, fixed-line internet (ADSL fibre), desktop computers, LTE mobile networks (4G/5G), laptops and smartphones. The results showed that some of the ICT tools were used more frequently than others. There are several reasons for this, for instance, one could have a smartphone but still not use it for business purposes related, possibly, to a lack of skills on how to use such a tool for e-commerce purposes. Interestingly, although most SMMEs owners indicated that they had access to smartphones, laptop computers and LTE mobile networks, very few were using e-commerce. Cloud services also play a critical role in e-commerce, yet

only a few SMMEs indicated that they used them. This could be attributed to challenges such as a lack of proper ICT infrastructure, a lack of funds and a lack of digital skills. Many of these challenges emanate from the digital divide. In general, it is important to note that the digital divide may prohibit businesses from coping with market competition, the attraction of new customers, a lack of funding/capital, managing business expansion, reduced revenue, a lack of digital literacy and lack of proper ICT infrastructure. The results revealed that upskilling SMME owners on digital technologies to enhance work productivity and creativity and to allow them to take part in e-commerce is an immediate necessity. The adoption of technology has the potential to enable SMMEs to play a crucial role in poverty alleviation and improving the economy of South Africa. Therefore, the reskilling of the SMME workforce in digital skills and capability is of the utmost importance.

Given that the digital divide exists globally and has impacted people of different ages, races, genders, education levels and economic standing, SMMEs are no exception. Consequently, the digital divide has exacerbated existing inequities, which makes it more difficult for disadvantaged groups and SMMEs to improve their circumstances. This article found that some common types of digital divide include infrastructure divide; wealth and income divide; racial divide; widespread inequalities; lack of education; and political instability. The lack of modern infrastructure in South Africa plays a big part in the digital divide. SMMEs located in areas that lack the proper infrastructure to support broadband and other ICT needs are unable to take advantage of modern economic opportunities. The digital divide is a significant challenge that needs to be eradicated for SMMEs to thrive, but solutions do exist. The digital divide can easily be closed by implementing digital inclusion policies, programmes and tools that take into consideration the following: affordable, robust broadband internet service; internet-enabled devices that meet the needs of the user; access to digital literacy training; quality technical support; and applications and virtual content designed to enable and encourage self-sufficiency, participation and collaboration. To address the challenges faced by SMMEs in South Africa, this article recommends a conducive and stable ICT policy that will not only promote and advocate complete access to digital technologies, but also allow for ICT infrastructural development that will address the challenges faced by businesses in accessing digital technologies.

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Indigenous languages as predictors of understanding and accepting COVID-19 vaccines in Nigeria and South Africa

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Abstract

Indigenous African languages have often suffered neglect in health development campaigns until recently. Considering the multi-faceted effects of the COVID-19 pandemic on different peoples and societies worldwide, this article argues that vaccine campaigns in African settings cannot be impactful if they are not disseminated in the indigenous African languages. The article is hinged on Salawu's model of indigenous language for development communication, which affirms the connection between language of communication and people's understanding of the message communicated. The study employed a survey experimental research method. Using the pool sampling technique, both online and offline questionnaires were used to survey the opinions of 191 Nigerian and 114 South African respondents in Lagos and Mafikeng, respectively, about dominant indigenous languages used for COVID-19 vaccine messages, their degree of understanding vaccine messages and their acceptance or rejection of the vaccine messages. Interview sessions were conducted with five purposively selected health communication and media experts to determine the significance of and challenges encountered in the use of indigenous African languages for COVID-19 vaccine campaigns. The quantitative data were analysed using descriptive and inferential statistical tools, such as frequency count and percentage, chi-square, percentile and logistic regression; while the qualitative data were thematically analysed. While respondents mostly identified with messages in Yoruba, Igbo, Setswana and isiZulu, a few respondents identified with a combination of languages, although these languages did not influence their acceptance of vaccines. Aside from other reasons given in reviewed studies, the message quality of COVID-19 vaccine messages was attributed to the ineffective use of indigenous African languages, especially with regard to media campaigners' attitude to indigenous languages and the scarcity of language translators.

Keywords

Acceptance, COVID-19 pandemic, development communication, indigenous African languages, rejection, vaccine campaigns

INTRODUCTION

Indigenous African languages have long suffered unequal recognition as the foreign languages of colonialism (Wilson & Oгри, 2017) and even the neo-colonialism that has been fostered by the owners of the languages. This fate often shows in health awareness campaigns, where there is usually a discordant tune between the sender and receiver of health messages. Especially in the language of communication strategy, African language use often is seen as a mere afterthought or appendage of the campaign, until recently when language activists like Abiodun Salawu, Gilbert Moothsathebe, Tshepang Molale, Siki Dlanga, Philip Mpofu started exposing the inadequacy in campaign methodologies of the so-called

change agents working in African communities. Notable scholars (Fadipe & Salawu, 2021; Mphasha & Lebesse, 2015; Nwanummo & Salawu, 2018; Obiora, 2021, Salawu, 2015) have pointed to the significance of indigenous African language use in communicating health messages. Its importance has further been highlighted by the advent of the COVID-19 pandemic whose preventive campaigns have been dominated by foreign languages, even in communities that do not predominantly use these languages. Largely, African media institutions can be blamed for this neglect of indigenous languages in the quest for people's need to be properly enlightened. Obviously, there is a preponderance of colonial language used in published newspapers and magazines, and also for broadcast radio and television. This mentality towards the use of colonial languages is often reflected in health communication campaigns as media practitioners are usually involved in the production and execution of these campaigns. However, oral communication form still exerts a great influence on African people (Chkaipa & Gunde, 2020; Kago & Cissé, 2022; Ochu et al. 2021; Wilson & Ogri, 2017) because it helps people to understand indigenous language-based health communication messages better (Nigussie, 2010; Ogwezzy-Ndisika, 2019). African language use is germane to the socialisation process of learning and education and to the practice of knowledge received in any forms of campaign. Considering the virulent effects of COVID-19 disease in terms of the death toll, and the physical, socio-economic and psychological impact with the concerted efforts towards its prevention and eradication, African language use presents an effective formula through which these impacts could be mitigated, and aspirations achieved in the fight against the disease. This significance is especially so for various stakeholders in African language communities and health campaign experts who need to exploit the advantages in African language use for effective and successful health communication campaigns. This is particularly important in dire situations such as the COVID-19 pandemic. The findings, conclusions and recommendations in this article add to the growing body of literature on African language use in health campaigns and behavioural communication campaign fields. This article argues that indigenous African languages are predictors of people's understanding and acceptance of COVID-19 vaccine messages. The focus is on how these languages are employed in the flyers used for COVID-19 vaccine campaigns produced by non-governmental and government agencies intended to encourage people to be vaccinated. Specifically, the article identifies the prominent indigenous African languages used in COVID-19 vaccine campaigns and how the indigenous language use translated into respondents' levels of health message understanding. Testing respondents' COVID-19 vaccine acceptance, the study determines the degree of vaccine information understanding and periods at which they take the vaccines. Also, it samples opinions regarding the significance and challenges encountered in deploying African languages for COVID-19 vaccine messages. The study's argument is further supported by Salawu's (2001) model of indigenous language use for development communication. This explains the relationship that exists between languages of communication and people's understanding of messages disseminated through the languages, and how they accept or reject the messages. Therefore, this study sought to answer the following research questions:

- a. What African languages were mostly identified with by people as deployed in COVID-19 vaccine campaign messages in South Africa and Nigeria?
- b. How did African language use in COVID-19 vaccine campaign messages influence people's understanding and acceptance of the vaccine in South Africa and Nigeria?
- c. What are the challenges encountered in using African languages for COVID-19 vaccine campaign messages?

INDIGENOUS AFRICAN LANGUAGES AND COVID-19 VACCINE CAMPAIGN MESSAGES

Languages play a significant role in health awareness campaigns (Mphasha & Lebesse, 2015; Nwammuo & Salawu, 2018; Ogunyombo & Bello, 2020). Their use falls within the bottom-approach paradigm discourse (Ochu et al., 2021) that encourages engaging people for solutions. This points to the need to look at African local strategies for herd immunity in combating the COVID-19 pandemic. The advantages of indigenous language in awareness campaigns are many (Fadipe & Salawu, 2021). Chkaipa and Gunde (2020) further explain that the use of minority languages simplifies the understanding of information and

encourages the participation of speakers who might otherwise be excluded due to language difficulties. In their comment on *Indigenous Languages and Global Health*, Flood and Rohloff (2018: e134) explain that:

Improving the health of the world's 370 million indigenous people is a crucial global health priority. Indigenous groups worldwide tend to have worse health outcomes than corresponding non-indigenous populations. These disparities stem from structural forces of colonisation, poverty, and marginalisation, as well as from barriers to accessing health care.

Also, these authors highlight the reasons indigenous languages are important in global health priorities. Such reasons include autonomy, rights, research ethics, programme efficacy and revitalisation of the indigenous languages themselves. Meanwhile, the importance of indigenous Nigerian languages for disseminating COVID-19 preventive measure messages, media briefings, health orientation and medical research is acknowledged by Obiorah (2021). For Ude-Akpeh et al. (2020), the use of Igbo as an indigenous language and opinion leaders made people believe in the COVID-19 reality. Yet, Nche and Agbo (2022) observe that religious leaders' role in fighting the COVID-19 pandemic differed between those who promoted public health measures and those who undermined these measures. Olubiye et al. (2013) examined the role of local languages in effective public health delivery in the Gambia and its implications for psychological assessment. Local languages were discovered to contribute to quality of service delivery, treatment compliance of patients and health improvements in patients. Moreover, Kago and Cissé (2022:1) state that to continue "to promote and its implications in daily life, culture, and environment (science engagement) in more African indigenous languages (AILs), then understanding, confidence, and ultimately trust in science across large audiences on the African continent will increase."

EMPIRICAL CONSIDERATION

The success or failure of any health campaign relies not only on the message quality but also on the language of communication. This is even more important for the COVID-19 vaccine campaign to encourage people from diverse countries worldwide to achieve herd immunity to bring down the effects of the pandemic. However, the scholars below have examined various factors responsible for people's willingness to take vaccines. Adedeji-Adenola et al. (2022) affirm that people's awareness of the COVID-19 vaccine was influenced by religion, occupation, education and previous diagnosis, while their willingness and perception were affected by prior diagnosis and occupation. Iliyasu et al. (2021) also submit that the COVID-19 vaccine campaign was sub-optimal and influenced by respondents' age, income, comorbidities, risk perceptions and concerns about vaccine safety, efficacy and rumours. Their study was based on how they investigated vaccine acceptability predictors and identified reasons for vaccine hesitancy among adults in urban Kano, Nigeria. In a study by Anjorin et al. (2021), people's vaccine hesitancy among Africa-based respondents was enabled by their perceived risk of coronavirus infections and past experiences. Similarly, Dzinamarira et al. (2021) emphasised the need for campaigners to address community preparedness and vaccine hesitancy in South Africa and Zimbabwe through effective public health awareness. They recommend the provision of sufficient COVID-19 vaccine information, discussion with the communities and the use of politicians, artists and religious leaders to provide correct information to raise awareness levels. Tlale et al.'s study (2022) demonstrated a high COVID-19 vaccine acceptance rate and a low-risk perception in Botswana, which was influenced by higher comorbidities among the people. Indeed, Gilmore et al. (2020) support the significance of community engagement in overcoming COVID-19, explaining that local leaders, community and faith-based organisations, community groups, health facility committees, individuals and key stakeholders worked together to achieve behavioural change communication goals. Jimenez et al., (2021) discovered that vaccine skepticism and distrust were high in Black and Latinx communities due to past experiences of racism and medical experimentation.

Tsao et al. (2021) discovered that the quality of health information in prevention education videos was one of the themes that scholars focused on in their studies about COVID-19 and social media

between November 2019 and November 2020. Dai et al. (2021) emphasised the significance of effective communication strategies such that COVID-19 vaccine information design should include behavioural nudges by highlighting the value of making vaccination easy and inducing feelings of ownership over vaccines to promote people's health decisions. On the contrary, Loomba et al. (2021) assert that online COVID-19 vaccine misinformation had negative effects on people's vaccine uptake in the UK and USA. Their findings further explain that sociodemographic groups were affected differently by exposure to misinformation, and that scientific-sounding misinformation was more strongly associated with a decrease in people's vaccination intent. Combating fake news and deliberate misinformation influences on COVID-19 mitigation, van der Linden et al. (2020) recommended prevention through debunking and rebuttal, which comes with inoculation and ensuring a multi-layered defence mechanism against "post-truth" science denial. They outlined the techniques commonly used to spread misinformation such as conspiracy theories, fearmongering and fake experts. While all of these studies did not specifically harp on the significance of using minority/indigenous languages in propagating the COVID-19 vaccine campaign, they identify sundry issues surrounding acceptance and rejection of the vaccines. As Flood and Rohlf (2018) have acknowledged barriers that prevent especially indigenous people from accessing information on how global health benefits should be dispensed with, this study contends that indigenous African languages can predict people's understanding and acceptance of COVID-19 vaccines.

SALAWU'S MODEL OF INDIGENOUS LANGUAGE FOR DEVELOPMENT COMMUNICATION

The relationship between communication and development is similar to the relationship that exists between languages of communication and people's understanding of messages disseminated through the languages, and how they accept or reject the messages. This assertion reinforces the study's main objective that indigenous African languages predict how people understand and accept COVID-19 vaccines. It does this through the indigenous languages the people mostly identify with in COVID-19 vaccine campaigns, how these indigenous languages influence their understanding and actions towards the vaccine uptake, and identifying the significance of indigenous language use and challenges faced in using the indigenous languages in health campaigns. Salawu's model of indigenous language for development communication gives further clarification about this interrelationship. Salawu (2015) agrees that the language of development messages is a significant aspect of message treatment and the only language that best suits a language community for message dissemination.

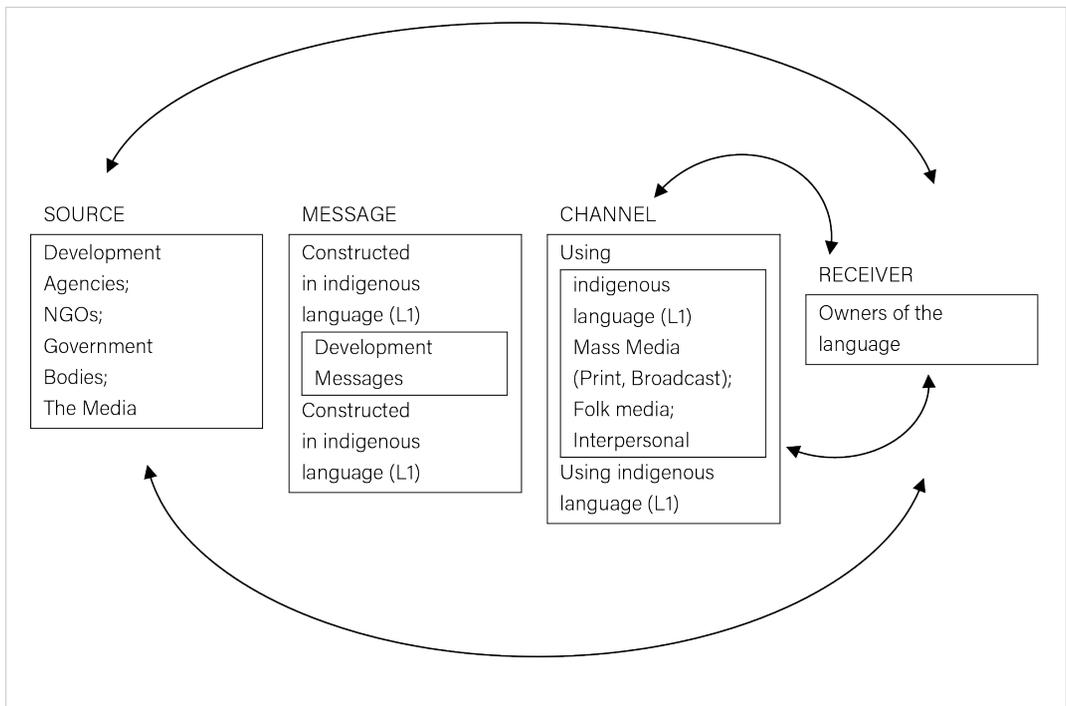


Figure 1: Model of Indigenous Language for Development Communication (Salawu, 2001)

Arguing that indigenous African languages are predictors of understanding and acceptance of COVID-19 vaccines, this model is further used to test the assumption. The different flyers produced in the indigenous languages came from different sources, such as international agencies (United States Agency for International Development, Mac Author Foundation), international media organisations (British Broadcasting Corporation), religious organisations (Redeem Christian Church of God) and government agencies (Nigerian Centre for Disease Control, SA Department of Health, Kwazulu-Natal province). The COVID-19 messages in the flyers revolve around behavioural change and how people understood the indigenous language messages and took the vaccines. Also, it considered the indigenous language nature of respondents. The channel of the vaccine message was digital flyers. The messages in the flyers were disseminated in six African languages: isiZulu, isiXhosa, Setswana, Yoruba, Igbo and Hausa.

METHODOLOGY

Contending that indigenous languages can predict understanding and acceptance of COVID-19 vaccines, and considering indigenous languages’ significance to African people’s accessing health information where foreign languages have dominated health campaign messages, this study employed the survey experiment research method. Two instruments of data gathering: were used, namely questionnaires and interviews, with the adoption of indigenous Nigerian and South African languages. These languages sought broad and diverse opinions of people with regards to indigenous language use in COVID-19 health campaigns in two selected African settings: Mafikeng and Lagos. The researcher found the survey experiment appropriate because the COVID-19 pandemic affected people worldwide in different ways, which called for the need to understand how people react to health campaigns aimed to mitigate its effects on them. The phenomenon occurred several months before 2022, the year in which the study was conducted. Pool sampling technique that takes samples from different places was adopted because respondents were drawn from different cities in the two nations, but the majority were from Mafikeng and Lagos. The technique was adopted because of the lockdown situations and peoples’ peculiar attitudes at the time with regards to their health concerns.

Three indigenous campaign flyer samples from each country, that is, six samples altogether, were added to the questionnaire administered to Nigerian and South African participants to seek their responses on the role of the languages in facilitating their interest in taking doses of available vaccines during the study period. Participation was voluntary, and participants were made aware of this from the onset. The questionnaire contained the consent note and was distributed using online and offline formats. The online format was carried out using Google Forms with links sent to the participants through various social networking sites, such as WhatsApp, Facebook and LinkedIn. The offline approach was done by printing the questionnaire and distributing it. The printed questionnaire copies were administered by trained research assistants in the selected cities (Mafikeng and Lagos) of the two countries. The research assistants went to meet people on the streets, shopping complexes/malls and campuses to administer the copies. They first discussed the questionnaire briefly with them and sought their consent before administering the questionnaire if they agreed. The use of the pool sampling technique led to a total of 305 respondents for the study. Because we were not able to get more than 105 respondents to complete the online questionnaire, we resorted to using offline physical questionnaires. We administered 100 copies each in both Mafikeng and Lagos. The distribution of respondents for online and offline participation revealed that participants from Nigeria totalled 191, while 114 South Africans participated in the study. Of the total, 304 respondents indicated the indigenous languages through which they had received COVID-19 vaccine campaign messages.

Understanding and accepting constructs were the two measurements used for quantitative data of the study. Understanding construct entailed a period of receiving information about the vaccines through the indigenous languages and determining the extent of understanding of that information. The period was measured using day, week, month and year, while understanding parameters within the construct were determined using a scale approach of *very great extent*, *great extent*, *little extent* and *no extent*. The construct of acceptance was measured using the ways the information helped the participants in the decision-making process with regards to taking the vaccines, and the exact time period of the pandemic for which the participants considered taking the vaccine as important to contain the spread of the virus. Descriptive and inferential statistics were employed for the analysis of the data. Simple frequency count and percentage, chi-square, percentile and logistic regression were specifically used for the analysis. Two South African health communication experts and three Nigerian media experts were also interviewed. This included interviews with a radio producer, a presenter and health communication experts. They were purposively chosen to determine their impressions of using indigenous languages in awareness campaigns, how effective using indigenous languages was for COVID-19 vaccine campaigns, challenges encountered and how these could be improved. The interviews were largely conducted using telephone and email communication due to the lockdown at the time. The qualitative data were subjected to thematic analysis using the study's objectives as content categories. The interview data were used to shed more light on the quantitative data.

RESULTS

In this section, the outcomes of the quantitative data for the constructs are presented. The gathered data through the questionnaire were first analysed using the stated methods of analysis. The presentation is carried out using constructs. The first part focuses on the presentation of the results of understanding the vaccine construct, while the second part entails the acceptance construct of the study. Moreover, the themes derived from the qualitative data were used to complement and interrogate the statistical data.

Understanding the vaccine campaigns

Respondents' understanding of COVID-19 vaccine campaigns was predicated on their identification of the indigenous languages used in the flyers and the extent to which they understood the messages.

Table 1: Indigenous languages of the respondents in the two countries

Language	Frequency and percentage
Hausa	23 (7.54%)
Igbo	36 (11.80%)
Igbo and Others	1 (0.32%)
IsiXhosa	14 (4.59%)
IsiZulu	22 (7.21%)
IsiZulu and isiXhosa	2 (0.65%)
IsiZulu and Setswana	5 (1.63%)
IsiZulu, isiXhosa, Setswana and others	1 (0.32%)
Others	39 (12.78%)
Setswana	34 (11.14%)
Setswana and others	11(3.60%)
Yoruba	110 (36.06%)
Yoruba and others	1 (0.32%)
Yoruba and Igbo	1 (0.32%)
Yoruba, Hausa and Igbo	4 (1.31%)
Total	305 (100%)

Table 1 establishes the indigenous languages of the respondents. In Nigeria, respondents of Yoruba, 110 (36.20%), and Igbo, 36 (11.80%), tribes identified more with their languages. In South Africa, respondents of Setswana 34 (11.20%) and isiZulu 22 (7.20%) identified more with their languages than those who chose isiXhosa 14 (4.60%). Moreover, in both countries, there were respondents who identified with a combination of these languages, though the multilingual respondent numbers were insignificant. The results show that the majority of the participants were from the dominant ethnic groups in both countries. The proportion of participation is attributable to the use of social media networking platforms and the unconscious concentration of data-gathering activities in the dominant tribes. These outcomes are further examined in Table 2.

Table 2: Percentiles of respondents' understanding of indigenous language COVID-19 vaccine information

		Indigenous languages of COVID-19 vaccine information	Percentiles						
			5	10	25	50	75	90	95
Weighted Average (Definition 1)	Extent of understanding COVID-19 vaccine information in indigenous language	Hausa	2.00	2.40	3.00	3.00	4.00	4.00	4.00
		Igbo	2.00	3.00	3.00	4.00	4.00	4.00	4.00
		IsiXhosa	2.00	2.00	2.00	3.00	4.00	4.00	.
		IsiZulu	2.00	2.00	2.00	3.00	3.25	4.00	4.00
		IsiZulu and Setswana	2.00	2.00	2.50	3.00	3.50	.	.
		Others	1.00	2.00	3.00	3.00	4.00	4.00	4.00
		Setswana	1.00	2.00	2.75	3.00	4.00	4.00	4.00
		Setswana and Others	2.00	2.00	2.00	3.00	4.00	4.00	.
		Yoruba	2.00	2.00	3.00	3.00	4.00	4.00	4.00
		Yoruba, Hausa and Igbo	3.00	3.00	3.25	4.00	4.00	.	.
Tukey's Hinges	Extent of understanding COVID-19 vaccine information in indigenous language	Hausa			3.00	3.00	4.00		
		Igbo			3.00	4.00	4.00		
		IsiXhosa			2.00	3.00	4.00		
		IsiZulu			2.00	3.00	3.00		
		IsiZulu and Setswana			3.00	3.00	3.00		
		Others			3.00	3.00	4.00		
		Setswana			3.00	3.00	4.00		
		Setswana and Others			2.50	3.00	3.50		
		Yoruba			3.00	3.00	4.00		
		Yoruba, Hausa and Igbo			3.50	4.00	4.00		

While the data in Table 1 indicates the indigenous languages of the respondents, the data in Table 2 pinpoints the extent to which the respondents understood the COVID-19 vaccine campaign messages. Using weighted average scores and considering the first quartile (25%), the levels at which the respondents understood the messages was quite different. Between the first and second quartiles, Hausa-speaking respondents' (23) understanding of the COVID-19 vaccine messages was at the high end of the measurement scale. However, analysis suggests that 75% of the 23 respondents understood the messages to a large extent. The same outcome was also recorded for Igbo-speaking respondents (36) with a higher level of understanding of the messages in the second and third quartiles, while Yoruba-speaking respondents (110) clearly resonated with the Igbo-speaking respondents, following the same pattern of quartile positioning. In South Africa, analysis shows that understanding of COVID-19 vaccine messages was largely between great and very great extent among the respondents of isiXhosa (14) and Setswana (34) languages. In all, for the weighted average parameter, analysis suggests that understanding more than one indigenous language aided to the participants' understanding of the messages. This is specifically exemplified with the case of four Nigerians in Table 1, who indicated that they understood three dominant languages (Yoruba, Hausa and Igbo) and 11 respondents who indicated understanding Setswana and other indigenous languages in South Africa (11). Overall, at the level of Tukey's Hinges, analysis indicates that 75% of participants who spoke Hausa, Igbo, Yoruba, isiXhosa and Setswana to a large extent understood the messages during the study period.

Accepting the vaccines

Measuring respondents' COVID-19 vaccine acceptance was determined by certain periods in which they had the vaccine administered and the extent to which they understood the vaccine information. Since a considerable level of understanding of the messages was found, the extent to which the respondents invariably transformed their understanding into accepting the vaccines is considered in Table 3 and subsequent tables.

Table 3: Information receiving period and taking the vaccines

COVID-19 vaccine information's receiving period	No	Yes
Today	1 (0.3%)	14 (4.8%)
Last week	3 (1.0%)	15 (5.1%)
Last two weeks	3 (1.0%)	6 (2.0%)
Last month	10 (3.4%)	24 (8.2%)
Last two months	8 (2.7%)	42 (14.3%)
Last year	39 (13.3%)	129 (43.9%)
Total	64 (100%)	230 (100%)

According to the data, 64 respondents of 305 respondents did not take any of the COVID-19 vaccines after receiving the campaign messages. Table 3 indicates that 43.9% of the respondents took the vaccines a year (2021) before the study was conducted, while 14.3% reported that they took the vaccines in the two months preceding the month that the study was conducted. This is closely followed by 8.2% of participants who took the vaccines a month before the month of the study. These results are examined further in Table 4, where attention is paid to the respondents who took the vaccines after being exposed to the indigenous language messages.

Table 4: Percentiles of respondents' taking COVID-19 vaccines after receiving indigenous language COVID-19 vaccine information during specific period

		Period of receiving COVID-19 vaccine information in the indigenous languages	Percentiles						
			5	10	25	50	75	90	95
Weighted Average (Definition 1)	Taken vaccine shots	Today	1.00	1.60	2.00	2.00	2.00	2.00	.
		Last week	1.00	1.00	2.00	2.00	2.00	2.00	.
		Last two weeks	1.00	1.00	1.00	2.00	2.00	.	.
		Last month	1.00	1.00	1.00	2.00	2.00	2.00	2.00
		Last two months	1.00	1.00	2.00	2.00	2.00	2.00	2.00
		Last year	1.00	1.00	2.00	2.00	2.00	2.00	2.00
Tukey's Hinges	Taken vaccine shots	Today			2.00	2.00	2.00		
		Last week			2.00	2.00	2.00		
		Last two weeks			1.00	2.00	2.00		
		Last month			1.00	2.00	2.00		
		Last two months			2.00	2.00	2.00		
		Last year			2.00	2.00	2.00		

Similar to the data presented in Table 2, the data in Table 4 indicate the percentage of respondents who took the vaccines in relation to the period of receiving the COVID-19 indigenous language campaign vaccine messages. From the perspective of the weighted average, analysis shows that between 25% and 75% of the 14 respondents who received the campaign messages during the day of administering the research instrument took one of the available vaccines. This also applies to the respondents who received the messages a week, two weeks, in the past two months and a year before the study. This result is further reinforced by Tukey's Hinges' outcomes, where above 25% of the respondents indicated taking the vaccines after receiving the messages during the periods indicated earlier.

Table 5: Predicted possible number of times of taking COVID-19 vaccines after understanding its indigenous language campaign messages

	B	S.E.	Wald	df	Sig.	Exp(B)
Very Great Extent			2.898	3	.408	
No Extent	-.612	.868	.497	1	.481	.542
Little Extent	-.559	.422	1.750	1	.186	.572
Great Extent	-.451	.310	2.116	1	.146	.637
Constant	1.528	.230	44.122	1	.000	4.609

Meanwhile, since understanding respondents' taking of any of the vaccines might not give a possible number of times of considering taking the vaccines after being exposed to various indigenous messages, the data in Table 5 are the outcomes of logistic regression analysis conducted to know how often the respondents might have decided to take the vaccines. Analysis suggests that at the very great extent (Wald=2.898. df=1, P>.408) and great extent (Wald=2.116. df=1, P>.146) scales, the respondents were more than twice as eager to take the vaccines. Analysis further suggests that despite the limited understanding of the messages, a number of respondents were more than once willing to also take any of the available vaccines (Wald=1.750. df=1, P>.186). However, none of this eagerness could be confirmed as central to taking the vaccines when one considers the level of significance, which is higher than expected at a p-value of <.05.

Table 6: Extent of understanding indigenous language COVID-19 vaccine information by country

	South Africa	Nigeria	Total
No extent	4 (57.10%)	3 (42.90%)	7 (100%)
Little extent	25 (62.40%)	15 (37.50%)	40 (100%)
Great extent	44 (34.60%)	83 (65.40%)	127 (100%)
Very great extent	41 (31.30%)	90 (68.70%)	131 (100%)

Since data were gathered in both Nigeria and South Africa, Table 6 shows the extent to which respondents in the two countries understood indigenous language COVID-19 vaccine messages. It is obvious that the level of Nigerian respondents' understanding of indigenous language COVID-19 vaccine information was better than their South African counterparts. The difference can be partly attributed to the disparity in the sample size of the two countries.

Table 7: Association between ways in which indigenous messages have helped in understanding the vaccines and taking them

	Value	Df	Asymptotic significance (2-sided)
Pearson Chi-square	89.578 ^a	95	.638
Likelihood ratio	105.451	95	.218
N of valid cases	298		

The data in Table 7 summarises the previous outcomes by revealing the link between the themes of the messages and the respondents' interest in taking the vaccines. The need to avert the spread of the virus and protecting lives were mostly reported by the participants as the themes that motivated them to take any of the vaccines. From the data in Table 6 and considering the Pearson Chi-square value of 89.578a at the degree of freedom of 95 and the asymptotic significance (2-sided) of .638, it could be concluded that indigenous language COVID-19 vaccine messages are ineffective in driving acceptance of the vaccines in Nigeria and South Africa because the expected p-value of <.05 was not met. This result suggests that the participants might have actually understood the vaccine campaign messages in

other languages. In other words, the previous outcomes that suggest some level of understanding of the indigenous language campaign messages need to be accepted with caution.

USING INDIGENOUS AFRICAN LANGUAGE MEDIA COVID-19 VACCINE CAMPAIGN

Health communication dissemination in Africa has had the misfortune of being disseminated mostly in colonial languages. This occurs in African contexts where indigenous languages predominate, both in rural and urban populations. Consequently, as part of this study indigenous language experts and media scholars' opinions were sampled on the significance and challenges of employing indigenous African media in COVID-19 vaccine campaigns in Africa. On the significance of indigenous languages to vaccine campaigns, an interviewee submitted that:

When the message and information about the vaccine started coming in indigenous languages, there was a better understanding of what the vaccine can do and why people should be vaccinated; the number of people who voluntarily went to the vaccination centres increased tremendously. So using indigenous language for messages in creating awareness is like a game changer in the acceptance rate among the people.

In many African societies, English dominated COVID-19 campaigns at the beginning, such that people found it difficult to relate to the enormity of the pandemic until health agents switched to people's indigenous languages. The use of the colonial language of English is dogged with an avalanche of misinformation and misconception about COVID-19 vaccines and its effects. There are reasons indigenous languages should be adopted in vaccine messages. For one, an interviewee said, "if you want to change my thinking about your idea for the better, put your idea in my language. If you speak my language, you have bridged the gap of misunderstanding and misinformation". Secondly, the sheer number of populations can be reached largely through their own languages, which indicates that using their own languages for vaccine campaigns is effective. The interviewees reckoned that using people's indigenous languages made them accept the vaccine and consider being vaccinated. Furthermore, they encouraged others to get vaccinated. Conviction comes with effective communication through indigenous language use.

The experts who were interviewed, however, also highlighted the challenges in adopting indigenous languages for COVID-19 vaccine campaigns. One complained that convincing campaign producers to employ people's indigenous languages to disseminate vaccine messages was strenuous as they were used to the English language. Another interviewee further explained that:

... at the level of content generation, the producers of these campaign messages don't contact or consult those that have thorough knowledge and understanding of the indigenous language(s). This most times makes the messages to be full of mispronunciations of local names.

In addition, there is the challenge of scarcity of indigenous language translators. An interviewee noted the "difficulty in translating some new COVID-19 registered words. It required consultation with experts to adapt generally acceptable words". This submission exposed a lack of synergy between indigenous language experts and producers of COVID-19 vaccine campaigns.

DISCUSSION OF FINDINGS

Based on the assumption that indigenous African languages facilitated better understanding and acceptance of COVID-19 vaccines, the following key findings were noted. Respondents identified mostly with vaccine messages in Yoruba, Igbo, Setswana and isiZulu, with a few respondents able to access a combination of two or more vaccine messages. Also, respondents of Yoruba, Hausa, Igbo, isiXhosa and Setswana largely understood COVID-19 vaccine messages. In addition, multilingualism aided some respondents' understanding of the vaccine messages in Nigeria and South Africa. This underscores the

significance and advantage of being literate in multiple indigenous languages.

Most of the respondents had already taken the COVID-19 vaccine before they were exposed to the indigenous language messages. Yet, they were willing to take the vaccine with limited understanding of the messages. Although their eagerness was not central to their taking vaccines, it shows that indigenous language COVID-19 vaccine messages are ineffective in driving acceptance of the vaccines in Nigeria and South Africa. It is possible that respondents already understood COVID-19 vaccine messages in non-indigenous or the colonial language of English, which may have driven their willingness to vaccinate. Other factors also appear to be responsible for people taking the vaccines. However, indigenous language broadcasters concur that using indigenous languages in COVID-19 vaccine campaigns increased the number of people who took vaccines, as people better understood the health messages in their own languages. Unfortunately, health campaign creators do not usually use indigenous languages to disseminate messages to people. It maybe that some campaigners were not used to deploying indigenous languages in health campaigns or did not know their effect on the people. Also, there is a dearth of language translators, especially from English to indigenous African languages, which might have impacted on the quality of vaccine messages disseminated to people. In all, this study shows that although indigenous language use in COVID-19 vaccine campaigns helped respondents to understand the messages better, it did not have much effect on respondents' acceptance of COVID-19 vaccines, as most had already taken the shots before being exposed to the messages. This may have been due to insufficient indigenous language vaccine campaign coverage, which might arise from campaigners' disinterest with indigenous language campaigns and translators' insufficiency.

Existing studies (Chkaipa & Gunde, 2020; Flood & Rohlof, 2018) have attested to the significance of indigenous languages in the success of health campaigns. The use of indigenous languages simplifies message understanding and can lead to the participation of people who might be disenfranchised due to language inaccessibility. Particularly, the findings of Obiorah (2021), Ude-Akpeh et al. (2020) and Olubiyo et al. (2013) affirm the importance of indigenous African languages in COVID-19 campaigns because it made people identify with and believe in the messages. Largely in African contexts, the collaboration of science and indigenous African languages needs to be cultivated to make a meaningful impact on people's lives, culture and environment (Kago & Cissé, 2022). With regards to whether indigenous language COVID-19 vaccine messages influenced people's acceptance and taking of vaccines, only Dai et al. (2021) and Dzinamarira et al. (2021) emphasise effective communication strategy significance, which does not specifically refer to indigenous language use in COVID-19 vaccine campaigns. Most reviewed studies (Adediji-Adenola, 2022; Iliyasu et al., 2021) attribute vaccine acceptance or rejection to socio-demographics, risk perceptions, comorbidities, fear, safety, efficacy and rumour. Since indigenous language COVID-19 vaccine messages were not significant in respondents' acceptance of vaccination, it may be argued that other factors, such as the ones listed above, may be responsible for people taking the vaccines. More so, the quality of indigenous language vaccine information (Tsao et al., 2021) might be insufficient for people to be influenced by it. This assertion could be due to the scarcity of good translators from English to respective indigenous African languages, as the study's findings have established.

Salawu's model of indigenous language for development communication shows that indigenous languages are germane to understanding the message development for the target audience. This assertion is corroborated by the study's findings that when people identify with indigenous languages of COVID-19 vaccine campaigns, they understand the disseminated messages. However, the sources of development communication may be incapacitated by a lack of competent workers, such as translators, and real development-driven campaigners who may be averse to using local languages for development communication. The quality of information in terms of capacity for people's acceptability will be lacking. The drawback of the model lies in the fact that it cannot be used to predict extraneous factors as interfering with the effectiveness of indigenous language use for development communication.

CONCLUSION AND RECOMMENDATIONS

The study contends that indigenous language COVID-19 vaccine messages influenced people in Nigeria and South Africa to get vaccinated. Findings show that even though indigenous languages aided people's understanding of the vaccine messages, they were not strong enough to influence people's decision to get vaccinated. It reveals that other factors might be responsible, which is supported by the empirical studies reviewed. From the submission of health campaign and media experts, the scarcity of competent language translators and campaigners' dismissive attitudes towards indigenous African language use might indirectly affect the quality of the indigenous language vaccine messages. The onus of promoting indigenous African language use in health and development communication is on health campaigners and message designers. People can identify with and understand their languages. The communicators need to be trained in translation skills and the message designs needed to ensure a meaningful impact on their target audience. Beyond this, it is evident that indigenous language use is not the only parameter for measuring people's acceptance of COVID-19 vaccination. More studies could still be carried out in other African countries to determine how indigenous languages have been used in COVID-19 vaccine campaigns. Also, new studies could attempt to look at how these other factors have influenced the acceptance of the COVID-19 vaccine messages. This kind of study encountered difficulty due to the general lockdown that arose from the COVID-19 pandemic. Getting people to attend to survey questions was difficult, despite technology and interconnectivity. It could be presumed that people may have been disturbed psychologically to the extent that they could not interact with fellow humans socially. This may have caused them to remain quiet or to disengage from other people. This situation may have been further compounded by people's economic downturn during this period.

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Voters' attitudes towards political parties' communication: the case of Diepsloot voters in Gauteng, South Africa

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Abstract

This article investigates how South African political parties' communication strategies influence voters' decision-making. The study sought to understand the effects and influences of political communication approaches on voters' decision-making processes. The election periods used for the analysis are the 1999 to 2019 general elections. The focus area of the study was Diepsloot, a densely populated township in the north of Johannesburg in Gauteng, South Africa. Furthermore, the researchers also assessed whether Diepsloot residents understood political communication, especially during an election period. The research focused on the African National Congress (ANC), the Democratic Alliance (DA) and the Economic Freedom Fighters (EFF). These parties were the top three when it came to electoral support in South Africa when this study was carried out. Data were gathered using open-ended telephonic interviews with voters in Diepsloot. While the study found that political communication affected a voter's choice, it also revealed that a voter's attitude towards these political communication interventions was one of caution. The article concludes that political communication is one of many discernible variables influencing voters when voting for a political party.

Keywords

ANC, DA, Diepsloot, EFF, Gauteng, political communication, political parties

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INTRODUCTION

"Political communication" is a broad term that encompasses news about political issues, institutions and politicians (Van Aelst et al., 2017). Kaushal (2018) places the spread of information and messages and how that influences politics, the media, policymakers and citizens in the definition of the term. These messages are produced by politicians, political parties and the media (McNair, 2017). Generally, this form of strategic political communication is meant to organise purposeful management of information and communication to reach the political objectives and to get the electorates to consider them on the ballot (Strömbäck and Kioussis, 2014). Makananise (2023:53) also points out that "communication strategies to attract potential voters could include posters that may be distributed during canvassing, displayed on street poles, or posted and accessed on social media accounts." Although these are not the only forms of political communication, they form part of the broader political ecosystem, which is found in most political environments and which provide widely available political information. Political communication research remains a source of much inquiry among political and communication scientists (Glenn and Mattes, 2011; Pfetsch and Esser, 2012; Van Aelst et al., 2017). From a democratic perspective, some of those studies were interested in understanding how the shift in political communication and information impacts the

character and quality of democracies (Van Aelst et al., 2017). From a communication perspective, the subject addresses how communication systems enable and empower the general citizenry towards their political behaviour (Barbara and Esser, 2014). On the former, Pfetsch (2009:344) adds that "democratic systems of government depend on political action and political decisions being publicly communicated and legitimated". For that reason, the researcher adds that structures of political communication are an essential variable in laying out the public representation of political objects.

According to Pfetsch (2009), much of the scholarly debate and development in political communication in recent democracies is focused on Americanisation and globalisation. However, Norris (2020) has found that even newer democracies worldwide have seen growth in political communications. In South Africa, research around political communication has received accelerated attention in the last few years. Researchers continue to grapple with how political communication finds expression in the country's public sphere and the dynamics surrounding this (Karam and Mutsvairo, 2021; Tyali and Mukhudwana, 2020). According to Kaushal (2018), political communication plays out through mass media and the general interpersonal relationship or communication between political leaders and their supporters. It further looks at the dissemination of such information and its effects on the audience. Blumler and Kavanagh (1999) state that political leaders often are interested in talking only about issues that matter to them and the general politics of what sets them apart from their political foes while forgetting the need to engage their supporters. Van Aelst et al. (2017) further suggest that for democracy to thrive, the general citizenry needs to be furnished with political information to make informed political choices. Some of those decisions concern whether to vote or not and who to vote for during elections. The term that encompasses this is called voting behaviour and is concerned with "the ways in which people tend to vote in public elections and the reasons they vote as they do" (Kaushal, 2018:08). While research on political communication continues to receive attention among scholars in a global context, there has not been much work done from a South African context focusing on its effects on voting behaviour.

Against this background, this article outlines the outcomes of a study by Hlungwani in 2021 that investigated the effects of political communication on voters' decision-making processes. The study also analysed voters' attitudes towards political parties' communication messages. To delimit the scope of this probe, the researchers focused on Diepsloot, a densely populated township in the north of Johannesburg, South Africa.

The focus was the top three political parties in South Africa, namely the African National Congress (ANC), the Democratic Alliance (DA) and the Economic Freedom Fighters (EFF). Focusing on the question "How do political parties' pre-election communication strategies influence a Diepsloot voter voting decision?", the study was interested in understanding whether Diepsloot voters vote for a party based on its communication strategies and messaging and what kind of communication strategies the parties (ANC, DA and EFF) used in the past (1999¹ - 2019) national and provincial elections in South Africa. The communication strategies encompass the construction and dissemination of political messages, the methods used to disseminate such messages, be it posters, the use of party websites, the use of paid mainstream media content, and the face-to-face method, also known as door-to-door campaigning.

The findings of this study are not meant to be conclusive or provide general evidence on the effects and influences of political communication approaches on voters' decision-making processes in South Africa. However, the findings do provide an overview of what goes into the minds of some voters when deciding which political party they vote for. This paper is organised as follows: first, the South African political landscape is presented in the context of electoral developments, background information on Diepsloot, which is the area of this study, and the political formations involved in political communication. This is followed by a summary of voting behaviour theories. The methodology critical to this study is

1 In the context of the EFF, the focus was from 2013 as the political party was only formed that year.

then presented, followed by the findings on the effects of political communication on voters' decision-making processes. The findings discuss emerging themes to unravel voters' attitudes towards political parties' communication messages. In the concluding remarks, we argue that there is a need to explore other elements of political communication, such as satire, to establish whether it has an impact on voter attitudes and behaviour.

LITERATURE REVIEW

South Africa political landscape

An analytical discourse on South Africa's political landscape shows a shift in governance systems amid changes in global political models. For instance, the era of dominant party hegemony seems to be approaching its last days, with political formations finding mechanisms to form collaborative models in the three spheres of government (Makole et al., 2022). It was after the 2016 local government elections, when the ANC lost control of metros such as Tshwane, Johannesburg and Nelson Mandela Bay, that many saw a clear illustration that dominant party politics bearing a clear majority in political councils would soon be a thing of the past. As South Africans head to the 2024 general elections, concerns partly necessitated by the ANC's decline in electoral support had been raised about the possibility of a coalition in the national government. In the 2019 elections, the ANC came out victorious with an all-time low percentage of 57%, the first time it had achieved less than 60% since it came into power in 1994. Alence and Pitcher (2019) argue that the party's performance in those elections signalled that rebuilding public trust in government takes more than electioneering slogans but actions. The main opposition, the DA, achieved 21% of the votes in 2019, with the EFF walking away with 11% of the votes.

By the ANC's standards, the results of the 2019 elections were not impressive, as the party has always shown its electoral dominance since the first democratic elections in South Africa. Cyril Ramaphosa's promise of a "new dawn" has faced many challenges. Observers have argued that his main challenge was to collapse the networks of corruption and dissent without exposing himself as a typical politician who was out to purge figures believed to be aligned to his predecessor, Jacob Zuma, some of whom are members of the party's national executive committee (Harvey, 2023). Maseremule and Ndletyana (2016) posit that the ANC appears only to be a ruling power in the sense of political numbers and lacks political hegemony, since its support in the urban areas is declining while it retains control in rural areas. The results of the 2021 local government elections are testament to that. Amid all of this, researchers have found that the current model of coalition arrangements needs to find policy and regulatory expression to avoid policy confusion in government and the collapse of coalitions (Bradshaw & Breakfast, 2019). A solution, according to Makole et al. (2022), is putting in place coalition rules for all partners in coalition arrangements. In many areas across the country, violent protests continue to erupt in response to residents' unhappiness over the pace and quality of basic service provisions. According to Alence and Pitcher (2019), this cements the concerns that South Africa is measured as one of the most unequal nations in the world, with a steady increase in unemployment figures and income inequalities.

Ahead of the 2019 national elections, a central focus of this study, Ramaphosa campaigned on the promise of bringing what his team termed a "new dawn" that would ensure that the ANC reclaimed the glory and values of past leaders such as Nelson Mandela (Alence & Pitcher, 2019). The coining of the term "new dawn" was not just Ramaphosa's promise of efficient governance but was also an acknowledgement of what many social commentators have termed "the nine wasted years" during which former President Jacob Zuma led the country into what some regarded as a dark period in the country's history (Langa & Shai, 2020). During this period, state-owned enterprises were also in a dire crisis, with the country's power utility Eskom failing to end the energy crisis amid widespread rolling blackouts, an issue many have touted as a threat to economic growth and foreign direct investments (Desai, 2018).

Going into the 2024 general elections, which we argue presents a pivotal point in the country's history of electoral democracy since it has been 30 years since the first democratic elections, one of the concerns raised by politicians revolves around voter apathy, particularly the low participation of young people in

the country's electoral and democratic processes (Enaifoghe & Dlamini, 2021). Even with concerns raised, some see youth voter apathy as an indication of a broad political problem or a national crisis. It has been categorised as a suggestion that young people have lost an appetite for democratic processes such as elections (Chauke, 2020). In the 2021 local government elections, of the almost 1.8 million young people between the ages of 18 and 19 who were eligible to vote, about 90% of them did not register, while in the 20–24 age group, less than 20% of them registered to vote (IEC, 2021). Oyedemi and Mahlatji (2016) have found that factors varying from unemployment to the realities of poverty and generally being demoralised are some of the reasons young people do not vote. Young people's participation is considered an essential aspect of the country's political future.

Diepsloot

The study underpinning this article was conducted in the informal settlement of Diepsloot. The township is a densely populated settlement in the north of Johannesburg. It features government-subsidised housing, shacks and personally financed and built brick houses (Madienyane, 2013). The area was developed in 1995 after some residents of a temporary camp were relocated from an unregulated dwelling on a private farm called Zevenfontein (Carruthers, 2008). Mangava (2018) states that the area consists of Diepsloot West Extensions 1–13. Like many informal settlements across the country, Diepsloot often battles service delivery protests, which many (Siphumeze, 2015) say results from the area's growing population. According to Bénit-Gbaffou (2005), locals of the area battle to find employment opportunities in various industries. This means that they cannot participate in the country's economic system. The area's rate of violence and service delivery protests that residents continue to experience are some of the issues that worry them.

Furthermore, Bénit-Gbaffou (2002) argues that such violence results from a lack of government intervention in the community regarding service delivery. High unemployment and many other issues make the area a fertile ground for social and political research. Broadly, political leadership is seen as a significant role in ensuring that service delivery, such as electricity, sewer systems, housing, sanitation and water, is possible in communities (Siphumeze, 2014). Generally, South African voters have tended to choose political leaders they believe will meet their expectations (Naidu et al., 2006). In cases where voted leaders fail to deliver on the electoral promises, the residents become angry and disappointed. Such disappointments breed a lack of trust and, in some cases, residents engage in protests (sometimes violent protests) to register their dissatisfaction with service delivery programmes (Siphumeze, 2014). Some researchers have found that violent unrest could signal a form of communicating frustrations to a government that understands only violence (Hough, 2008). The study underpinning this article was interested in understanding the attitudes of Diepsloot voters towards political parties' communication messages. The researchers only looked at the top three political organisations: ANC, DA and EFF. The ANC is the national governing political party, while the DA is the main opposition. The EFF is a splinter party formed and led by former ANC members (Julius Malema and Floyd Shivambu). In the following section, the discussion centres on political communication and agenda setting.

Political communication: The media setting the election agenda

The effects of the media on voting behaviour and preferences have always dominated research on political communication and agenda (McLeod, et al. 2009). While voting behaviour theories can better explain the voting exercise and what voters consider when voting, the mass media, with its role in informing citizens and setting the agenda, can be regarded as one factor influencing voting behaviour (Tyali, 2017). In general, political communication involves the interactive processes of political information and how the information is shared. It works differently in varying political setups and affects mass political behaviour and how political systems function (Pfetsch & Esser, 2012). However, in most political systems, political communication research is interested in the public political communication environments in which politicians use mass media to communicate their messages (Habermas, 2006; McNair, 2017). According to Hopmann et al. (2012:175), "the basic idea of agenda-setting studies is that the salience of issues on the media agenda influences the salience of issues on the public agenda, that is, in the minds of voters." When

it comes to voters' perspectives, their exposure to political messages is important in helping to inform their political roles and impacts their capacity to make informed voting decisions. One of these is voting for their preferred political parties or candidates.

Many researchers who marry communication and political sciences research seek to establish the extent to which communication-related variables, such as news coverage about politicians and their political utterances, affect political outcomes such as voting behaviour and voters' attitudes towards the candidates (Cantarella et al., 2023; Hayes et al., 2011). These studies reveal that political communication directly impacts voters and their attitudes, but that effect is mediated (Enli & Skobergo, 2012; Habermas, 2006). One of the mediating factors in this study is agenda setting. Regarding the effectiveness of political communications and campaigning to win voters, Herrnson and Campbell (2010) states that issues such as the political agenda in which the elections are held, the mood of voters and the efforts of those standing for elections impact the outcome. The same can arguably be said about the 2019 general elections in South Africa, where President Cyril Ramaphosa's ANC won with a marginal 57%, a drop from the 62.5% that the party had achieved in 2014. This occurred despite his campaign message being regarded as one of the most influential since the dawn of democracy (Mehale, 2022).

Some social scientists say this can signal that it takes more than election slogans to garner electoral support and rebuild public trust (Alence & Pitcher, 2019). Political parties and their leaders might not have the same influence or capacity in their messaging to set the media agenda but, by reading through and listening to their campaign messages, it is possible to find elements of agenda-setting. Hopmann et al. (2012:174) posit that "it is important for both the political scientist and the political parties to understand better the factors that condition the ability of parties to put their preferred issues on the media agenda". Agenda-setting should be seen as a filter that mass media plays in cases where they select and portray issues (Yang et al., 2016). Such action could lead the audience to believe that the widely covered issues are more prominent and important than the others because the mass media is a channel through which some of these messages are communicated. It can influence the salience of these messages (Scheufele, 2000).

THEORETICAL ORIENTATION

Voting behaviour theories

The focus on voting behaviour theories is expanded in the sections below with a broader look at the theories that help explain electoral voting behaviour. To get a clear theoretical background of voting behaviour, the researchers used voting behaviour theories, such as Rational Choice Theory (Downs 1957), the Psychosocial Theory of Voting Behaviour (Campbell & Kahn, 1952), the Sociological Theory of Voting Behaviour (Berelson et al., 1954) and the Theory of Planned Behaviour (Ajzen, 2011), as a yardstick to understand what voters consider when voting for a political party. In their nature, elections play a very important role in deepening democracy because they allow those governed to choose who they want to have govern them (Albert, 2007). That, in essence, is part of participatory democracy and forms an integral part of a fully functional democracy (Albert, 2007). Elections allow citizens to choose the candidates they deem fit to run the affairs of their countries. Kakuba (2011) sees this as one of the critical roles of citizens in democratic setups and political environments: to be given the privilege to make decisions about political issues.

Studies on political and voting behaviour are multifaceted and show that different factors influence voting for a political party or a candidate (Hindess, 1984). There are, however, many factors that influence voting behaviour. Therefore, the theoretical framework underpinning this analysis uses a combination of four theories to contextualise and explain voters' attitudes towards political parties' communication messages. The theories, as also noted above, are the Rational Choice Theory, the Sociological Theory of Voting Behaviour, the Psychological Theory of Voting Behaviour and the Theory of Planned Behaviour. In his initial conceptualisation of the Rational Choice Theory in his seminal work titled *An Economic Theory of Democracy*, Downs (1957) projected that human beings are ordinarily rational in their choices as a

means to reaching their preferred or desired ends. The theory assumes that voting behaviour is a result of what people expect to receive from their actions. Following Downs's work, a great deal of scholarship was done to understand what drives voting behaviour (Hindess, 1984). Broadly, issue-based voting and policy design consideration underpin the Rational Choice Theory. In its analogy, the theory likens the relationship between politicians and voters to that of two parties in which each of them wants to benefit in a relationship. The theory sees voters as rational beings who base their decision to vote on their assessment of what is important and not important to them. While it is possible to see elements of the models in voters, it can also happen that more than one of them could be seen in voters at the same time, though it may vary in showing.

In the context of the research study underpinning this article, we argue that the Rational Choice Theory allows researchers to grapple with political communication and how voters make sense of that. As Hindess (1984:256) points out, "Political behaviour may sometimes depart from the canons of strict rationality, but such departures are not thought to pose a serious problem for the rational choice approach". Some theorists posit that people vote for a political party that promises some materialistic benefit to them (García-Rivero, 2006; Koter, 2013;). However, other studies have reached a different conclusion and found that some voters decide because they identify with a certain political party over others (Berelson et al. 1954). The psychological theory posits that motivational factors lead a voter to vote. According to Ahmad, Bhatti, Yousaf (2020, 09) "the voters feel motivated to solve the issues of the community, locality, or country".

The Psychological Model Theory of voting behaviour, with its focus on partisanship, postulates that voters express their preferences to show their loyalty to the political parties of their choice. This theory explains that partisanship plays a critical role with voters who are somehow attached to a certain party due to their partisan position on that party (Mahsud & Amin, 2020). In the context of a country like South Africa, where some citizens have expressed unhappiness with the performance of the governing ANC (Dubbeld, 2017), the above could be one of the reasons the party is holding onto power, despite its perceived bad performance in government. According to Mayer and Perrinea (1992), the model details that party identification is an essential determinant of voting, and that partisanship plays a central role in maintaining lasting political relationships between the voter and the party they identify with, irrespective of whether that party delivers on its promises (Antunes, 2010).

Because one or two theories might not be enough to explain voting behaviour in a society that is made up of different people with varying viewpoints on political issues, it is wise that researchers employ other theories. The Sociological Theory places individual voters within their social structure as a determinant for their voting behaviour (Mahsud & Amin, 2020). The theory finds that voters' decisions result from their social background, religion, family traditions, ethnicity, personality and attitude towards certain issues (Berelson et al., 1954). According to Mahsud & Amin (2020), while there are beliefs that voters decide based on political communication and sometimes the personality of the candidates, the social groups of which voters are a part play a role in their decision-making process.

The Theory of Planned Behaviour was also employed in the study to understand voter behaviour. Early studies on what constitutes voting behaviour revealed that many voters were not adequately informed about politics and were ignorant of the policy positions of the political parties they supported (Hindess, 1984). Mahsud and Amin (2020) admit that voting behaviour is a complex phenomenon whose determinants are difficult to explain in absolute terms. The empirical validity of the theoretical approaches above has always been the subject of research undertakings and political discussions (Feddersen, 2004). That, however, does not mean that the models of voting behaviour, whether used alone or jointly, cannot create a framework to understand voter behaviour. It is important to note that history and context can provide researchers with the lens through which they can understand voter behaviour. In the context of this study, the theory's application was based on its applicability to making sense of what motivates voters to vote for a political party: political communication or their intention.

METHODOLOGY

To make sense of the research data, the study followed a qualitative research methodology through interviews to gather data about voters' attitudes. The study underpinning this paper employed the qualitative method, which, according to Brynard and Hanekom (2006), produces descriptive data mostly collected through in-depth interviews, case studies, participant observation and questionnaires. One of the aims of the study was to investigate the effect of political communication strategies on voting behaviour (Hlungwani, 2021). The qualitative paradigm with its focus on how people think, behave and deduct meaning from issues assisted the researchers to probe the attitude of Diepsloot residents to political communication and their voting preferences (Bellamy, 2011). Because it is almost impossible to study an entire population using in-depth interviews with respondents, a purposive sampling technique was used to sample 35 research participants, 30 of whom had voted before.

The selection criteria for the research participants from the residents were that the respondents had to be residents of the area, of an appropriate age (18 years) to vote and be able to provide their own consent without an adult's supervision. The race of the respondents, as was the case of many residents in Diepsloot, was Black. Mangava (2018) posits that such is the result of the apartheid spatial planning that passed laws that forced Black people to settle in the outskirts of cities, a setup still prevalent to date. It would have been very challenging for the researchers to interview all the residents of the area under probe. Ahead of the 2019 national and provincial elections, South Africa had over 100 active political parties registered with the Independent Electoral Commission (IEC). According to the commission, the elections had 48 political parties standing for election, an increase of 39.6 % from the 2014 elections (Madinga et al., 2020). That makes it impossible to study all the political parties. For that reason, only the ANC, DA, and EFF, which were the top three political parties when this study was carried out, were studied. This decision was taken by looking at their electoral support and their vibrant political cultures, as they dominated the political sphere in South Africa at the time. This exercise required the researchers to plant themselves in the area's political sphere to understand the neighbourhood as a complex political community.

To ensure that the exercise achieved the study's aims, a social analysis of the area was done. The context of this is important because it exposed the political and socially diverse nature of the area and its surroundings. For instance, the community of Dainfern, which overlooks Diepsloot, is a very affluent suburb that exposes the extreme opposites in various communities across the country. The COVID-19 pandemic almost disrupted data collection with its regulations around movements but, fortunately, the researchers visited the area while selecting the case study. Even before that, the researchers were familiar with the place and its socio-economic challenges. Data in the study underpinning this article were collected through telephonic interviews and recorded with a voice recorder app embedded on the phone. This was followed by transcription for analysis purposes. Individual interviews were about two hours long. The benefit of conducting the interviews using an audio recorder was that the interviewer could focus on the asking of questions and not worry about transcribing because the content would then be retrieved after the field day (Kvale, 1999). The raw data were then analysed using thematic analysis, with the researchers reading the transcripts to make sense of the data and establishing units of significance that could represent the subjective experiences of the respondents.

During the analysis process, the researcher identified and discussed the major themes that emerged during the interviews with the selected respondents. The section below details the findings of the study.

FINDINGS AND DISCUSSION

This section details some suggestions found during the interviews with residents of the area. In South Africa, the election season is rich with political activities, such as campaigning, and voters choose their preferred political parties based on several things. From the findings of the study underpinning this article, there are varying viewpoints on what constitutes political communication and how politicians should use communication during elections. This makes it difficult for one to gauge what constitutes effective political communication. In the case of the national and provincial elections of 2019, political campaigns

comprised very different messaging, most of which went against one another. The ANC promised renewal and rooting out corruption, the EFF stuck to its land expropriation without compensation message of “our land and jobs now,” and the DA highlighted the ANC as a corrupt party and then evoked the “One South Africa for all” in its campaign posters – an issue widely seen as an attempt to create one united South Africa (Mpofu, Matsilele, & Nyawasha 2021).

The ANC also accepted its shortcomings by campaigning around what it termed its renewal strategy due to the myriad of issues that affected its image. The biggest drawcard was newly elected party president Cyril Ramaphosa with the message “New Dawn”, which some saw as the party admitting its shortcomings during Jacob Zuma’s tenure (Hlungwani, 2021). The sub-sections below offer a more detailed discussion and analysis of these approaches by political parties.

Political rhetoric

Due to declining voter turnout, politicians devise ways to revitalise political participation by strengthening their political engagements (Calhoun, 2013). This is also done to mobilise electoral support. Respondents in this study felt the communication from politicians was full of rhetoric to garner electoral support. Participant #1 pointed out that the political communication employed by politicians was manipulative and used rhetoric to steer their minds towards supporting them:

The election season gives politicians an opportunity to make promises just to get votes. I think voters should take all campaign messages with a pinch of salt and analyse them against what the party has done thus far. The ANC is the biggest culprit in this. One measure is the party’s ability to provide service delivery and its willingness to be held accountable by citizens and own up to its shortcomings.

The reference “pinch of salt” could mean voters understand that political parties use rhetoric to win electoral support. The ANC used its “a better life for all” rhetoric in its campaign messages and posters. The rhetoric echoes its 1994 election campaign where the party won the elections with a majority of 62%. According to Mehale (2022), the “a better life for all” message evoked a sense of fighting for equality among South Africans. “Such a message was crucial because South Africans, particularly black people for the past years, did not manage to get equal opportunities as did the white minority” (Mehale, 2022:94). For some political scientists, low electoral support could signal loss of trust in political leaders from the voters (Mattes et al., 1999; Ryabchuk, 2016). However, this study argues that such a conceptual distinction could be flawed because, despite almost three decades of majority governance, the ANC still received the biggest margin of electoral support from voters, an issue political scientists say is caused by a lack of better alternative (Mattes et al., 1999; Ryabchuk, 2016). Participant #2 in this study noted the following:

Many political parties lie their way into our hearts as voters, and we unfortunately fall for their rhetoric because many of us are desperate for service delivery where we live. The issue of unemployment and poverty also play a part in the whole exercise of politicians lying to us.

The response from Participant #2 above highlights the fundamental part of the relationship between politicians and voters that ought to be founded upon trust. However, much as there is a need to establish trust between the two parties, Albert (2007) explains that the role of rhetoric is to evoke strong emotions and give the candidates an advantage in bridging the gap between the real and the imaginary world, which they want voters to envisage. This messaging appeals to some voters, such as that noted by Participant #3:

The EFF’s rhetoric is a big factor in making them popular, and I think most have realised this and are tapping into it to appeal to the needs/wants of the masses. Rhetoric is a

powerful tool that has the ability to increase visibility and create awareness on a particular subject. I feel that it can be used as a contributing factor in popularising political parties and their campaigns among voters.

Detailing the reasons they vote, Participant #4 below explains that messages from political parties are full of negative campaigning towards other parties that are also contesting elections. In recent times, unconventional campaigning, such as the DA's burning of the country's flag ahead of the 2024 national and provincial elections done through paid media advertisements on television, radio and newspapers. Political parties produce content that seeks to tarnish the name of their opponents by highlighting their failures.

The DA will tell you why not to vote for the ANC, the EFF will harp on about WMC and race, the ANC will attempt to highlight its success as the governing party. Generally, The EFF's racist rhetoric certainly impacted my decision not to vote for them in the previous elections. Their anti-Indian messaging felt exclusionary.

These are some of the attitudes voters had on the campaign messages delivered by political party leaders. With its promise of a clean government, the DA hammered on the credibility challenge the ANC faced under its former leader, Jacob Zuma (Africa, 2015). A study by Davis (2001) revealed that political parties that invoke an exclusive "us and them" rhetoric in their election campaigns do better than those that attempt to provide a wider umbrella of a "catch-all" approach. Such a finding is an important variable in a party with a divided racial past. Davis (2004) states that political parties must have realised that one of the most efficient ways to mobilise electoral support is through the play on voters' fears and aspirations associated with their race. Africa (2015) says that in democratic South Africa, the demographic traits of the electorate are normally blended into the curation of electoral strategy to form stereotypes and prejudice. While that is attractive to certain citizens, Participant #5 viewed it as a sensitive issue:

Certain rhetoric can be attributed and even expected of a particular political party. While it may make them popular amongst supporters, it can also desensitise non-supporters.

Observing many ANC leaders while addressing voters, they always invoked a fear of regressing into the apartheid system if they did not vote for the organisation. While that can aid political parties in garnering support, the dangers of such utterances are that they can fuel racial or ethnic tensions in a country such as South Africa, with a history of racial divides. Africa (2015) found that in its political campaigning and messaging, the ANC in the 2019 general elections spoke widely about its contribution to overcoming the apartheid government but still acknowledged the challenges it was experiencing in providing basic services for South Africans. This study found that all the sampled political parties relied on conventional face-to-face and door-to-door campaigning methods, where political leaders engaged their constituency and promised service delivery. It is the nature of these campaigns that senior political leaders would hand out t-shirts produced by their parties, with the face of the head of the candidate standing for election on the t-shirts. Participant #6 had the following to say about the campaign messages used by political parties:

These people sell us dreams during their campaigns. When I vote, I do so based on my assessment of the parties standing for elections. I would rather choose a better devil than vote for a party based on their electoral promises because I know they are lying to us. The EFF, for instance, has promised to raise the monthly social grant, with the ANC promising to scrap the very same e-tolls system that they have put to function, and the DA's promise to get rid of corruption is some of the messages that convinced me to vote.

As the Psychological Model Theory of voting behaviour with its focus on partisanship states, some voters support the parties as a showing of their loyalty to the political parties of their choice (Antunes, 2010). One can observe that while some of these electoral promises can be delivered, politicians exaggerate what they can do. This observation came from Participant #7, who also acknowledged that credibility is an essential aspect of communication, particularly political campaigning, even though this type of communication tends to be marred by rhetoric and false dreams. With the passage of time, voters seem to understand the nature of these messages and their purpose.

Politicians don't realise that party politics won't put food on our tables, that we have no interest in all that, but we want to know what a party is prepared to do for us when the promises are too good to be true, we easily see that. We are not interested in party politics. Sloganeering and political mudslinging do not.

In line with the Rational Choice Theory, which proposes issue-based voting and policy design consideration when voting, the participant above demonstrated that one goes to the voting booth with an expectation that whoever they vote for will implement policies that will change their lives for the better. Broadly, the rational choice model sees voters as rational beings who base their decision to vote on their assessment of what is important and not important to them.

Ahead of the 2019 national and provincial elections, the country faced the highest unemployment rate at 29.3%, with the youth (25-35 years) mainly affected by the issue at 35.6%, more than double that of the 45-54 year age group at 17.5% (StatsSA, 2020). Since political campaign messages are often cognisant of prevailing economic situations, creating employment then becomes integral to most political parties' communication strategies. While most of the presidential campaigning took place in urban settings and state capitals, other campaigns were held at the local government level, where most voters are found but still live in desperate and dire situations of poverty, unemployment and lack of service delivery. Because political parties would tailor make campaign messages based on the challenges prevailing at any given election period, the messages of those campaigning on the ground will reflect what the leaders at a national or presidential level will be delivering. For this reason, as Madinga et al. (2020) explain, the campaigning system in South Africa is still a political-party-oriented exercise, where political parties rely heavily on their ground forces and, in some cases, the employing of political advertisements and well-known public figures, mostly referred to as celebrities, to popularise their campaign messages.

False dreams

In any country, electoral participation is influenced by political grievances such as lack of service delivery and unattainable promises. Going into the 2019 elections, the ANC's campaign message was woven around fighting corruption within the party's ranks and in government. The state capture commission exposed a lot of rot in the party's ranks, how some party leaders had used their political power to form alliances with the Gupta family and how such an alliance had created a litany of irregularities in state-owned enterprises. A key theme that emerged from one of the front-runners' campaigns, Ramaphosa, was the renewal of the ANC. However, as revealed by Participant #8 during the data-gathering process, some of these promises are false dreams:

They need to keep to their 'promises'. Some parties tend to change their tone once they see the 'numbers', some issues of crime, drug abuse and poverty. There has been no change since 1994. Instead, more young people are being sucked into the trap.

The issue of unemployment remains a challenge for many youths, as outlined by the respondent above. The participant's response above confirms the assumptions of the Rational Choice Theory that voting behaviour is a result of what people expect to receive from their actions (Downs, 1957). The theory assumes that in deciding who to vote for, voters consider what will be their material benefit from their

action (Downs, 1957). Since the youth is the majority in South Africa and has the potential to constitute the biggest voting block during elections, issues of youth employment always form part of campaign messaging. However, as Participant #9 contests below, campaign messages have no truth but are just words to win electoral support:

Their words are not backed up by actions that are meaningless, but words do need to be said to keep political parties accountable. Political parties will sell what is popular, especially to the younger generation. The marginalised are always targeted, so telling them what they want to hear has always been part of political campaigns.

One common element that can be found in campaign messages of liberation movements is the statement that they have saved their constituency from the shambles of previous oppressive governments. According to Participant #7, such an argument, or talking, is slowly losing relevance among voters as they call for more service delivery than the typical "we saved you message".

Parties must stop relying on past successes and understand that we live in a time that presents new challenges, some old. However, parties need to understand that we live in a digital age. Information is readily available, and young people no longer rely on party manifestos to help them decide which party to vote for, but their track record of service delivery and job creation.

While liberation movements often evoke partisanship, an element of the Psychological Model of Voting Behaviour (Mahsud & Amin, 2020) in reminding voters that they freed them from the shackles of colonialism and apartheid in the case of South Africa, Participant #7 above details that gloating about past success is not enough – political parties need to demonstrate how they will ensure service and provision of job opportunities. Although such developmental plans must be communicated, Participant #4 explained that political parties must be honest about their timelines instead of making promises they cannot fulfil:

Parties should communicate their plans with action/implementation plans with clear and realistic timelines. They should also communicate what they have done in the past, account for where they failed to achieve their targets and outline how they plan on changing the narrative.

RECOMMENDATIONS

Despite its findings, this study has its limitations. Although it is a burgeoning scholarship conducted to test the impact of political communication on voting behaviour, there is a need to look at that from many political organisations because this study only sampled the top three at the time: the ANC, the DA and the EFF. The study can be significantly strengthened by increasing the sample size and including participants in other geographical areas because the current one only focuses on Diepsloot. Secondly, the current study was limited to only three past elections. To compare results, subsequent studies could consider replicating this study in other African countries where political communication and its effects on voting behaviour remain of interest to scholars. The present study did not examine political communication, political affiliation and voting behaviour to understand whether the former influenced or changed the voting behaviour or preferences of those with political affiliation. Overall, this as a recommended possible focal point of future studies could enormously contribute to the existing scholarship on political communication and voting behaviour in Africa and globally. In an environment that is moving towards the digital era, future studies could explore other elements of political communication, such as satire and whether it impacts voter attitudes and behaviour. The study also recommends that political communication from the side of politicians should be a constant exercise and not a method employed before the elections to woo electoral support.

CONCLUSION

This article sought to give an account of a research study conducted to investigate South African political parties' communication strategies and how these influenced voters' decision-making processes. The study found that credibility is an important characteristic that political parties should possess, giving them the upper hand in electoral support. On what wins the favour of voters during elections, the study demonstrated that there are various reasons voters choose Party A over Party B. Some of those could be long-lasting relationships the voters have with the party or the expectations that such political formations could bring change to the lives of the voters. However, that might not be the only explanation because voters could be influenced by a historical culture of voting. For instance, many argue that the ANC still has electoral dominance in South Africa despite its failure to transform the lives of most South Africans in terms of jobs, service delivery, the provision of housing and adequate healthcare. This is insufficient to back that argument because the party's electoral support is declining, which could signal impatience among voters. Such an argument has elements of the Rational Choice Theory, which emphasises that voters' choice of candidates in an election is based on issues and policy design of the political parties. This means that benefits directly influence individual choices; the greater the benefits, the greater the likelihood of a decision or choices being taken. This explanation seems only to reflect to a small extent in South Africa, where many people on the ground have become tired of electoral promises and are in dire need of service delivery. Conversely, the Sociological Model underscores voting behaviour as an expression of the social structure, suggesting that social group membership influences voting behaviour.

The findings of this study show that, in South Africa, this is still happening because those in the broader membership of the ANC as a liberation movement still vote for it despite its apparent failure to transform the country. In the visible South African context, where the majority are Black people, the tenants of the Sociological Model that ethnic and geographical belongings are determinants of voting behaviour could explain why the ANC still enjoys wide electoral support from many Black settlements, the majority of whom continues to bear the brunt of the party's apparent failure to provide services. Broadly, the findings also demonstrate that there is little appreciation of participation in election processes among South Africans, the implications of which are dire for democracy.

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Centre-periphery circulation patterns in Ghana's print media landscape: Exploring the underlining determinants

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Abstract

After 202 years (1822–2024) of its inception in the then Gold Coast, now Ghana, and witnessing an unprecedented upsurge in publication since 1992, the circulation of print media appears unevenly distributed between the centre (capital) and the peripheries. Since there are not enough studies that explore the circulation of print media under Ghana's fourth republic to show its circulation patterns, this article analyses print distribution figures and views sourced from newspaper firms to examine the situation within the participatory communication and the political economy of the media frameworks. It uncovers that a few newspaper firms have regional offices but do not print in those locations. They function only as bulk distribution and administrative centres that gather news to feed their headquarters in the capital. Ghana's print industry operates a centre-periphery production and distribution framework. Furthermore, the study unveils that four factors contribute to newspaper concentration in urban centres, namely ownership tendencies, revenue motives, skilled labour availability and seat of government, and urban media credibility. Thus, Ghana experiences wide rural-urban print disparities which retard timely information sourcing, consensus building and participatory development communication. The findings from the study have implications for Africa.

Keywords

Community, distribution patterns, newspaper, participation, rural, urbanisation

INTRODUCTION

The Ghanaian media industry is diverse and pluralistic (Owusu, 2011) and can be described as the epitome of a thriving democracy (Yeboah-Banin & Adjin-Tettey, 2023). Generally, "pluralism is associated with diversity in the media; the presence of a number of different and independent voices of different political opinions and representation of culture within the media" (Doyle, 2005:12). However, Ghana's print media availability does not imply accessibility (African Media Barometer [AMB], 2017). To Temin and Smith (2002), this pluralistic perception is an overestimation of the significance and influence of newspapers in daily discourse. In the views of Adesonaye (1990) and Picard (2003), the existence of media resources alone does not guarantee that actual information dissemination occurs, but rather that their relevant use as tools to enable society to have full participation in building consensus is key. In Ghana, direct subscription is required to access most of both the local and foreign print, which tends to be an index of socio-economic class differentiation (International Research and Exchanges Board [IREX], 2012). The situation lingers. Although print firms give access to news online in Ghana (Amadu et al., 2018; Fiadzawoo et al., 2022) buttressed by *Daily Graphic's NewsPlus App* at a subscription fee, newspaper still plays a significant role in disseminating information as a major news source preference (AMB, 2017). However, access limitations tend to hinder rural societies from getting or sending information even though more than two thirds of Ghana's population resides there (Ghana Statistical Service [GSS], 2021). To this end,

Lister (2011) argues that it is not merely the eradication of restraints on our work to report that is so vital, but also the degree to which disadvantaged communities can access media to voice their opinions. The concerns about media concentration in cities coupled with the political and economic control over important communication resources informed the design of the “community media notion” as a step in the right direction (Coyer, 2011). However, it appears that “community print” has received less attention than broadcasting in Ghana and Africa. This trend seems true in other parts of the world. Gicheru (2014) maintains that the potential of newspapers should be exploited for development rather than neglecting them.

Prior print media studies in Ghana have explored how economic, political, socio-cultural and professional factors informed the development of English language newspapers and Ghanaian (African) language newspapers with a focus on how they contrasted during the colonial and post-colonial eras (Anyidoho, 2016). Amadu et al. (2018) explored circulation and readership of newspapers in Ghana’s northern regional capital, Tamale, where they observed that although online news led to a decline in print newspaper readership, readers still preferred paper-based newspapers as a reliable and authentic news source. Nevertheless, studies have drawn attention to a declining reading culture (Awuttey, 2020; Ibrahim, 2021; Owusu, 2020) that tends to negatively impact newspaper readership. There are hardly any studies under Ghana’s fourth republic that have analysed the centre-periphery print distribution patterns nationally following the influx of print media in the 1992 democratisation drive. While this article does not intend to downplay the significance of global media transformation from analogue to digital, of which Ghana and Africa are part, it argues that the uniqueness of paper-based news format is worth preserving because it tends to enhance discourse in society. Referring to media academic Michael Schudson, Lovaas (2008:246) reiterates: “All media is important in a democracy, but some media, mainly print media, counts most because it investigates, gathers, and reports news.” No wonder Amadu et al. (2018) find newspapers to be credible sources of information. By this, Nyarko (2016) concludes that the print has remained the agenda-setting base in Ghana through “newspaper review” broadcast shows. This article attempts to explore the centre-periphery distribution patterns of newspapers in Ghana and their implications on news consumption. The article identifies the factors that contribute to them and, more significantly, to conceptualise the production model used by the print media in Ghana.

RESEARCH QUESTIONS

1. What are the implications of print media concentration in cities on news consumption?
2. To what extent is centre-periphery print disparity a challenge to participatory communication?
3. What factors contribute to widening print disparities between the centres and peripheries?

HISTORICAL OVERVIEW OF GHANA'S PRINT MEDIA

Coloniality and its globality have a long-term impact on media structures and performance. As a previously colonised nation, the history of Ghana’s media remains incomplete without reference to global geo-political economy structures. Generally, Jones-Quartey (1974) and Wilcox (1975) recorded that the beginning of African media could be traced to publications of colonial administrations and that this was evident in both British and French territories. In 1801, the first official African print was published in Sierra Leone, called the *Royal Gazette*. Later in 1822, the Gold Coast (now Ghana) also published a handwritten paper called *Gold Coast Gazette* under the governorship of Charles McCarthy in Cape Coast (Jones-Quartey, 1974). Specifically, the history of African media in British colonised territories traces its roots to four categories of early publication: “(i) the official government gazettes, (ii) the missionary press, (iii) privately owned newspapers and (iv) the underground political, anticolonial news sheets” (Faringer 1991:3). This pattern is evident in today’s media ownership ecology of Ghana, Africa and other colonised parts of the globe where media is categorised as public/state/government, private, political and religious/philanthropic.

The publication of the *Royal Gazette* ceased abruptly two years after its launch in 1824. After prolonged silence in the landscape, two Ghanaian brothers, Charles Bannerman and Edmond Bannerman, published

a new paper in the Gold Coast in 1857 (Twumasi, 1981). The brothers launched the hand written paper *Accra Herald* in Cape Coast and later renamed it *West African Herald* (Jones-Quartey, 1974). This paper occasionally appeared in the newsstands between 1873 and 1874 until it halted. J.H. Brew's two-week *Gold Coast Times* surfaced in the print landscape until 1885. Subsequently, the periodically published *Western Echo* also followed. The inception and growth of Ghana's press at the time was unstable and could be described as a "baton-relay pattern" during which papers collapsed and others emerged. In the nineteenth and twentieth centuries, several newspapers sprung up. The fairly liberalised atmosphere at the time meant that ownership was in private African hands and spanned across the 1930s and 1940s. In 1931, J.B. Danquah published the premier daily newspaper in the Gold Coast, *Times of West Africa* (Twumasi, 1981). These media developments show that the colonial administration's grip on the colony was loosening as the independence struggle intensified. Between 1931 and 1956, there were 40 different newspapers but only 11 appeared on the newsstands at the onset of 1956 (see Table 1).

Table 1: Active print in the Gold Coast prior to independence (1956)

Newspapers	Year(s)
<i>Catholic Voice</i>	1926
<i>Ashanti Pioneer</i>	1939
<i>Gold Coast Weekly Bulletin</i>	1939–1940
<i>Ashanti Times</i>	1947
<i>Ghana Evening News</i>	1948
<i>Daily Graphic</i>	1950
<i>Sunday Mirror</i>	1954
<i>Daily Mail</i>	1955
<i>Liberator</i>	1955
<i>West Africa Worker</i>	1956
<i>New Nation</i>	-

Source: Jones-Quartey, 1974:27

In another account, Twumasi (1981) showed that newspapers published between 1929 and 1939 in the Gold Coast reflected the following circulation statistics: out of a total of 14 papers, Accra alone pulled eight, Cape Coast three and Kumasi, Saltpond and Koforidua had one each. Because of this, many African papers attempted to reach the national population but to no avail. The *Pioneer* newspaper (published in 1939), for instance, would have been more vibrant financially and in agenda-setting terms if it had covered only the Ashanti regional capital (Kumasi) of Ghana rather than trying to supply Accra and the other regional capitals (Hachten, 1975). Anyidoho (2016) sums this up professionally, noting that Ghana's print journalism comes in three phases. The premier phase comprises amateur printing dating back to 1822 by colonial governors, missionaries and native Ghanaians. The second phase covers papers published between 1931 and 1945, which aimed at being critical of the colonial government policies prior to independence and had commercial intent. The final phase covers the emergence of journalism training institutions and papers such as Nkrumah's *Evening News* (1947), *Morning Telegraph* (1949), *Daily Graphic* (1950) and *Sunday Mirror* (1953). At this stage, contemporary facilities and technology, language skills, formal education and appropriate funding models were emphasised in Ghana's journalism practice. During this period, local language papers were run to serve local language readers but most of them ended abruptly (see Table 2).

Table 2: Publication of missionary and native-language newspapers

Local language papers	Year of publication/dialect	Ownership
<i>Sika Nsona Sanegbalo</i> [Christian messenger: Gold Coast]	1859 – Ewe	Basel – Missionary
<i>Mia Holo</i> [Our friend]	1894 – Ewe	Catholic – Missionary
<i>Nutifafa Na Mi</i> [Peace be with you]	1903 – Ewe	Basel – Missionary
<i>Akan Kyerema</i> [Akan drum]	1948 – Akan	Catholic – Missionary
<i>Asenta</i> [News]	1935 – Akan	A.J. Ocansey City Press
<i>Amanson</i> [People]	1937 – Fante	Kofi Akumia Badu
<i>Amansuon</i> [Nations]	1943 – Fante	John Max Y. Awotwi
<i>Akan Akwansosem</i> [Current happenings/affairs] <i>Akan Nkwantabisa</i> [Seeking direction]	1951 – 1970: Akan Other Akan dialects: Fante, Akwapim and Asante. Other Non-Akan dialects: <i>Motabiala</i> (Ewe), <i>Lahabali Tsunu</i> (Dagbani), <i>Mansralo</i> (Ga), <i>Labaare</i> or <i>Labaari</i> (Kasem), and <i>Kakyevole</i> (Nzema).	The Bureau of Ghana: State-sponsored rural newspapers
<i>Duom</i> [Move On]	1953: Akwapim-Twi	Oman Nwomaye Fekuw
<i>Kpodoga</i> [Gong]	1976 - Ewe	State-run rural paper (Adult Education in collaboration with UNESCO). UNESCO co-sponsored projects
<i>Wonsuom</i> [All hands on deck]	(n.d.) Fante	
<i>Atumpani</i> [Talking drum]	1989	Ministry of Education and Non-formal Education: Ghana
<i>Midim</i> [Seek Me]	2001 – Ewe	Apostles' Revelation Society
<i>Nutifafa</i> [Peace]	2007 – Ewe	Esther M.K. Edu-Yao (Good News Church)

Source: Anyidoho, 2016

Ghana's media environment at independence in 1957 was vibrant because many of the privately owned press that led the freedom fight were operational. Kwame Nkrumah established the Ghana News Agency and took over the vibrant foreign-run outlet, *The Daily Mirror Group* (Jones-Quartey, 1974). However, by April 1974, only three newspapers existed actively in Ghana, composed of two government-owned and one party-political paper. No private ownership existed at the time (Wilcox, 1975). Prior to the 1992 constitution, there were roughly 13 newspapers that intermittently surfaced on the newsstands (IREX, 2012). At the beginning of the fourth republic, the democratic winds saw the upsurge of private outlets publishing tabloids alongside the two state-owned prints in Ghana (Morrison, 2004). This is because the 1992 constitution abrogated media controls (Hasty, 2005) to some extent and assigned a chapter to media freedoms and expressions (Alhassan, 2005), thus liberalising the media landscape (AMB, 2011). These events marked a new take-off point in the print media industry in Ghana with its chequered past (Temin & Smith, 2002). This development is reminiscent of the many newspapers that sprung up in Ghana after the colonial liberation. Despite this print influx of the 1990s, the cover prices ranged between GH¢4.00 and GH¢3.00 (USD 0.36 at the time of study). Due to low economic and living standards, many people in Ghana could not afford newspapers and flanked newsstands to read front pages without buying them. Sometimes, a single paper bought was read by many people (Temin & Smith, 2002), which formed a reading network numbering hundreds (Hasty, 2005).

THEORIES

The study pertaining to this article employed participatory communication (PC) and the political economy of media (PEM). PC sees communication as a measure of inclusivity in the process of taking decisions for a development agenda (Ifeduba & Bolarinwa, 2016; Waisbord, 2008). Communication designs should emphasise "participation" to build consensus and explain that the aim of the "democratic principle of distribution" is to achieve pluralistic and liberalised media equity to enable communities to partake in discourse (Baker, 2006:8). Meier and Trappel (1998) call for unrestricted access to information and to the means to impart information. Van Cuilenburg (1999:185) distinguished between "access to" and "accessibility of communication". To Van Cuilenburg, this distinction reflects the concepts of exclusion and inclusion where the higher the extent of accessibility of communication, the more inclusive citizens are and vice versa. To Tufte and Mefalopulos (2009:12), "what is often not made explicit in PC approaches is the important role of media access, which is crucial considering the rapid changes in media tools, coverage and worldwide use. PC is also about visibility and voice in the mediated public sphere, which leads us to ask further: what more concrete roles do the media play in PC". Also, Yoon (n.d) concurs. Drawing on Paulo Freire's dialogic communication, Tufte and Mefalopulos (2009:11) stipulate that "strengthening community media can ensure [that] the most marginalised groups have a platform to voice their concerns, engage in public debate and solve problems". To this end, Ifeduba and Bolarinwa (2016) contend that a significant aspect of PC is "variety" in a defined community which encourages involvement of the masses in development and stresses media pluralism and diversity. The expectation is that newspapers are distributed equitably among the populace and in ways that enhance easy access.

PEM, conversely, is concerned with resource allocation in capitalist communities. PEM encapsulates studying ownership and control, power relations, class systems and structural inequalities (Wasko, 2014). Furthermore, PEM is "the study of the social relations, particularly power relations, that mutually constitute the production, distribution and consumption of resources", including communication resources (Mosco, 1996:25). By this, mass media emerged as the foremost and key industrial and commercial organisation engaged in the production and distribution of commodities (Murdock & Golding, 1974). Profiteering became the norm (Wasko, 2014) because communication and information are key marketing variables executed through public relations and advertising (Murdock & Wasko, 2007), among other contents. The foregoing is rooted in "The Blindspot Debate" which maintains that audiences are the major product of media that media firms sell to advertisers (Smythe, 1977). Due to the stiff competition in such capitalist markets, media becomes concentrated (Murdock & Golding, 1974) where news and public information is provided. However, Mosco (1996) notes that different forms of PEM exist but many of them try to decentre media. According to Picard (2003), this ensures that multiple content is created which enables many voices and opinions to be heard in society. Generally, PEM in Africa is fragile financially and could hardly support the independence of the media or curb concentration (Cag'e, 2014; Nyarko, 2023).

In the application of PC and PEM models, the former argues that urban-centred newspaper retards grassroots participation and consensus building in public discourse. PC, in this context negates global efforts to reduce inequality in information access. PEM helps to understand the politico-economic influences of concentration of media at the centres and their implications for newspaper distribution.

METHODOLOGICAL ISSUES

Country and print media statistics

Ghana is a country with a population of 31,699,675 (World Population Review, 2021) inhabiting a land area of 238,533 km² with a 69.8% literacy rate (GSS, 2021). The national daily wage for 2023 was GH¢14.88 [USD 1.43] (Atawoge, 2022). Ghana has had four republics; the onset of the fourth republic saw the promulgation of the 1992 constitution which triggered the proliferation of several print media houses. This has been attributed to the country's liberalised environment. The print ecology of Ghana (newspaper, magazines and journals) grew to 466 (IREX, 2012). Of these, registered newspapers were 135, according to the National Media Commission [NMC] (Media Ownership Monitor, 2017) and the top 15 newspapers

circulate 4,549,000 copies daily (Geopoll, 2017). Despite this growth, some residents outside the capital and other cities seem starved of access to dailies and weeklies of their choice. Figure 1 shows Ghana with 16 regions. It pinpoints the location of its capital city (Accra) from where it appears print media firms are located and distribute the news.

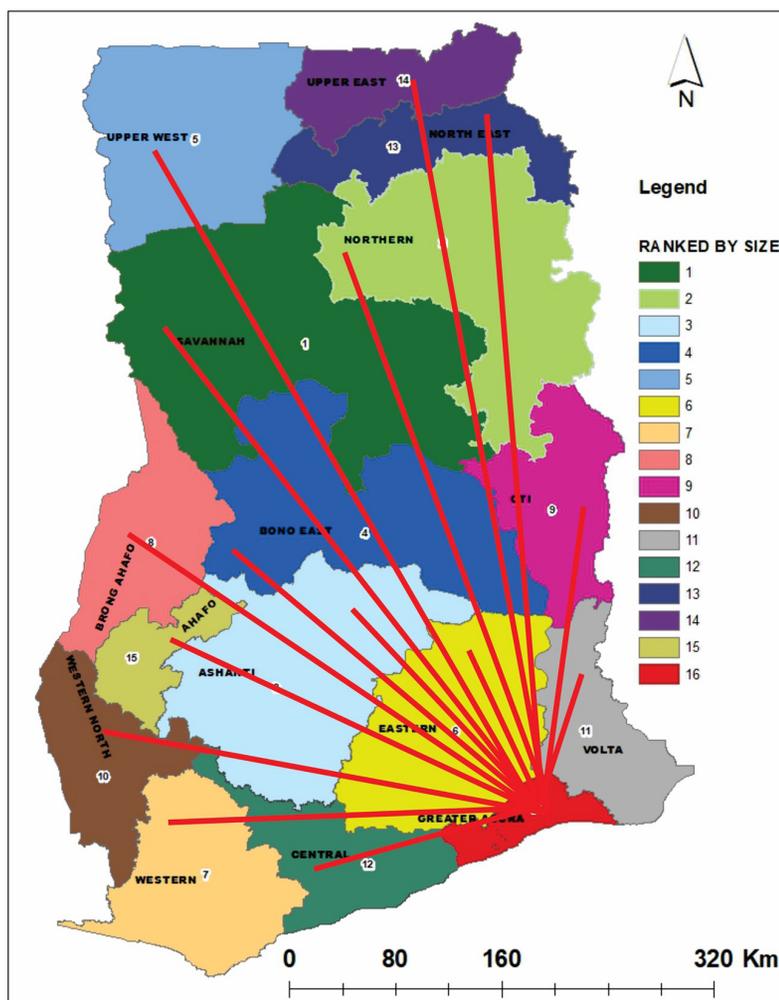


Figure 1: Map of Ghana

Approach

This article analyses print distribution figures as well as interview responses sourced from four newspaper firms: *Daily Graphic*, *Daily Guide*, *Ghanaian Times* and the *Public Agenda* in Ghana. The selection of *Daily Graphic*, *Daily Guide* and *Ghanaian Times* was based on reach. *Public Agenda* was purposively selected to create a balance of state and mainstream private-owned as this newspaper is NGO-owned. After collecting the regional/zonal print distribution data from respective outlets, further conversations were held with their distribution/sales managers to uncover the underlying determinants for distribution disparities. According to Hammersley and Atkinson (2007), these dialogues and conversations are seen as a form of interview. Berg (2001) sums it up noting that, basically, interviewing is a conversation with a purpose, mainly to gather information. The interview was unstructured due to the conversational nature of the researcher's foremost interaction with the representatives (distribution/sales managers) of the firms to collect the print distribution statistics. Berg (2001) defines an unstructured interview as the type that

does not use a predetermined list of questions and enables the researcher to develop, adapt and generate appropriate questions to probe the situation under investigation. Owing to the dynamic nature of news consumption by audiences in relation to their distribution patterns, the print outlets were approached to update their distribution data. The print distribution statistics were obtained directly from the print firms and, subsequently, the interview interactions were manually captured.

Data analysis

The data were presented in tabular and narrative formats. First, the distribution of newspapers across Ghana was analysed to ascertain their concentration or otherwise. The higher the number of copies of newspapers assigned to a zone, the more concentrated they are and vice versa. Second, the responses obtained from the interactions with the distribution/sales managers were organised and re-organised in ways that enabled categories to be used as units of analysis. Putting this into perspective and in line with Yin’s (2009) definition of textual analysis, data were regrouped into various patterns to meet the interest of the researcher and, more significantly, the objective of this study. With two data sources assembled for this study, data triangulation becomes necessary. Triangulation, according to Berg (2001:5), is “used largely to describe multiple data-collection techniques designed to measure a single concept or construct”. The responses from the distribution/sales managers were expected to buttress and deepen the understanding of the distribution figures they gave and vice versa. Ethical and consent requirements were adhered to. Gatekeeping letters were dispatched to all the print firms and approval was received before data collection commenced. The distribution managers (DM) were labeled DM1, DM2, DM3 and DM4 for anonymity purposes.

RESULTS

Print distribution patterns under the Fourth Republic

The Ghanaian print media landscape is concentrated in the capital, Accra, and its twin city, Tema. The circulation in the capital city alone supersedes those in the other regional capitals. The hinterlands appear virtually excluded, as is evident in the following statistics in Tables 3 and 4.

Table 3: State newspaper zonal distribution

Newspaper: Daily Graphic	
Accra zone	Other zones (45%)
55%	7% Tema zone 14% Ashanti zone (Kumasi) [Bono, Bono-East, Ahafo, North-West] 7% Western / Central zones (Takoradi and Cape Coast) 13% Eastern (Koforidua) / Volta (Ho)/Oti zones 4% Northern zone (Tamale, Bolga,Wa)

Source: Field data, Daily Graphic, 2023

Table 4: Private newspaper zonal distribution

Newspaper: Daily Guide	
Accra zone	Other regions (63.95%)
36.05%	14.51% Tema 16.95% Ashanti zone [Kumasi, Obuasi ...] 13.21% Eastern [Koforidua, Kade, Akyim ...] 7.94% Central (Cape Coast/Kasoa) 5.9% Western [Takoradi...] 2.5% Volta [Ho, Aflao ...] 2.94% Bono [Sunyani ...]

Source: Field data, Daily Guide, 2023

From Tables 3 and 4, *Daily Graphic* and *Daily Guide* circulate newspapers across Ghana. However, their distribution is besieged with an acute imbalance in which 55% and 36.05% circulate at the centre (Greater-Accra zone) alone and the remaining newspapers at 45% and 63.95% respectively are distributed among the other regional zones respectively: (Tema [7%], Ashanti [14%], Western [7%], Eastern [13%], Northern [4%]) and (Tema [14.51], Ashanti [16.95%], Eastern [13.21%], Central [7.94%], Western [5.9%], Volta [2.5%], Bono [2.94%]). Considering the proximity of Tema to Accra, which could be described as a "twin city", the centre by extension is 62% (*Daily Graphic*) and 50.56% (*Daily Guide*). Note that the *Daily Guide* does not allocate papers to the northern zone. This means newspapers are southern based and the regions beyond Accra are not represented equitably in public discourse. This makes the "opinion sections" of many newspapers that of city dwellers. To *Daily Graphic*, the complex nature of newspaper distribution makes them define Kasoa as an extension of Accra, although geographically it is part of the central region. According to the sales manager of *Daily Guide*, the firm suspended serving the northern zone due to its commercial viability but they expected that some copies from the Ashanti and Sunyani zones may have reached there. The copies distributed to the major zones may not reach their peripheries.

Capital and regional printing patterns

In terms of geographical locations, Table 5 shows that all the print firms are headquartered at the centre (Accra). While three of the firms also run regional offices in Ghana – *Daily Graphic* (12), *Ghanaian Times* (9) *Daily Guide* (5) – none of the regional offices print news. They only operate as stories and advertising collection units to feed their headquarters for publication and as bulk distribution centres (BDC) that redistribute newspapers from the centres. Moreover, many firms cannot afford to send reporters to the peripheries to gather stories and those who could, receive their inputs to print at the centre. Finally, the news may not get back to the peripheries and tends to fall into the hands of the central audience. The concentration of firms in the centre, coupled with distribution costs, poses a challenge to disseminating newspapers to the peripheries. This accounts for the peripheries lacking news or reading dead news. Ghana's print industry runs a centre-periphery production and distribution (CPPD) model that shows a one-way news production flow from the centre to regional capitals, which trickles down to the peripheries in smaller quantities. In the end, the number of regional offices of state media over the private epitomises the national-ness of the state media and broader news circulation impacts.

Table 5: Print, ownership, location and regional printing status

Newspapers	Ownership	Location	No. of regional offices	Regional printing
<i>Daily Graphic</i> [Group]	State	Greater-Accra	12 ¹	No
<i>The Ghanaian Times</i>	State	Greater-Accra	9 ²	No
<i>Daily Guide</i>	Private	Greater-Accra	5 ³	No
<i>Public Agenda</i>	Private	Greater-Accra	0	No

Source: Field survey, 2023

1 Tema, Sunyani, Kumasi, Obuasi, Takoradi, Cape Coast, Oda, Koforidua, Ho, Tamale, Wa, Bolga.

2 Kumasi, Sunyani, Takoradi, Cape Coast, Koforidua, Ho, Tamale, Wa, Bolga.

3 Tema, Sunyani, Kumasi, Takoradi, Cape Coast (Dormant).

Bulk Distribution Centres: Newspaper circulation strategy

Due to financial and logistical constraints, newspapers are strategically distributed along selected zonal routes to attempt nationwide coverage. Accra is the centre and the newspaper production hub so all distributions start there and move to the peripheries (outskirts) through different means. This makes newspapers southern-Ghana based (see Figures 1 and 2). State and private print operate similar distribution trends. The difference is that private outlets are unable to serve the northern zone due to its geographical location and commercial viability factors. First, newspapers are transported to major BDC routes: Northern (Tamale), Tema/Aflao, Ashanti (Kumasi), Eastern (Koforidua), Central (Cape Coast) and Western (Sekondi-Takoradi) zones by using their own vehicles, the State Transport Company (STC) or other commercial buses that travel to those routes/cities. Due to the remoteness of the northern route from the centre; both firms used to airlift their newspapers but have now stopped due to high costs. *Daily Graphic* now transports newspapers to the north by road. Second, newspapers that arrive at the minor BDCs (suburban towns) are further redistributed to other settlements. The identification of major and minor BDCs is determined by access, transport and commercial viability. The permutations: 1-4, 2-4 and 3-4 in Figure 2 show that newspaper vending and circulation are intertwined at all stages (1, 2, 3, 4) because circulation is a continuous process. For instance, in the Accra zone, vendors distribute through newsstands, cycling and vehicular traffic to readers. With this flexibility, newspapers assigned to the central zone serve Apam, Winneba, Mankessim and Saltpond townships, among others, before arriving at the major BDC in Cape Coast.

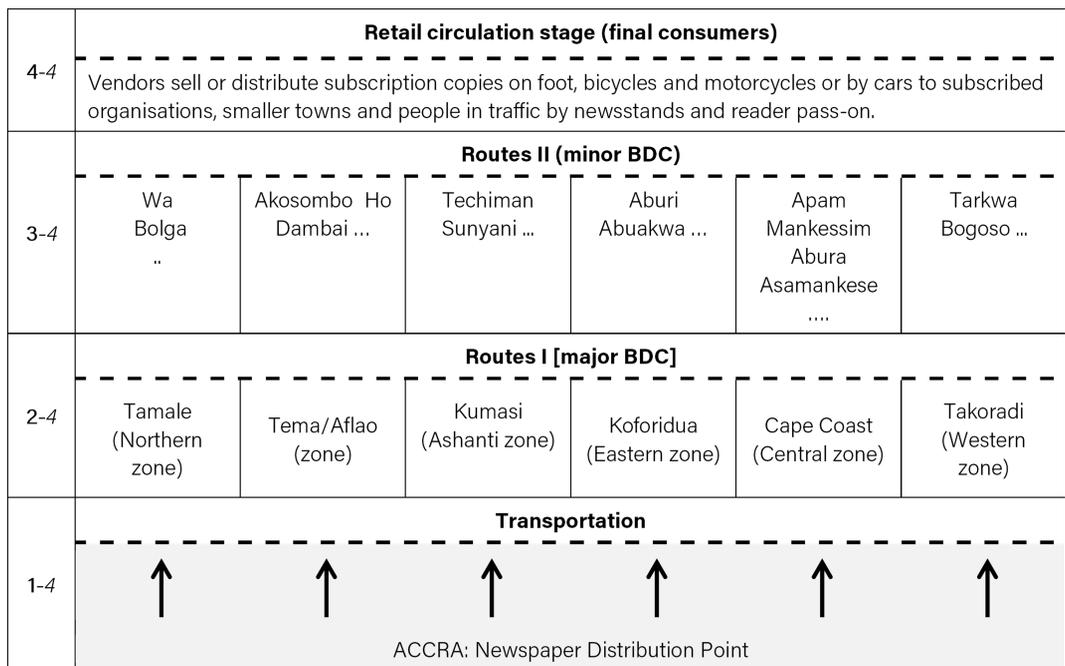


Figure 2: Newspaper circulation (Author's construct)

Contributory factors to centre-periphery newspaper distribution

Four determinants influence the distribution pattern of newspapers nationally. These are ownership tendencies; revenue motives; skilled labour availability, literate population and seat of government; and urban media credibility. On the ownership determinant front, DM2 explained:

Media ownership is a big challenge in Ghana and the contention lies especially in politicians and businessmen owning media outlets. With the promulgation of the 1992

constitution, private newspapers, particularly those in politics, have shown that they are not in the printing game to inform the public, but to satisfy their political ambition and second, an avenue to make money hence gravitate towards city centres. It has got nothing to do with providing information.

From the foregoing, owners and investors of media determine the location of their establishments in line with their personal aspirations. This tends to sway them from the media's core mandate and function of pursuing public interest. The centredness of print in the cities seems to illustrate a growing media capture by print owners who are mainly political and corporate actors. DM2's response pointed to the fourth republican constitution for opening the print ownership space and blamed the private sector for flooding the mainland for politico-economic reasons. Furthermore, DM4 from the study showed the following:

The population in the urban area is a great motivation for owners to site and distribute their newspapers there. For instance, the Greater-Accra region, which is the most populous region in the country, has more newspaper vendors than the other regions. This is because the demand by residents for newspapers is much higher than in areas outside the capital.

Based on the economic principle of demand and supply, newspaper owners are always driven to establish their outlets in densely populated areas. The high demand and consumption of newspapers by readers propel media enterprises to produce and supply more copies. This correlates directly with the high number of vendors that operate in the city. Moreover, the observation that the national capital alone has more vendors than all the other regions typifies the concentration of newspapers in the city. Related to the foregoing is the revenue-determinant factor. In line with this, DM1 reported that:

Sale influences the siting of media outlets in cities because revenue plays a critical part in newspaper establishment, which is why the state media is also established there. Since newspapers largely depend on circulation and advertisement, it is pertinent to note that Accra provides the opportunity for the print media to generate revenue to sustain the increasing production cost.

DM1 explained that the concentration of print outlets in cities is not perpetuated by only private enterprises but also includes government-owned media. Accra's huge population implies a huge readership and translates into sales and income that help print firms to meet increasing production/operational costs of printing. With Ghana's free market system, owners freely determine the geographical siting of their investment in the cities and, consequently, tend to marginalise the peripheries to access the news. In addition, DM3 noted:

Residents in the centres are deemed part of the middle/high class with disposable income that enables them to spend on newspapers without much financial struggle. This feeds into the number of vendors in the centres as against the outskirts. Many outskirt residents do not fall under the formal sector of the economy and hence do not see the need to purchase newspapers that cover those sectors. For instance, the Komenda-Edina-Eguafo-Abrem (KEEA) municipality has only one newspaper vendor stationed at Elmina Chapel Square and this serves the entire population there.

This respondent argued that higher standards of living were evident in cities and hence residents there could afford to purchase and consume newspapers. This drives print firms to distribute more of their publications there. It is in this respect that Daily Graphic and Daily Guide distribute 55% and 36.05% of their publications respectively in Greater-Accra alone (see Tables 3 and 4). According to DM3, this

culminated in the plethora of vendors in the capital. Moreover, many citizens in the peripheries are not employed in mainstream official and white-collar jobs and hence find the need to consume news about them insignificant. In the end, the concentration of the print in the capital was illustrated by an entire municipality having only one vendor to serve the information needs of the populace.

The third determinant is the existence of a skilled labour force, an enlightened populace and the seat of government. In line with this, DM2 observed:

The availability of qualified human resources is a pre-requisite to the gathering, production and dissemination of news. Moreover, the location of key government ministries in the capital city constitutes essential raw material (information/news sources) for publication. Also, low literacy rates in rural communities make cities attractive for print establishments.

Generally, firms are located based on their proximity to the most needed resources. To this manager, skilled workforce abounds in Ghana's capital and they facilitate the processing of newspapers from information assembly, production, circulation and consumption. Considering the media's core mandate as a watchdog on officialdom regarding the city centre location of the political machinery, the media is attracted to the vicinity. Finally, DM2 justified their location in the cities to its highly educated populace. Furthermore, another manager (DM1) summed the foregoing determinant as follows:

Higher literacy rates and reading culture are major factors in newspaper distribution. Parents imbibe the culture of reading into their children [in cities]. In contrast, the peripheries tend to have lower literacy rates and limited access to education which inadvertently reduce the demand for newspapers. Moreover, the peripheries are logistically challenged with limited transportation infrastructure and digital connectivity to facilitate efficient distribution [of news].

Newspaper consumption and largely its circulation patterns are determined by the differences in literacy levels and reading habits between the centre and periphery zones. DM1 identified the following limitations in the peripheries to explain the concentration of print in the centres: parental role in the education of their wards, education access, transport facilities and unstable Internet network. To access news, DM4 observed that: "more folks in the peripheries prefer to listen to radio than read. The inability of many of the residents there to read gets them glued to radio and TV which usually broadcast in the local language"

The final determinant is the "urban media credibility perception". Here, DM3 remarked:

Routinely, people tend to regard print media outlets in the cities and the capital as more credible institutions than their periphery counterparts. As a result, many entities are willing to do business only with urban-based media outlets.

Oftentimes, urbanisation occurs on the presumption that conditions of life are better in city centres, especially in relation to the briskness of socio-economic activities in a densely populated environment. This mindset implies that individual and corporate clients prefer to engage in the services of urban-based media. To take advantage of this perception, many print media firms are established in the urban centres. From another perspective, DM4 showed that sections of the peripheral dwellers themselves seem disinterested in accessing the news by questioning the significance of consuming newspapers whose agenda does not cover their developmental needs. DM4 stated thus:

What is the relevance of patronising print content if it does not champion the interests of rural populations but focuses on urban issues because it is presumed as more salient. The peripheries find themselves distanced from the urban areas and the print may not be important to them.

This concern epitomises the centredness of the print to the marginalisation of the peripheries because the agenda set is urban focused. Overall, these determinants reflect the reason print firms are headquartered in Ghana's capital. Table 5 illustrates this trend.

Discussion

In Ghana, huge disparities exist between the national capital (*Daily Graphic* [55%] / *Daily Guide* [36.05%]) and other regions (*Daily Graphic* [45%] and *Daily Guide* [63.95%]). That is, the twin-city nature of the Accra-Tema enclave worsens the centre concentration of the print at 62% (*Daily Graphic*) and 50.56% (*Daily Guide*). *Daily Graphic* explained that even a town such as Kasoa, which geographically is in the central region, is demarcated as an integral part of the Accra-Tema zone for newspaper distribution purposes. Thus, the farther away from the centre, the fewer the number of newspapers in circulation. *Daily Guide*, for instance, does not distribute newspapers to the northern zone because it is not commercially profitable. Under this guise, newspapers impact southerners because opinion columns are voiced by them, thereby marginalising the peripheries in public discourse. In India, Sahoo (2017) noted that "the division between the information rich and the information poor has grown exponentially. Thus, the process of social development among different social and marginalised communities differs according to the nature of consumption of mediated information and communication". However, the media's function is to serve all citizens equitably (Bertrand, 2002) as PC demands. In this light, the Pigouvian School asserts that information is a public good and its consumption should be more inclusive than exclusive.

In Ghana, newspaper outlets are headquartered in the national capital and only three of them (*Daily Graphic*, *Ghanaian Times* and *Daily Guide*) have regional branches. Kekezi and Mellander (2018:96) observe in Sweden that due to media urbanisation, "53% of journalists now live in the capital region of Stockholm". Furthermore, they report that the number of local editorial offices in Sweden reduced from 668 to 273 over 28 years and that local media were shifting to urban centres at an alarming rate. Despite efforts at creating a regional-level presence in Ghana, the actual printing of newspapers is still done at the national capital, thereby rendering the branches as information and advertisement-seeking gateways as well as BDCs. Here, two major challenges emerge. First, the information sourced from the peripheries may not get back to them as news. Sahoo (2017) reiterates that even where issues of marginalised groups are reported and discussed, it remains a one-way communication and the chance for the peripheries to participate is quashed. Second, the cost of distribution and redistribution at the centre and periphery levels, respectively, is high. To attempt national coverage starting from Accra as the centre of production to the peripheries, newspapers in Ghana are distributed through designated zones called the BDCs. The determination of major and minor BDCs is dependent on commercial vibrancy, transportation and accessibility. Comparatively, IREX (2010) observes that a lack of good roads in rural Malawi accounts for print concentration in cities while in Madagascar newspapers are not distributed at all.

The centre-periphery imbalance in print distribution is determined by four PEM factors. First, print owners establish their firms in the national capital to take advantage of the huge population there for business and political gains. This grip on the media by politico-economic actors depicts that media capture is at play in Ghana. Smaele (2006:41) observes that "political and economic elites try to secure via the media their own wealth, status and influence". These objectives create media concentration. In Ghana, four firms (*Daily Graphic*, *Ghanaian Times*, *Daily Guide*, *B&FT*) headquartered in Accra control 95% of Ghana's readership thereby making a handful of media owners gain considerable influence over public opinion (Reporters Without Borders, 2017). This negates pluralism in media, as Doyle (2005) espouses. As a challenge, Musa (1996) concludes that Nigeria could have a relevant fourth estate if there were to be a dramatic change in its media ownership patterns in which resources were given directly to communities to publish their own newspapers.

Second, print firms, both private and state, are attracted to the huge market size and revenues from circulation and advertising in the capital. Newspapers' extreme over-dependence on sales and advertising income (Nyarko, 2023) to sustain themselves financially in the market leaves them no option but to operate in commercially vibrant zones. Moreover, Ghana's capitalist system does not prohibit their

establishment in cities. AMB (2011) observes that most media entities are business focused and aim at exchanging the advertiser's money for a huge audience. However, Eugene Roberts, the renowned U.S. newspaper editor, condemns many newspaper's concentration on increasing profits to please shareholders (Bertrand, 2002). To this end, the marginalisation of the peripheries from access to news is attributed to poverty and inability to afford newspapers in those parts of Africa (IREX, 2010; Opuamie-Ngoa, 2010; Wahl-Jorgensen & Cole 2008;). Although Cape Coast was Ghana's capital between 1929 and 1939, most of the vibrant newspapers, totalling eight, were rather located in Accra due to the brisk economic activities there. Anyidoho (2016:109) reaffirms this: "The readers [of newspapers] were mainly European traders and pre-independence administrators" who lived mainly in the cities. Thus, print firms and city siting are symbiotic. In the urban centres of Africa where big conglomerates exist, economic and political activities abound (Opuamie-Ngoa, 2010). Annabel (nd) observes that in Lagos and other urban cities in Nigeria, small crowds of people gather around newsstands and gaze at the displayed newspapers and magazines. Many of them read front-page headlines and accompanying first paragraphs while other readers pay less than the cover price to read more pages.

Third, the availability of a skilled workforce, educated population, residence of the political hub and developed infrastructure in the capital serve as incentives for the smooth functioning of print firms. Conversely, IREX (2010) reports that in Angola, poor transport, ICT infrastructure and illiteracy in rural areas limit citizens' access to print media. Moreover, Gavin Stewart, a former member of the South African National Editor's Forum (SANEF) concurs that economic and geographic boundaries hamper news accessibility and noted that the "more urban you are, the more voices you hear" (IREX 2012:382). Adesonaye (1990) maintains that communication skewed in such a manner cannot be deemed as sharing in line with PC. In Ghana, the erstwhile *People & Places* (P&P) newspaper is youth-focused, but only students in Accra-Tema and a few cities enjoy its educative content. This concern informed the Lebanese Ambassador to Ghana to donate Gh¢5,000.00 (\$1,300.00 at the time) to support the free distribution of *Junior Graphic* to serve disadvantaged schools in rural areas (Badu Jnr. 2014). Despite this stride, print coverage of the peripheries is still inadequate. Exploring the economics of the sub-Saharan African media, Cag'e (2014:2) observes that "the newspaper market expands as literacy steadily increases".

Fourth, the perception by clients that urban media is more credible than their periphery counterparts drives many print firms to the centre to take advantage of this notion. In view of this, it is not totally wrong that in the majority of the Commonwealth states of which Ghana is a part, the government owns a section of the print because it ensures that at least the state media exist where none [private media] might go, and can encourage others to follow in its wake (Ross, 1999). UNESCO (2014:16) concurs: "While the state media still cover stories that have developmental dimension, most other commercial media have tended to ignore issues affecting the peripheries where the majority of people in the Asia and Pacific region live". This marginalisation fuels Van Cuilenburg's observation that communication is not participatory when access to it is denied.

To this end, PEM variables revolve around media institutions in Ghana, their markets, society, technologies and other structural changes. Media political economists should not passively look on while these changes occur (Winseck, 2011). With this, Bland (2021) explains that media firms must navigate these constraints and incentives in ways that maintain readership and financial viability. Like the Ghanaian experience, Carson (2014) observes that due to political-economic issues, newspapers in the developed world have also become concentrated and are experiencing dwindling advertising and circulation incomes, closures and cutbacks. In relation to Australia, Carson notes that PEM elements have rendered weak the investigative role of newspapers in exposing corporate transgressions.

CONCLUSION

From the foregoing discussion, the concentration of print media in the cities implies that (i) the information sourced from the peripheries to the centres for publication may not return to their source to benefit them; (ii) there is a high cost of distribution and redistribution through the BDCs; (iii) the peripheries may read dead news due to slow distribution; and (iv) the public interest focus of the media is diverted to pure

commercialisation where demand and supply determine the pattern of news distribution. Again, it is evident that the sharing of print news is not democratised because it is skewed towards the national capital and largely the southern enclave of Ghana at the exclusion of the huge number of residents in the outskirts. This defeats and challenges the PC principle of inclusivity because, as a public good, the fourth estate is expected to distribute news equally among citizens in all communities. This is exacerbated by the opinion sections of newspapers dominated by the views of city residents, which leads to centre-focused agenda setting. To this end, peripheral dwellers who could access newspapers decline to do so because the agenda relevant to their communities is not covered. Finally, (i) owner hegemony, (ii) financial viability, (iii) skilled labour, literate population and information from government seats and (iv) credibility perceptions are the determinants of print concentration. These PEM determinants illustrate the power of print owners to locate their firms in the centre and distribute their publications along strategic routes to ensure their financial sustainability but also to hinder PC. The print industry in Ghana operates a centre-periphery production and distribution (CPPD) model depicting a one-sided pattern of news production from the centre to BDCs and filters down to the peripheries in fewer copies. Thus, newspaper consumption in Ghana depends on the physical proximity of the audience to the centre. This tends to be the situation in some parts of Africa (Nigeria, Malawi, Angola, Madagascar and South Africa, among others) because it excludes community-level participation to an appreciable extent.

LIMITATIONS

Generally, newspaper distribution data and literature are limited in Ghana, and largely in Africa. This has been exacerbated by the unwillingness of some print firms in Ghana to share their publication and distribution figures. While all four of the outlets willingly participated in the interviews pertaining to this study, only two firms (*Daily Graphic and Daily Guide*) released their distribution figures for the study. Moreover, the sample size was inadequate and the study lacked the experiences of vendors in newspaper circulation and distribution. However, the four outlets are leading players in the industry and hence the data from them serve as authentic and are representative of the ecology of the Ghanaian print media.

RECOMMENDATIONS/WAYFORWARD

The media is captured in circumstances where political and business print media owners single-handedly determine the location of their firms for purposes other than pursuing public interest agenda. The regulator (NMC), in collaboration with media stakeholders and civil society, should lobby government and lawmakers to spell out modalities that define the geographical confines within which prospective print outlets can site to decongest the centre. This is expected to help to reverse the "centre production approach" to a "periphery production approach" to ensure community-level publications amid the existing nationwide newspapers.

With the central government running national dailies, municipals, district councils and NGOs are encouraged to fund and run their own newspapers to enable the masses to participate fully in the development of their communities and to enhance broad consensus building in shaping public opinion. Thus, operationalising regional printing is vital to reduce the long chain of sharing the news through the BDCs to curb high distribution cost.

On the basis that the PEM factors that drive print firms to the centre are largely financial, the media fraternity in Ghana is encouraged to revive the media development fund launched in 2009. Strategising about incentive packages to help sustain prospective print firms in the peripheries could be valuable.

As postulations that broadcast and Internet media will make extinct print media appear to be an illusion because newspapers are still found to be credible news sources, it becomes imperative that newspaper is sustained based on its merit as a paper format medium that enhances pluralism and development. With this, the implementation of print initiatives to ensure wider coverage and audience participation should be separated from broadcast/Internet media policies because they have different formats. For instance, Ufuoma's (2012) observation that "community radio" bridges the information disparity gap between sections of a country is a positive trend; however, such a notion also comes as a pretext to further neglect

the print as the medium that “cannot get there”, “gets there late” and “in fewer quantities”. Moreover, Noam (2009) observes that, globally, the Internet, which is being touted as a replacement, is neither a solution to a concentration of the media nor immune to it. In Ghana today, strong Internet connectivity is an urban phenomenon because the farther away from the centre, the weaker the speed and hence news consumption. This suggests that efforts to bridge the print disparity space should not be tackled through the lens of broadcasting.

Future researchers are encouraged to use large sample size and also include vendors to share their rich experiences in the newspaper circulation process.

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