The Effect Of Communication On Service Reliability Of National Water And Sewerage Corporation,Uganda

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Abstract: Effective communication is widely acknowledged as a critical determinant of service reliability in public utility organizations. This study examined the effect of communication on service reliability at the National Water and Sewerage Corporation (NWSC), focusing on the Kampala Service Centre. The study adopted a cross-sectional survey design, employing both quantitative and qualitative approaches to obtain comprehensive insights. Data were collected from 79 NWSC staff using self-administered questionnaires, complemented by key informant interviews with top managers and business partners. Quantitative data were analyzed using descriptive statistics, Pearson correlation, and regression analysis with SPSS version 24, while qualitative data were analyzed using thematic content analysis. The findings revealed that stakeholders generally perceived NWSC's communication practices positively, particularly in relation to feedback collection, internal information dissemination, and stakeholder engagement. Correlation analysis indicated a weak but positive and statistically significant relationship between communication and service reliability (r = 0.250, p < 0.05). However, regression analysis revealed that communication accounted for only 5% of the variance in service reliability, indicating a very weak predictive effect. Consequently, the hypothesis that communication has a positive and significant effect on service reliability was rejected. The study concludes that while effective communication is necessary for stakeholder engagement and transparency, it alone is insufficient to significantly influence service reliability at NWSC. The study recommended strengthening communication systems through structured feedback mechanisms, technology-driven communication platforms, and enhanced transparency to improve service reliability and stakeholder satisfaction. Consequently, the hypothesis that communication has a positive and significant effect on service reliability was rejected. The study concludes that while effective communication is necessary for stakeholder engagement and transparency, it alone is insufficient to significantly influence service reliability at NWSC. The study recommended strengthening communication systems through structured feedback mechanisms, technology-driven communication platforms, and enhanced transparency to improve service reliability and stakeholder satisfaction.

Keywords: Communication, Service Reliability, Stakeholder Engagement, Public Utilities, National Water and Sewerage Corporation

Introduction

Neuroplasticity is defined as the brain's capacity for reorganizing itself by forming new connections between neurons. This is an essential aspect of the human brain, especially during early childhood. Studies have proven that neuroplasticity is responsible for affecting cortical thickness and branching of neurons. Other studies that have used functional magnetic resonance imaging have proven that neuroplasticity is also active in adults, thus helping the brain recover from injuries. The neuroplasticity model has significant implications for educational psychology and rehabilitation medicine.

Communication has been identified to play a pivotal role in improving service reliability by promoting timely and effective communication of information, facilitating the engagement of various stakeholders, and responding to service disruptions. Effective communication has been identified to help organizations manage customer expectations, communicate accurate and timely information, and build trust with various stakeholders (Shockley-Zalabak, 2017). In public utilities, communication has been identified to be vital in situations of planned maintenance, emergencies, and service disruptions, where timely and accurate communication of information helps to reduce customer dissatisfaction and inefficiencies. (Zeithaml et al., 2021).

Despite the investment in infrastructure and operation reforms, NWSC still experiences challenges in terms of interruptions in the delivery of services, delays in disseminating information to the stakeholders, and dissatisfaction in some of the services offered (Kirabo et al., 2019; Ongom & Sserwanga, 2021). Although other studies have emphasized the need to consider business relationship management in improving the reliability of the services offered (Nyongesa & Wanjala, 2021; Ochieng & Mwirigi, 2020), little evidence exists on the specific contribution of communication as a key dimension in the business relationship in improving the reliability of the services offered in Uganda.

Moreover, communication in public organizations is not only confined to customer relationships but also includes internal communication with other employees or management and the outside environment. Therefore, effective internal communication is vital in ensuring that the public is well-informed and that the employees are able to respond to any issues related to service provision in a timely manner (Al-Ghamdi et al., 2017).This study therefore sought to examine the effect of communication on service reliability at the National Water and Sewerage Corporation, with a focus on the Kampala Service Centre. Specifically, the study assessed stakeholders' perceptions of NWSC's communication practices, examined the relationship between communication and service

reliability, and determined the extent to which communication predicts service reliability. By doing so, the study contributes to the growing body of knowledge on public utility management and provides empirical evidence to inform policy and managerial practices aimed at improving service reliability through effective communication strategies.

RESULTS

Communication and service reliability

The first objective was to assess the effect of communication on service reliability of NWSC. The study thus sought opinions on communication from selected respondents at NWSC. Table 4.3 presents a summary of the opinions expressed in percentages, mean values and standard deviations.

Table 1: Showing descriptive results on communication

Statement	SD (%)	D (%)	NS (%)	A (%)	SA (%)	Mean	Std. Dev
NWSC effectively gathers stakeholder feedback for continuous improvement.	1.3	1.3	5.1	46.8	45.6	4.34	.749
Employee feedback holds value in NWSC's communication strategies.	1.3	1.3	3.8	44.3	49.4	4.39	.741
NWSC seeks stakeholder feedback on decision-making.	2.5	2.5	8.9	57.0	29.1	4.08	.844
NWSC conveys organizational knowledge to staff through diverse internal sources	3.8	5.1	5.1	40.5	45.6	4.19	1.014
Stakeholders are reliably informed about NWSC operations	0	2.5	3.8	35.4	58.2	4.49	.696
NWSC's communication methods are timely and reliable	1.3	3.8	3.8	51.9	39.2	4.24	.804
Stakeholders receive accurate information promptly from NWSC	17.7	2.5	3.8	35.4	40.5	3.78	1.456
NWSC's internal communication ensures timely engagement with stakeholders.	5.1	5.1	3.8	38.0	49.4	4.23	1.049
NWSC consistently meets employee information needs through various internal communication sources.	16.5	2.5	6.3	36.7	38.0	3.77	1.414

Source: Research findings (2024)

According to the study findings, vast majority (92.3%) of respondents were in agreement that NWSC effectively gathered stakeholder feedback, highlighting confidence in the organization's feedback collection methods. Those who disagreed (2.6%) and those who remained neutral (5.1%) may have had reservations or lacked sufficient information to form a strong opinion. The mean value and standard deviation attained were 4.34 and 0.749 respectively. The high agreement rate suggests that NWSC's methods for collecting feedback are effective, contributing to continuous improvement and enhancing stakeholder trust. This is in line with the findings by Kuchi (2016) affirmed that effective communication plays a crucial role in ensuring stakeholders comprehend organizational changes and directions. According to his findings, increased communication enables stakeholders to grasp the reasons behind an organization's strategic movements, reducing conflicts and aligning stakeholders' understanding with the organization's programs and priorities.

An overwhelming majority (93.7%) of respondents agreed that employee feedback held value in NWSC's communication strategies. Those who strongly disagreed were 1.3%, 1.3% disagreed and those who remained neutral (3.8%) may have had uncertainties or required further clarification regarding the integration of employee feedback. The mean value obtained was high at 4.39 with a relatively low corresponding standard deviation of 0.741. The strong agreement indicates that NWSC values employee input,

fostering a more inclusive and effective communication approach that can lead to increased employee engagement and satisfaction. This aligns with research highlighting the positive effect of employee feedback on organizational performance and employee satisfaction (Al-Ghamdi et al., 2017; Pincus, 2018). By valuing and integrating employee feedback into communication strategies, NWSC demonstrates its commitment to transparency, collaboration, and continuous improvement. Key informants expressed mixed views where by some key informants praised NWSC for its efforts to provide clear and comprehensive information whereas others felt that there were instances where transparency was lacking.

One respondent had this to say, "*…enhancing transparency could further bolster stakeholder trust and foster a more inclusive decision-making environment. Openness about decision-making rationales and processes is crucial for building stakeholder confidence and promoting collaborative engagement.*"

Another key informant stated that,

"*NWSC has made strides in transparency, but there's room for improvement. This comment reflects mixed perceptions regarding NWSC's transparency in communicating decision-making processes. While the organization's efforts were acknowledged, there were suggestions for enhancing transparency to bolster stakeholder trust and promote inclusive engagement. Open communication about decision-making rationales and processes was seen as crucial for building confidence and fostering collaboration.*"

As per the findings in Table 4.3, majority of the respondents were in agreement as reflected by 57.0% of those who agreed and 29.1% of those who agreed that NWSC sought stakeholder feedback on decision-making. Those who disagreed were 5.0% in total and those who remained neutral were 8.98%. The mean value and the standard deviation obtained indicated 4.05 and 0.844 respectively. These findings imply that that NWSC is committed to inclusive governance, which can lead to more informed and inclusive decision-making processes consistent with findings by Kuchi (2016). In this context, seeking stakeholder feedback on decision-making reflects NWSC's commitment to inclusive governance, as emphasized by Adams (2019) and Bennett and James (2020).

A majority (86.1%) of respondents were in total agreement that NWSC conveyed organizational knowledge to staff through diverse internal sources. Those who disagreed in totality (8.9%) and those who remained neutral (5.1%) may have required more exposure or experience with these internal sources to form a definitive opinion. The mean obtained was high at 4.19 with a corresponding standard deviation of 1.014. The positive response suggests effective knowledge dissemination practices, fostering a well-informed and engaged workforce. The findings are in line with Al-Ghamdi et al. (2017) who affirmed the pivotal role of internal communication in conveying organizational strategies, values, and information to employees, leading to improved understanding and trust-building within the organization. Additionally, Putti et al. (2019) was also in agreement with these findings whereby he highlighted the importance of top management communication in enhancing employee commitment and understanding of organizational policies and priorities.

A significant majority (93.6%) of respondents were in total agreement that stakeholders were reliably informed about NWSC operations. Those who totally disagreed (2.5%) and those who remained neutral (3.8%) may have lacked sufficient exposure to organizational communications or the required additional assurance regarding reliability. The mean value depicting the levels to which the respondents were in consensus was affirmed by a very high mean of 4.49 with a corresponding low standard deviation of 0.66. The high agreement rate indicates effective communication efforts, which can build trust, transparency, and stakeholder satisfaction. This was supported by one of the key informants, who stated that,

"*Planned maintenance, repairs, or upgrades occasionally lead to temporary service interruptions. However, through effective communication, NWSC promptly notifies customers about these activities, minimizing inconvenience and enabling them to make necessary arrangements. Timely notifications and alerts empower customers to manage their water usage efficiently, reducing wastage and facilitating seamless adjustments to their schedules.*

The findings also indicate that majority (91.1%) of respondents generally agreed that NWSC's communication methods were timely and reliable. Those who generally disagreed (5.1%) and those who remained neutral (3.8%) may have had limited experiences or encounters with these communication methods, leading to uncertainty. the mean value obtained was high at 4.24 and a standard deviation of 0.804. The positive response suggests robust and dependable communication infrastructure, facilitating effective communication with stakeholders and enhancing organizational reputation. The positive response underscores NWSC's commitment to efficient communication practices, aligning with Kuchi's (2016) assertion that effective communication fosters stakeholders' understanding and reduces conflicts. Moreover, timely and reliable communication is essential for maintaining transparency, trust, and credibility with stakeholders, as emphasized by Al-Ghamdi et al. (2017) and Pincus (2018).

One of the key informants had this to say, "*Transparent communication serves as an opportunity to educate the public on conservation practices, and infrastructure upgrades. So, by offering accessible information, NWSC enhances public awareness and*

understanding, empowering individuals to make informed decisions about their water usage. This educational aspect not only benefits customers but also promotes sustainable water management practices and environmental consciousness. He further added that NWSC establishes clear protocols for responding to emergencies such as pipe bursts. Effective internal communication ensures that frontline staff, technicians, and management are promptly notified of emergencies and can mobilize resources efficiently to address the situation. By swiftly responding to emergencies, NWSC minimizes downtime and maintains reliable water supply for customers in police barracks.

Further still, findings in Table 4.3 reveal that a significant majority (75.9%) of respondents generally agreed that stakeholders received accurate information promptly from NWSC. Those who generally disagreed were 20.2% and those who remained neutral were 3.8%. The mean obtained was 3.78 and a standard deviation of 1.456 which was quite high providing confirmation that quite a high number of respondents strongly disagreed. This also implies that while many find the communication effective, there is room for improvement to ensure accurate and prompt information dissemination. The findings highlight the need for NWSC to enhance its communication processes to reduce uncertainties and enhance stakeholder satisfaction. One of the key stakeholders mentioned that,

"While I generally trust NWSC's information, there have been instances where updates were delayed or lacked clarity, leading to some confusion". This sentiment aligns with the survey results, emphasizing the importance of timely and accurate communication hence NWSC needs to prioritize consistent, clear, and timely information sharing to foster trust and enhance stakeholder satisfaction.

A majority of the respondents (87.4%) generally agreed that NWSC's internal communication ensured timely engagement with the stakeholders. The respondents who generally disagreed stood at 10.2%, and the ones who were neutral stood at 3.8%. The average value obtained was high at 4.23 with a corresponding standard deviation of 1.049. This shows that a lot is being done to ensure timely engagement with the stakeholders, but there are still areas of improvement. This shows a positive internal communication process, which is essential in ensuring the success of any business. This is in line with Kuchi's (2016) argument that effective communication helps in reducing conflicts and ensures the alignment of the interests of the stakeholders. Timely engagement with the stakeholders is essential in ensuring transparency and trust in an organization, as discussed by Bennett & James (2020) in their analysis of the healthcare sector.

Furthermore, a significant majority (74.7%) of respondents were in total agreement that NWSC consistently met employee information needs through various internal communication sources. Those who strongly disagreed were 16.5%, those who disagreed were 2.5% and those who remained neutral were 6.3%. The mean value attained was high at 3.77 and a corresponding high standard deviation of 1.414. This highlights potential gaps or inconsistencies in meeting the diverse information needs of employees, the reason some respondents strongly disagreed as affirmed by the high standard deviation. The findings emphasize the need for NWSC to enhance its internal communication strategies to ensure comprehensive, consistent, and tailored information dissemination, promoting employee engagement and satisfaction. Effective internal communication is crucial for keeping employees informed, engaged, and motivated, as emphasized by Kuchi (2016) and Bennett and James (2020). By addressing the identified gaps and inconsistencies, NWSC can promote a culture of transparency, trust, and collaboration within the organization, contributing to improved employee satisfaction and organizational performance.

In conclusion, it is worth stating that the results of the descriptive study are consistent with literature, which underscores the importance of stakeholder communication and feedback collection in organizational success. The high level of consensus among respondents regarding NWSC's effective collection of stakeholder feedback is in line with Kuchi (2016), which underscores the importance of stakeholder understanding through transparent communication. Moreover, the high level of consensus regarding the importance of employee feedback is in line with Al-Ghamdi et al. (2017), which underscores the importance of internal communication in enhancing employee engagement and satisfaction. The high level of consensus regarding NWSC's active collection of stakeholder feedback in decision-making processes is in line with Garnett et al. (2018), which underscores the importance of inclusive communication strategies in public sector organizations.

Table 2: Correlation between communication and service reliability

		Communication	Service reliability
Communication	Pearson Correlation	1	.250*
	Sig. (2-tailed)		.026
	N	79	79
Service reliability	Pearson Correlation	.250*	1
	Sig. (2-tailed)	.026	
	N	79	79

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research findings (2024)

The findings from Table 2 above indicate there is a weak but positive and significant relationship between communication and service reliability as revealed by Pearson's Correlation coefficient of 0.250 with a corresponding P-value of 0.026. The correlation is statistically significant at 0.05 confidence level (2-tailed). This implies communication has a weak but positive and significant relationship with service reliability as revealed by the results from the study. Therefore, there is a high possibility that improvements in communication will lead to improvements in service reliability. This is in line with Adams (2019), who revealed a robust positive relationship between effective communication practices and service reliability in the manufacturing sector. This therefore underscores the importance of communication in ensuring service reliability in various sectors of the economy, thus creating a platform to understand its implications in relation to public utility organizations.

Table 3: Regression model summary for communication

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.250[a]	.063	.050	.399
a. Predictors: (Constant), Communication				

Source: Research findings (2024)

The results reflected by the regression model summary in Table 4.10 indicate that the Adjusted R Square value of 0.050 was obtained. This means that 5% variations in service reliability are predicted by communication while the remaining 95% is due to other factors. These findings imply that there is a very weak effect caused by communication on service reliability within NWSC.

Conclusion

Basing on the results attained, stakeholders predominantly perceive NWSC's communication and feedback mechanisms positively and thus the high agreement rates across various aspects indicate effective stakeholder engagement, employee-centric communication, and robust knowledge dissemination practices. However, despite a positive association between communication and service reliability as depicted by the correlation analysis, standardized coefficient (Beta) indicated a weak negative effect of communication on the service reliability of NWSC. Consequently, the initial hypothesis, **H₁**, which proposed that "*Communication has a positive and significant effect on the service reliability of NWSC*," was **rejected.**

Recommendations

To strengthen its relationship with stakeholders and improve service reliability, NWSC must prioritize the establishment of comprehensive feedback mechanisms. These mechanisms should include a variety of tools and channels, such as customer surveys, feedback forms, and complaint resolution processes. By actively soliciting feedback from customers, stakeholders, and employees, NWSC can gain valuable insights into their experiences, expectations, and areas of concern.

The collected feedback should be systematically analyzed and reviewed by dedicated teams within the organization. These teams can be comprised of members from the customer service department, quality assurance teams, and senior management. By collaborating across departments, the organization can gain a holistic understanding of the feedback and develop targeted strategies to address identified issues and enhance service reliability.

Furthermore, the integration of technology can streamline the feedback collection and analysis process. Implementing a digital feedback management system can facilitate real-time data collection, automated analysis, and timely reporting. This not only improves the efficiency of feedback handling but also enables faster response times and more proactive problem-solving.

In addition to analyzing feedback internally, NWSC should consider involving external stakeholders, such as industry experts, consultants, and customer advisory boards, in the feedback review process. External perspectives can provide unbiased insights, innovative solutions, and best practices that can further improve service reliability and stakeholder satisfaction.

Lastly, the management and leadership at NWSC should demonstrate a commitment to acting on the feedback received. This involves allocating resources, implementing recommended changes, and communicating the outcomes and actions taken back to the stakeholders. Transparent communication about the organization's response to feedback fosters trust, demonstrates accountability, and reinforces the organization's commitment to continuous improvement and service excellence.

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