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Communicating University Research Project Outputs: Evidence from the University of Dar es Salaam

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Abstract

This study assessed communication practices for disseminating research findings at the University of Dar es Salaam, where ineffective communication has limited research utilisation and societal impact. A mixed-methods approach was employed, involving a survey of 88 participants from research projects completed between 2019 and 2020 and face-to-face interviews with five key informants from the Directorate of Research and Publication. Quantitative data were analysed using SPSS version 22 to generate descriptive statistics, while qualitative data were analysed through content analysis. The findings showed that publications were the dominant dissemination strategy, with journals, social media, and policy briefs being the most frequently used and effective channels for reaching target audiences. However, research dissemination was constrained by inadequate funding, the effects of the COVID-19 pandemic, and ineffective communication approaches. The study concludes that while research projects employed multiple dissemination strategies with varying levels of effectiveness, integrating traditional scholarly publications with digital communication platforms can enhance the reach, utilisation, and impact of research findings. It recommends increased financial support and the adoption of integrated communication strategies to strengthen the dissemination of research and maximise its contribution to policy, practice, and societal development.

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1. Introduction

Research projects generate knowledge that can contribute to scientific advancement and address societal challenges only when their findings are effectively communicated to relevant stakeholders. Research communication encompasses a continuum of activities ranging from the dissemination of findings to interactive engagement and feedback with diverse audiences, thereby enhancing knowledge accessibility, promoting stakeholders' participation, and facilitating the uptake of research evidence in policy and practice (Barreto et al., 2024; Mayo-Gamble et al., 2022). Consequently, effective communication strategies are increasingly recognised as an integral component of the research process because they enhance the visibility, accessibility, and utilisation of research outputs within the scientific community and across social, economic, and political domains (Entradas et al., 2023; Bucchi & Trench, 2021; Soler-Gallart & Flecha, 2022; Fischer et al., 2024).

Despite this recognition, effective communication of research findings remains a significant challenge, particularly in developing countries. Africa contributes only about 1% of global research output, and existing evidence suggests that research findings are often communicated in overly lengthy, technical formats that are inaccessible to intended users, thereby limiting their uptake and societal impact (Adakawa, 2022; Ibem et al., 2017). Similar concerns have been reported in Tanzania, where stakeholders have expressed dissatisfaction with the limited dissemination and utilisation of research findings. These challenges have been associated with inadequate communication planning, limited use of communication expertise, and reliance on dissemination channels that are often unsuitable for non-academic audiences (Fussy, 2018; Assey & Msoka, 2019; Mwogela & Sane, 2025; Buguzi & Nyinondi, 2025). Collectively, these observations underscore the need to strengthen research communication strategies to enhance the accessibility, uptake, and societal impact of research findings.

Communication strategies constitute a critical component of research dissemination because they determine how research findings are tailored, delivered, and communicated to different stakeholder groups. Although communication channels provide the media through which messages are conveyed, communication strategies encompass broader considerations, including audience identification, message framing, timing, and the

selection of appropriate dissemination channels (Zerfass et al., 2018). Universities have traditionally relied on formal dissemination mechanisms such as peer-reviewed publications, conference presentations, seminar papers, technical reports and inaugural lectures to communicate research outputs (Ezema, 2013; Nguyen, 2014; Twinamasiko et al., 2024). While these approaches remain indispensable for scholarly communication, evidence consistently indicates that they primarily target academic audiences and offer limited opportunities for sustained engagement with research beneficiaries throughout the project lifecycle (Onisei, 2024; Noori, 2024; Vaughn et al., 2013).

Recent scholarship advocates a broader conception of research communication that extends beyond the dissemination of completed findings. Rather than treating communication as a one-way transfer of knowledge, studies increasingly emphasise stakeholder-centred strategies involving early engagement, audience segmentation, contextualisation of findings, communication brokers, narrative approaches and the use of multiple dissemination formats to enhance accessibility and uptake (Ashcraft et al., 2020; Agency for Healthcare and Quality, 2012; Aiello et al., 2021; Tripathy et al., 2017). Collectively, these studies suggest that effective communication is a continuous and interactive process that should be integrated throughout the research lifecycle rather than confined to project completion.

Technological advancement has further transformed research communication by expanding opportunities beyond conventional dissemination channels. Digital platforms, including institutional websites, repositories, social media, online videos, and other web-based technologies, have enhanced researchers' ability to reach broader, more diverse audiences rapidly and cost-effectively (Moseti, 2015). Beyond increasing visibility, digital communication facilitates real-time interaction and feedback between researchers and stakeholders, thereby strengthening knowledge exchange and promoting wider societal utilisation of research findings (Malhotra & Garg, 2023; Noori, 2024; Onisei, 2024). Consequently, current evidence increasingly supports the combination of traditional scholarly communication with digital approaches to maximise both academic visibility and public engagement.

Notwithstanding these developments, the effectiveness of communication strategies depends on more than the choice of dissemination channels. Previous studies consistently demonstrate that effective communication

requires strategic planning, adequate financial and human resources, professional communication expertise, appropriate timing, and communication approaches that are tailored to audience needs and contextual conditions (Budden & Michener, 2018; Marín-González et al., 2017; Siddiqui, 2016; World Health Organisation, 2017). Effective communication also requires accessible content, stakeholder participation, appropriate framing of information, network building and sustained communication capacity to ensure that research findings are understandable, relevant and actionable for different user groups (Burns et al., 2021; Elwy et al., 2022; León & Lipuma, 2024; McBride et al., 2008). Together, these findings indicate that effective communication is multidimensional, combining organisational, technical and audience-centred considerations.

Despite increasing recognition of effective research communication, substantial barriers continue to constrain the dissemination and utilisation of research findings across different contexts. Existing evidence identifies inadequate institutional support, insufficient funding, limited communication expertise, weak information and communication technology infrastructure, poor awareness of dissemination platforms, and inadequate management of institutional repositories as major impediments to effective communication (Elwy et al., 2022; Moseti, 2015; Nunda & Elia, 2019). Equally important are policy-related constraints, including the absence of institutional and national frameworks that provide clear guidance for communicating research outputs, resulting in fragmented, voluntary and inconsistent dissemination practices (Onisei, 2024; Twinamasiko et al., 2024; Ukachi, 2018). These institutional and policy limitations collectively reduce the visibility, accessibility and utilisation of research findings.

Beyond institutional constraints, research communication is inherently complex because it requires balancing scientific rigour with accessibility for audiences possessing diverse knowledge needs and levels of expertise. The effectiveness of communication, therefore, depends on researchers' ability to simplify complex evidence without compromising scientific integrity, select appropriate communication formats, and respond to evolving stakeholder expectations (León & Lipuma, 2024; National Academies of Sciences, Engineering, and Medicine, 2017; Scalway et al., 2019). Although

previous studies have substantially advanced understanding of communication strategies, communication effectiveness and associated barriers, the evidence remains largely fragmented across healthcare, policy and higher education contexts, with limited integration of these dimensions within university research projects. Consequently, there remains insufficient empirical understanding of how communication strategies, communication effectiveness and contextual barriers collectively shape the communication of university research findings, particularly within developing-country universities.

Although previous studies have considerably advanced the understanding of research communication, existing evidence remains fragmented. Most studies examine communication strategies, communication effectiveness, or communication challenges as separate phenomena, with much of the empirical evidence originating from healthcare, policy, or other sector-specific contexts. Consequently, limited attention has been paid to how these dimensions interact to shape the communication of findings from university research projects, particularly within multidisciplinary university environments in developing countries. This fragmented understanding constrains the development of comprehensive communication approaches capable of enhancing the accessibility, utilisation and societal impact of university research. Addressing this gap requires empirical evidence that simultaneously examines the communication strategies employed, their effectiveness, and the contextual challenges influencing the communication of university research findings within Tanzanian universities.

The study draws on Brownson et al.'s (2018) Model for Dissemination of Research (MDR) to explain how research findings are communicated from knowledge producers to intended users. The model conceptualises research communication as a dynamic process involving four interrelated components: message, source, audience and channel, and emphasises that effective dissemination depends not only on the quality of research evidence but also on how messages are framed, tailored and communicated to different stakeholder groups. Unlike conventional dissemination approaches that rely predominantly on academic publications and conferences, the MDR advocates audience-centred communication through multiple channels, strategic message framing, continuous stakeholder engagement and feedback. The model therefore provides an appropriate theoretical lens for understanding why some

communication strategies are more effective than others in enhancing the accessibility and utilisation of university research findings.

While the MDR offers a comprehensive framework for research dissemination, it pays relatively little attention to the contextual conditions that may facilitate or constrain the effectiveness of communication within university environments. Building on the model, this study develops a conceptual framework in which communication strategies constitute the explanatory variable, effective communication of research findings represents the outcome variable, and institutional, technical, policy and resource-related challenges act as contextual factors influencing this relationship. Within this framework, communication effectiveness is assessed through accessibility, credibility, relevance, timeliness and understandability of research findings. The framework extends the MDR by integrating communication strategies, communication effectiveness, and contextual challenges into a single analytical model that explains research communication practices in Tanzanian universities.

Against this background, the study investigates the communication strategies for university research project findings at the University of Dar es Salaam, examining their effectiveness and identifying the contextual challenges that influence research communication. Specifically, the study sought to identify the communication strategies used to disseminate university research project findings; assess the effectiveness of the communication strategies in reaching intended stakeholders; and examine the institutional, technical, policy, and resource-related challenges affecting the communication of research findings.

This study makes three contributions to the literature on research communication. Firstly, it advances existing scholarship by integrating communication strategies, communication effectiveness, and contextual challenges within a single analytical framework, thereby providing a more comprehensive explanation of university research communication than studies that examine these dimensions independently. Secondly, it extends empirical evidence beyond the dominant healthcare and policy settings by investigating research communication practices across multidisciplinary university research projects. Thirdly, by providing empirical evidence from the University of Dar es Salaam, the study contributes context-specific

insights from a developing-country university that can inform institutional communication policies, strengthen stakeholder engagement, and enhance the accessibility, utilisation and societal impact of university research findings.

2. Methods and Materials

This study employed an explanatory case study design focusing on the University of Dar es Salaam (UDSM). The design was suitable for gaining an in-depth understanding of how and why research outputs are communicated in a university context. The study further employed a convergent parallel mixed-methods approach, in which quantitative and qualitative data were collected concurrently, analysed separately, and integrated during interpretation to provide a comprehensive understanding of research communication strategies. The research focused on 115 completed projects from 2019-2020. The selected period targeted completed research projects, as researchers were still actively communicating, disseminating, and publishing their research outputs, thereby providing current and relevant insights for the study. Using Yamane's formula (N=115, confidence level 95% and margin of error (e)= 5%), 88 projects were randomly selected. After this, one respondent was randomly selected from each selected project to represent the respective project team, regardless of the number of team members. Respondents were selected based on their membership in project teams and their active involvement in research activities, including the production, dissemination, and publication of research outputs. Five key informants from the Directorate of Research and Publication were conveniently sampled, and the study concluded after reaching data saturation with five participants. The key informants were selected purposively based on their official roles, responsibilities, expertise, and involvement in managing or coordinating research and publication activities within the institution. Hence, the study involved a total of 93 participants.

ata collection methods include questionnaires (with open-ended and closed-ended questions) and semi-structured interviews for primary data collection. At the same time, documentary review (from print sources and online databases) was used for secondary data. Self-administered questionnaires were distributed to 88 respondents, who completed and returned them directly to the researchers for analysis. Additionally, five semi-structured interviews were conducted with key informants to obtain

in-depth insights into the study issues. Expert review and triangulation ensured the reliability and validity of data. Quantitative data were analysed using SPSS version 22, employing descriptive statistics (frequencies, percentages, means, standard deviations) and presenting them via tables and pie charts. Qualitative data were analysed thematically and presented through narratives and quotations. Ethical considerations were observed throughout the study, including obtaining research clearance and permits from the relevant UDSM authority and securing informed consent from all participants. Voluntary participation, confidentiality, and clear communication regarding the study purpose, benefits, and potential risks were also ensured.

3. Results

This section presents the study findings, organised around three themes: communication strategies, effectiveness, and challenges in communicating research project outputs. The questionnaire respondents were broadly representative of project teams involved in university research activities. Most respondents were highly educated, with the majority holding postgraduate qualifications, reflecting the academic context in which research projects are conducted. Academic researchers constituted the largest share of participants, alongside a smaller representation of key informants from research and publication managers and coordinators, capturing diverse functional roles in the communication of research outputs. In terms of gender, both men and women were represented, with male respondents forming a larger proportion, mirroring prevailing gender patterns in academic research environments.

Strategies Used in Communicating University Research Findings

The first objective of this research was to explore the common strategies universities use to communicate the findings of their research projects. A list of potential strategies was provided, and respondents were asked to select multiple strategies if more than one was used. The results are summarised in Table 2.

Table 2: Common Strategies Used in Communicating University Research Findings (N=88)

S/N	Communication Strategies	Frequency	Percentage
1	Digital and online	36	40.9
2	Mobile and messaging	12	13.6
3	Traditional media	17	19.3
4	Face-to-face communication	31	35.2
5	Integrating findings in a societal context	19	21.6
6	Publications	67	76.1
7	None	7	8

Source: Field Data (2023)

Table 2 reveals the use of multiple strategies in communicating research project outputs. It also shows that publications were the most commonly used communication strategy, with (76.1%) of respondents selecting this option, followed by digital and online platforms with (40.9%) of respondents and face-to-face communication with (35.2%) of respondents. Findings from the key informants identified several strategies, including well-written publications, outreach programs and community engagement activities. The key informants also pointed out that effective communication requires compelling narratives beyond mere data presentation. One key informant stated:

> "Communicating project findings is not just about presenting data. It is about telling a compelling story through well-written publications and outreach programs" (KI C).

The quote shows that effective communication of research results requires a compelling narrative and direct engagement with communities. Interview findings underscore that while traditional methods remain important, researchers increasingly recognise the necessity of interactive, narrative-driven approaches that actively involve communities and balance academic rigour with accessible communication.

The questionnaire and interview findings jointly indicate that research communication relies on a mix of traditional and emerging strategies, with publications (in print and digital formats) remaining dominant, while other approaches play complementary roles. Questionnaire results indicate that

publications are the most widely used strategy, reflecting adherence to conventional academic dissemination, while the use of digital platforms and face-to-face communication reveals a growing recognition of the need to reach broader audiences. This pattern is reinforced by interview insights, in which key informants emphasised the importance of well-written publications alongside outreach and community engagement activities, stressing that effective communication goes beyond presenting data to telling compelling, audience-focused stories. The study also examined the channels used within the various communication strategies. Respondents were given the option to select multiple responses and to add channels not listed. Results are presented in Table 3.

Table 3: Communication Channels used in Communicating University Research Findings

S.N.	Communication Channel	Frequency	Percentage
1.	Websites	9	10.2
2.	Blogs	5	5.7
3.	Social media	27	30.7
4.	Email newsletters	2	2.3
5.	Phone calls	3	3.4
6.	Tailored text messages	11	12.5
7.	Radio	16	18.2
8.	Television	2	2.3
9.	Stakeholder meetings	21	23.9
10.	Workshops, conferences and seminars	11	12.5
11.	Stories and testimonials	3	3.4
12.	Exhibitions	16	18.2

13.	Small-scale pilot programs	13	14.8
14.	Entrepreneurship venture	9	10.2
15.	Policy briefs	23	26.1
16.	Journals	47	53.4
17.	Brochures	7	8.0

Source: Field Data (2023)

Table 3 reveals that researchers use multiple channels to communicate research findings, though to varying degrees. Journals, with 53.4% of respondents, maintain their prestige as the preferred channel for formal dissemination, featuring their enduring academic currency and role in scholarly publications. These are followed by social media, policy briefs, stakeholder meetings, exhibitions, and radio channels, demonstrating their preferences for reaching diverse audiences. The interview findings revealed the channels mentioned by the key informants, including social media platforms, research reports, conferences, workshops, and institutional repositories. Interview insights also revealed that channel selection involves multiple influencing factors, as explained by one key informant:

> "In some cases, the donor of the project is the one who dictates which channels we use, but most of the time, it all comes down to which combination of channels can provide the widest reach in the most cost-effective manner possible" (KI E).

This quote highlights the dual influence of donor requirements and strategic cost-effectiveness considerations in optimising communication impact. The questionnaire and interview findings converge to show that researchers prefer multiple channels for delivering research findings, though not to the same degree. Questionnaire results indicate a strong preference for multiple channels, with journals, social media, policy briefs, stakeholder meetings, exhibitions, and radio leading the list. These patterns are strengthened by interview insights, which identified similar channels, such as social media, reports, conferences, and repositories, and noted that donor requirements and cost-effectiveness considerations often influence channel choice.

Moreover, respondents were asked to indicate when they communicate their findings after project completion, and the results are summarised in Figure 2.

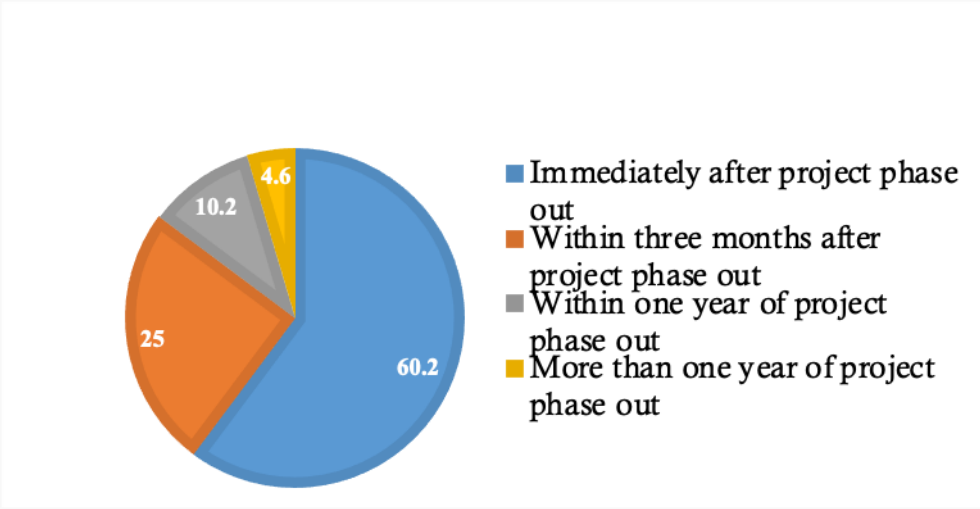


Figure 2: Timeframe for Communicating University Research Findings
Source: Field Data (2023)

The results presented in Figure 2 indicate diverse timeframes for communicating research findings. The majority of researchers (60.2%) disseminated their findings immediately after project completion, followed by those who did so within 3 months of completing the research. A relatively small proportion disseminated their research findings within one year or less.

Effectiveness of Strategies Used in Communicating University Research Findings

The study assessed which communication strategies were most effective in communicating research project findings. The research employed a 5-point Likert scale to measure the effectiveness of each communication strategy used, where (1) = Very Ineffective, (2) = Ineffective, (3) = Neutral, (4) = Effective, and (5) = Very Effective. The mean values ranged from 1 to 5, with higher scores indicating more effective communication.

Table 4: Effectiveness of Strategies Used in Communicating University Research Findings

s/n	Communication Strategy	n	Minimum	Maximum	Mean	Std. Deviation	Rank
1	Digital and online	36	2	5	3.64	0.868	2
2	Mobile and Messaging	12	1	5	2.16	0.645	6
3	Traditional Media	17	2	5	3.06	1.004	5
4	Face-to-face communication	31	2	5	3.05	1.036	3
5	Integrating findings in a societal context	19	2	5	3.48	0.453	4
6	Publications	67	3	5	4.23	0.654	1
	Grand Mean				**3.403**		

Source: Field Data (2023)

Table 4 shows variations in the perceived effectiveness of communication strategies used to disseminate research outputs. Publications recorded the highest mean score (M = 4.23, SD = 0.654), followed by digital and online strategies (M = 3.64, SD = 0.868). Mobile messaging strategies registered the lowest mean score (M = 2.16, SD = 0.645). Overall, the grand mean score was 3.403, indicating differences in respondents' ratings across the communication strategies.

Interview data revealed stakeholder meetings as the primary communication strategy, followed by publications and other media. One key informant said:

> "Meeting stakeholders should be the biggest priority... because it creates a framework that can be supplemented by other components such as publications and the use of media." (KI B).

This highlights meetings as essential groundwork requiring reinforcement through complementary strategies. Contrarily, on the effectiveness of communication strategies, another informant had a different opinion:

> "Communication methods employed… may not always effectively cater to these different levels of understanding, leading to confusion or misinterpretation" (KI D).

This narrative suggests that the inappropriate choice of communication methods can reduce message clarity and limit audience reach.

Integrating both datasets reveals different levels of effectiveness of selected communication strategies as perceived by study participants. Publications dominate due to credibility and formality. Digital platforms address accessibility and reach, while stakeholder meetings provide crucial interpersonal engagement. This pattern underscores the importance of credible, structured channels, supplemented by diverse platforms. However, the lower effectiveness of mobile strategies indicates practical constraints. In contrast, inappropriate strategies can distort the delivery of research results to intended audiences. The study further examined key descriptors that define the perceived effectiveness of communication strategies among respondents. Respondents were asked to prioritise the five (5) factors they deem most important in describing the effectiveness of communication strategies.

Table 5: Description of the Communication Strategies Effectiveness (n=88)

S/N	Description	Frequency	Percentage (%)
1	Accessibility	25	28.4
2	Timeliness	13	14.8
3	Credibility	16	18.2
4	Relevance	14	15.9
5	Understandability	20	22.7

Source: Field Data (2023)

Table 5 presents respondents' views on the key attributes of effective communication strategies. Accessibility emerged as the most frequently identified attribute, followed by understandability and credibility. Relevance and timeliness were also identified as relatively less important characteristics of effective communication. Overall, the findings show that respondents associated effective communication strategies with ease of access, clarity of information, trustworthiness, contextual relevance, and timely delivery.

Challenges Facing the Communication of University Research Findings

Respondents were provided with a list of potential challenges to choose from, along with the option to add any additional challenges they encountered that were not on the list. Results are presented in Table 6.

Table 6: Challenges Facing the Communication of Research Findings in the University

S/N	Challenges	Frequency	Percentage
1.	Lack of interest from stakeholders	21	23.9
2.	Effects of the COVID-19 Pandemic	44	50
3.	Lack of funding	56	63.6
4.	Complexity of the research	18	20.5
5.	Limited time and resources	6	6.82
6.	Poor framing of information	11	12.5
7.	Poor communication methods	35	39.8
8.	Lack of platforms	2	2.3
9.	Political interference	10	11.3

Source: Field Data (2023)

Table 6 presents the challenges affecting the effective communication of research findings. Most respondents reported a lack of funding as a challenge, followed by the impact of the COVID-19 pandemic. Respondents also identified challenges related to communication methods, stakeholder disinterest, research complexity, information framing, and political interference. The findings indicate that both institutional and contextual

factors are involved. The issue affected the communication and dissemination of research outputs.

Interview findings provided deeper insight into how communication challenges manifest and affect the dissemination of research findings at UDSM. Regarding funding constraints and pandemic-related disruptions, one key informant noted:

> "In 2020, when the COVID-19 outbreak was at its peak, some research projects here at UDSM were forced to postpone communicating their findings due to funding issues, and others had to restructure their communication strategies because of how the situation was at the time" (KI C).

This quote shows how unexpected crises and limited financial resources can significantly delay or alter planned communication strategies and activities, undermining timely dissemination. Challenges related to stakeholder engagement and message framing were also evident. One informant explained: "Bridging the gap between academia and the general public is hard sometimes… or else the public becomes uninterested" (KI E).

The quote indicates that a lack of relevance and poorly chosen channels weaken public engagement. Similarly, another key informant stated: "Research project findings can be highly technical and complex" (KI C), emphasising how technical language creates barriers to understanding. This was reinforced by the view that "researchers… may inadvertently overlook the need to frame their findings for non-experts" (KI A), underscoring the need for deliberate simplification and audience-focused communication. Together, these insights reveal that ineffective framing, limited stakeholder engagement, and contextual constraints jointly hinder effective communication of research findings. The quantitative and qualitative findings collectively revealed interconnected barriers affecting effective research communication. The questionnaire findings identified major challenges, including financial constraints, poor communication methods, and stakeholders' disinterest. At the same time, interview responses provided additional details on issues related to accessibility, audience comprehension, donor dependency, political interference, and

platform accessibility. The combined findings indicate that challenges to research communication exist at institutional, technical, and contextual levels.

4. Discussion

This section discusses the study findings, organised around three key themes in line with the analysis presented in the preceding section.

Strategies Used in Communicating University Research Project Findings

Study findings revealed that research communication relies on a combination of formal scholarly dissemination, digital engagement, and interpersonal interaction strategies, with publications remaining the dominant strategy. The varied usage patterns demonstrate that researchers recognise no single strategy satisfies all communication needs across different audiences and projects. The dominance of publications in research communication highlights reliance on traditional academic practices. These findings concur with those of Twinamasiko et al. (2024), Onisei (2024), Noori (2024), and Nguyen (2014) on the predominance of publications in peer-reviewed journals and the emergence of digital avenues for communicating research findings. The use of multiple strategies reflects awareness that no single approach satisfies the diverse needs of the audience across different projects, aligning with Budden and Michener's (2018) assertion that different strategies target different audiences: written communication for experts and verbal methods for broader publics. This pattern supports the MDR's emphasis on adapting communication to audience needs and on using multiple channels for broader impact. However, it reveals practical gaps in fully leveraging the potential of digital platforms for wider reach.

The findings demonstrate the growing diversification of research communication channels in universities, where scholarly journals, reports, social media, policy briefs, conferences/meetings, repositories, exhibitions, and radio are used to reach different audiences. Similar observations were reported by Saadudeen et al. (2024), who noted the expanding role of social media in facilitating the digital dissemination of research findings. The shift toward virtual stakeholder engagement during the COVID-19 period further reflects the adaptive nature of institutional communication strategies in response to contextual disruptions. Nevertheless, the continued preference for scholarly journals, as observed by Fischhoff (2018), suggests that academic recognition, credibility, and institutional

reward structures still strongly shape communication choices, despite the wider reach of digital alternatives. These patterns are consistent with the MDR, particularly its emphasis on matching communication channels to audience needs and dissemination goals, though the study also indicates that practical realities, such as donor requirements, resource constraints, and institutional priorities, significantly influence the selection and effectiveness of communication channels.

Communication timeframes varied considerably: most respondents disseminated findings immediately after project completion, while others communicated results after a period. The study findings align with those of Nieuwland et al. (2024) and Uphold et al. (2022), who also noted that research outputs are communicated promptly upon project completion. While immediate dissemination emphasises the timely transfer of knowledge, which aligns with the MDR, delayed communication reflects the practical need for analysis, validation, and simplification. Turon et al. (2023) noted that long-term projects require additional time to simplify findings for public understanding, while Siddiqui (2016) argued that the nature of information influences timing; some findings require patenting or simplification. These findings are consistent with the MDR, which underscores effective and timely dissemination of research findings through appropriate communication approaches. The findings confirm that successful research communication depends on balancing promptness with responsiveness to audience needs and contextual demands.

Effectiveness of Strategies Used in Communicating University Research Project Findings

The study findings reveal different levels of effectiveness of selected communication strategies. Meaning that the effectiveness of research communication is enhanced through the complementary use of multiple communication strategies, in which formal publications, digital platforms, stakeholder engagement, and media channels collectively strengthen the reach, accessibility, and impact of research outputs for diverse audiences. These results are supported by Ashcraft et al.'s (2020) study, which shows that publications effectively reach both academic and non-academic audiences, with journals targeting academia and policy briefs reaching policymakers through accessible formats. However, the findings differ from

those of Noori (2024) and Onisei (2024), who noted that publications do not target non-academic audiences and do not support real-time engagement and dialogue and are therefore ineffective. The findings support the key propositions of the MDR by demonstrating that effective dissemination depends on strategically using multiple communication channels to reach diverse audiences and enhance the accessibility, credibility, and impact of research outputs. The combined use of publications, digital platforms, stakeholder engagement, and media channels further supports the model's emphasis on matching communication approaches with audience needs and dissemination objectives.

The findings have further revealed that effective communication strategies are associated with ease of access, clarity of information, trustworthiness, contextual relevance, and timely delivery, though to varying degrees. The results are supported by studies by Leon and Lipuma (2024), Elwy et al. (2022), and Burns (2021), which note multiple factors key to the effective communication of research findings. Zizka (2014) similarly identified accessibility as significant, while the Bennett Institute of Public Policy (2020) highlighted credibility, suggesting that contextual variation in factor prioritisation requires the flexible application of dissemination models. The findings also largely align with the MDR, validating its emphasis on accessible channels, credible sources, and clear messaging.

Challenges Facing the Communication of University Research Projects' Findings

Findings indicated that specific challenges to research communication vary across institutional, technical, and contextual levels. In particular, research communication was affected by financial dependence on external support and by unstable socio-political conditions, such as COVID-19, which collectively disrupted dissemination activities, disrupted the continuity of communication efforts, and limited public engagement with research outputs. Fasci et al. (2019) and Piotrowski and King (2020) corroborated these findings, noting that donor funding cessation and pandemic-related budgetary shortfalls create significant obstacles for effective communication. This evidence reveals that resource instability and external disruptions significantly impede dissemination, challenging the MDR's implicit assumption of stable resources and controlled environments. Further results indicate that limitations in message design, presentation approaches, and channel selection reduced the clarity and accessibility of

research outputs, thereby constraining effective audience understanding and engagement. These results are similar to those of Noori (2024) and Onisei (2024) on inadequate communication methods used to meet diverse user needs and preferences. The MDR addresses message framing and channel selection but inadequately accounts for the practical difficulty researchers face in translating specialised knowledge for diverse audiences, particularly when balancing academic rigour with accessibility.

The findings further indicate that stakeholder interests posed some limitations on effective research communication, though these were less pronounced than the limitations posed by resource disruptions. Similarly, limited time for dissemination activities and inadequate communication platforms were identified as minor constraints that may be linked to competing academic responsibilities, such as teaching and administrative duties (Uphold et al., 2022). These findings reveal that effective dissemination requires not only appropriate strategies and channels but also stakeholder relevance, adequate time allocation, and platform availability. The MDR underscores audience engagement but inadequately addresses structural constraints, institutional priorities, time limitations, and platform access that impede implementation in academic contexts where research communication competes with teaching and administrative responsibilities.

Regarding theoretical implications, it is evident that while the MDR provides valuable theoretical grounding, accentuating effective channels, audience engagement, and clear messaging, it inadequately addresses real-world constraints, including resource instability, external disruptions (pandemics, political interference), structural barriers (time, platforms), and the practical difficulty of translating complex research for diverse audiences. These gaps suggest the need for enhanced dissemination frameworks that explicitly incorporate resource contingencies, external risk factors, institutional constraints, and practical translation strategies, moving beyond idealised communication scenarios to address the complex realities of academic research dissemination in resource-constrained, disruption-prone environments.

5. Conclusion

The study concludes that the research projects at the UDSM employ multiple strategies to communicate their findings. The deployed communication strategies blend traditional academic methods with emerging approaches. It further establishes that publications remain a dominant method, stressing their importance in academic credibility and scholarly impact. However, the increasing use of digital platforms and face-to-face interactions highlights a shift towards more flexible ways to engage both academic and non-academic audiences. The study further shows that most adopted communication strategies vary in their effectiveness, but overall, they were moderately effective. It is concluded that while publications remain the most credible and formal approach, the growing use of digital communication and stakeholder meetings has the potential to offer broader reach and greater audience engagement. It is also concluded that key factors such as accessibility, credibility, and timeliness are critical to developing effective communication strategies. The study establishes that the communication of research findings by research projects at the UDSM is susceptible to challenges. The most significant challenges include a lack of funding, especially from external sources, and disruptions caused by the COVID-19 pandemic, which led to changes in communication plans. Finally, poor communication methods, low stakeholder interest, and the complexity of research topics also hinder the effective dissemination of research findings.

6. Limitations of the Study

This study should be interpreted in light of several limitations. Firstly, the research adopted a single-institution study focusing on the University of Dar es Salaam; therefore, the findings may not be directly generalisable to other universities with different institutional contexts, research cultures, or communication systems. Nevertheless, the study provides analytical insights that may be transferable to comparable institutions in higher education. Secondly, the study examined completed research projects from the 2019–2020 period using a cross-sectional design, which captured communication practices at a particular point in time and may not fully reflect subsequent developments, particularly the increasing adoption of digital communication strategies. Thirdly, the study relied primarily on participants' self-reported experiences and perceptions, which may be subject to recall or response bias despite methodological triangulation across questionnaires, interviews, and documentary review. Future studies could strengthen the evidence base by employing longitudinal and multi-

institutional designs and incorporating objective measures of research communication outcomes, such as stakeholder reach, engagement metrics, and research utilisation indicators.

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