The role of leadership communication and organizational communication satisfaction in improving librarians' agility

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Abstract

Background of the study: In the VUCA era, librarians must have an agile character, namely the ability to be proactive, adapt quickly, remain resilient in the face of unexpected changes, and be innovative in performance

Purpose: This study aims to investigate the influence of leadership communication on the agility of librarians working in special libraries within the scope of the Ministry of Agriculture.

Method: Using a high-order construct model, Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to analyze data collected from 103 librarians via the survey method.

Findings: The result of this study showed a significant influence of leadership communication on librarians' agility mediated by librarians' communication satisfaction.

Conclusion: This study emphasizes the importance of leadership communication and a good communication climate in the library unit in the Ministry of Agriculture to create communication satisfaction that increases the agility of librarians.

Keywords: librarian agility, leader motivating language, organizational communication, internal communication satisfaction

Introduction

The role of libraries is significant in supporting government agencies in achieving the vision and mission of the organization to achieve the SDGs. Libraries play an important role in realizing sustainable development by providing access to information, building partner communities and supporting lifelong learning (Aregbesola et al., 2024). Libraries also significantly contribute by incorporating the SDGs into their resources, activities, and programs. They support research and innovation, which are essential for sustainable development (Lahyani et al., 2024; Missingham, 2024). Libraries provide access to up-to-date and relevant information on various aspects, such as health, education, food security, and the environment, which are essential to achieving the SDGs (Dey, 2023; Kosciejew, 2020). Some libraries have integrated the SDGs into their strategic planning, which helps align their activities with national and global development goals. This strategic alignment ensures that libraries contribute effectively to sustainable development (Connaway et al., 2023). The library is involved in various programs and activities that support the SDGs. These programs and activities include environmental literacy programs, technical guidance on waste management, and literacy and education promotion (Anawati & Utari, 2023). Special libraries in government agencies have a vital role in realizing the vision, mission, and goals of organizational development by aligning their services with the strategic initiatives of the Institution. Libraries, including specialized libraries, are increasingly contributing to the UN Sustainable Development Goals, demonstrating significant hard work in achieving those goals (Connaway et al., 2023).

Libraries must constantly adapt to meet the changing needs of users, requiring flexibility and quick response (Stoddard et al., 2019). The digital age and the fourth industrial revolution demand librarians to update their competencies and skills to stay relevant and provide efficient services. Continuous professional development is essential to keep pace with technological advancements and changing user needs (Chigwada, 2021; Chigwada & Chisita, 2021). The VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) era requires librarians to be agile in providing excellent service performance. This era is characterized by rapid change and uncertainty, which demands flexibility and quick response from organizations, including libraries (Turan & Cinnioğlu, 2022; Wulandari et al., 2024). Agile leadership is essential in the VUCA era, as it positively impacts employee performance and helps organizations navigate an uncertain environment (Turan & Cinnioğlu, 2022). A competitive organizational culture that embraces agility, innovation, and continuous talent management is necessary to achieve success (Wulandari et al., 2024). Libraries must foster collaboration, shared responsibility, and continuous reflection to drive innovation and achieve significant change (Sulyman et al., 2024). Resistance to change and inconvenience with transparent working conditions can hinder the adoption of agile concepts (Lewis, 2022).

In addition to individual factors, the agility of librarians is influenced by the organizational factors in which librarians work. The presence of strong institutional structures and support, such as research funding, promotion systems, and academic initiatives, significantly increases librarians' productivity and agility (Kennedy et al., 2020). A conducive physical work environment has a positive impact on the research productivity of librarians. Maintaining and improving the work environment is recommended to support their performance (Adetayo et al., 2023). Effective leadership in libraries involves building strong relationships with colleagues and collaborators. This relational approach helps to create a supportive and inclusive work environment which supports agility. By nurturing these relationships, leaders can encourage self-determination and inclusivity, essential for agile responses to changing demands (Cota, 2024). Leaders with high emotional intelligence can better manage their teams, resulting in a supportive and adaptive work environment. Key

practical leadership attributes such as communication, teamwork, adaptability, and organizational awareness are essential to maintaining agility in library operations. These attributes help leaders to empathize with staff, recognize and respond to their needs, and create a positive organizational culture that supports agility (Tokakis et al., 2018).

Organizational factors that support librarians' agility include adaptive leadership, organizational culture and climate. The environment of internal communication is greatly influenced by leadership. Leaders who place a high value on open and honest communication can foster an atmosphere where librarians are encouraged to take the initiative and adjust to new responsibilities. Conversely, a hierarchical, top-down approach to communication can create feelings of neglect and underappreciation, hindering agility. Efficient internal communication ensures that all staff members are well-informed and can easily access the necessary information. Efficient internal communication reduces misunderstandings and improves the ability to respond to change quickly (Wakimoto, 2021). High enthusiasm and engagement are directly related to effective internal communication. When librarians are engaged and satisfied with their communication environment, they show agility in their roles. Agility includes being proactive in solving problems and embracing new technologies or processes (Stevenson, 2022).

Efforts to increase the agility of librarians require extensive resources, while the budget of government libraries is generally limited. Budget constraints and the need for sustainable skills development pose significant challenges (Chigwada, 2021). Research related to agility is generally carried out in the industrial and private sectors because the bureaucracy of government agencies is considered slow and rigid, so it is considered not in line with the concept of agility. Most agility studies are focused on for-profit companies and sectors such as manufacturing, healthcare, and IT, so government agencies are less explored (Nguyen et al., 2024; Sarmiento Falla & Karwowski, 2024; Tomomitsu & Moraes, 2021). Previous studies create a gap in understanding how agility can be effectively applied in the public sector.

Previous literature discussed the concept of agility at the level of library operational systems, while research on agility at the personal level of librarians is still scarce. Several studies have shown a significant focus on operational, organizational, and strategic agility, but there are significant gaps in research specifically addressing personal agility among librarians (Fulea et al., 2023; Haider et al., 2021; Mao et al., 2023). Previous studies suggest that although agility has been well explored on a broader level, its application at the individual level, particularly for librarians, is still under researched. One piece of writing addresses the agility of human resources, emphasizing traits like initiative, adaptability, and resilience that are critical to individual agility. (Athamneh & Jais, 2023). However, this document is not explicitly aimed at librarians, which indicates the need for targeted research in this area. Other abstract points to the need for agility in library science education to prepare students for rapidly changing professions, which implies that while there is recognition of the need for agility in the training of future librarians, there is still a lack of detailed exploration of how current librarians can develop and maintain personal agility. In addition, no research has examined the influence of leadership motivational language and organizational communication satisfaction on librarians' agility (Lankes, 2020).

Unlike previous research, which has primarily concentrated on operational, organizational, and strategic agility at the institutional level, our study uniquely focuses on the personal agility of government agency librarians and specifically examines the influence of leadership motivating language and organizational communication satisfaction—an area that remains largely unexplored in the existing literature. This research is important because it can fill the gap in the research agility of individual librarians in government institutions, which impacts library services in supporting the organization's vision, mission and development achievements. The purpose of this study is to evaluate how government agency librarians' agility is impacted by leadership motivating language and communication

satisfaction. The objectives are described in the following research questions: (i) How do agricultural ministry librarians perceive leadership communication, organizational communication satisfaction and their agility? (ii) Do perceived leadership communication and organizational communication satisfaction influence librarians' agility?

Literature Review

Theoretical Framework and Hypothesis Development

This study incorporates a number of significant hypotheses that serve as the foundation for examining the impact of leadership communication on organizational communication satisfaction and librarians' agility (Figure 1). Leadership communication using the concept of Motivating Language Theory (Mayfield & Mayfield, 2018), Librarians' satisfaction with internal communication of the organization utilizing the idea of Internal Communication Satisfaction (Tkalac Verčič et al., 2021), and librarians' agility using the concept of Librarian Agility (Alavi, 2016).

Figure 1 Theoretical framework

Leadership Communication

Effective leadership communication is essential for influencing others and building strong relationships, which is essential for achieving organizational goals (Hamzah et al., 2023). Leadership communication helps members of the organization better understand the opportunities available to express creativity and persuade members to engage in it. Leadership communication can also reduce fear and increase members' comfort zones in performing creative tasks by instilling trust in members of the organization. In other words, leaders can communicate guidance on how a member can shape his or her creative ideas to align with the organization's vision. Therefore, leaders should be aware of this opportunity to target communication to help members feel creative (Madlock & Sexton, 2015). Motivating Language Theory was developed to fill gaps in understanding the importance of effective leader communication. Even though leaders spend most of their time communicating (about 80% of their working time), there is little emphasis in the management literature on effective communication.

Leader language is divided into three main categories, the core dimensions of Motivating Language Theory: 1) Meaning-Making Language helps employees find meaning in their work by connecting their personal goals with the organization's goals. Leaders use this language to reward employees' talents, guide them to leverage those abilities for organizational contributions, and provide a clear vision and values about the organization. 2) Empathetic Language: this language includes the ability of leaders to show empathy to employees. Through empathetic language, leaders can understand employees' perspectives, provide emotional support, and show care in both work and personal contexts. Leaders who use this language well

will reduce the power gap between superiors and subordinates, creating stronger emotional attachment in the workplace, and 3) Direction-Giving Language: this language is the most used in leader communication and includes clear instructions on the tasks that employees should perform. Through this language, leaders provide specific directions regarding tasks, processes, completion times, and organizational goals.

Leaders motivating language, which includes direction-giving, empathetic, and meaning-making language, is shown to improve communication satisfaction. Effective use of these language strategies by leaders enhances employees' trust and satisfaction with organizational communication (Men et al., 2022). While direct studies on employee agility are limited, related constructs such as employee proactivity, self-efficacy, and personal initiative provide insights into how leadership motivation language might influence agility.

H1: There is a significant positive relationship between leadership communication and organizational communication satisfaction

H2: There is a significant positive relationship between leadership communication and librarians' agility

Organizational Communication Satisfaction

Internal communication practices in an organization include various informal and formal communication activities to share information with one or more parties. Each member of the organization often engages in these actions, which might be done with the intention of horizontal, downward, or upward communication. The leaders of the company make sure the internal communication system functions properly and efficiently. Effective management of a communication system can raise awareness of organizational possibilities and dangers and strengthen the bond between staff and management. Conversely, if the communication system is ignored, it may become dangerous (Tkalac Verčič et al., 2021).

Numerous studies have demonstrated a strong positive correlation between job satisfaction and communication. An organization's financial success is largely dependent on its employees' performance, communication, and job happiness. In the workplace, communication can boost motivation by improving job satisfaction. Employees' degree of communication satisfaction acts as a mediator in the relationship between their perception of transformational leadership, their communication abilities, and their level of job satisfaction. High levels of employee engagement are predicated on and contingent upon satisfaction with internal communication. (Pološki Vokić et al., 2023; Tkalac Verčič & Pološki Vokić, 2017; Uluturk et al., 2024).

The eight dimensions of communication satisfaction are as follows: 1) Satisfaction with feedback encompasses information regarding how effectively workers are working, the outcomes and contributions of their job to the organization's performance, and similar aspects; 2) Satisfaction with communication with direct supervisors: comprises questions about both formal and informal communication with direct supervisors, as well as how much the boss values and listens to staff members, among other things, 3) satisfaction with horizontal communication: encompasses a variety of contact channels with coworkers, including their availability, the ease of communication within the department, and their willingness to take constructive criticism.; 4) satisfaction with informal communication: satisfied with how often informal meetings are held, how many decisions are made through informal communication, how many gossips there are in the company, and how accurate and helpful the information shared informally is, 5) satisfaction with information about the organization: contains formal information related to the functions and success of the organization, such as satisfaction with information about financial success, the legal framework that affects the operation of the organization and work procedures; 6) includes official information on the organization's

operations and success, including information about financial success, the legal framework that influences how the group operates, and work practices. 7) satisfaction with the quality of communication media: demonstrating the degree of contentment with digital media, the potential and caliber of communication via new media, communication media, and similar and 8) satisfaction with communication in meetings: including the degree of satisfaction with the way the meeting was conducted, the value of the information discussed, how long the meeting lasted, and similar factors.

Effective organizational communication contributes to organizational success by improving processes and procedures, which ultimately create greater efficiencies (Chan & Fabbi, 2023). Efficient processes can enable librarians to be more agile in their roles, as they can quickly adapt to new workflows and technologies.

H3: There is a significant positive relationship between organizational communication satisfaction and librarians' agility

Librarians Agility

Employee agility is a reflection of their capacity to swiftly comprehend changes in the outside world and react suitably by gathering, analyzing, and applying pertinent data (Alavi, 2016). Employees must possess adequate information sources and processing abilities in order to attain agility. Agility specifically entails being able to access information from multiple sources and quickly recognizing changes in the outside world. The capacity to adapt to abrupt changes using efficient information processing techniques, such as information interpretation, integration, and use, is another aspect of agility. Three characteristics of worker agility have been identified from a behavioral perspective: proactive, adaptive, and resilient (Athamneh & Jais, 2023; Tessarini & Saltorato, 2021) 1) Employee proactive behavior, such as foreseeing issues associated to change and starting initiatives that result in solutions; 2) Workforce adaptive behaviors, such involves being able to assume various tasks within the company and continuously acquiring new skills; and 3) Workforce resilience behaviors, characteristics include being able to accept uncertainty and divergent viewpoints, being able to work well under pressure and in a changing environment, and having a positive attitude toward change and new ideas.

Agility is a critical attribute for librarians, enabling them to adapt to changes, improve job performance, and deliver better services. Leadership communication significantly impacts librarians' agility by first improving communication satisfaction, which then enhances job satisfaction and fosters a positive, adaptable work environment.

H4: Organizational communication satisfaction mediates the significant positive influence of leadership communication on librarians' agility

Method

Instrument Development

The research instrument is a questionnaire containing a list of questions based on research variables, developed from the operationalization of the concept and adjusted to the research objectives and hypotheses. The latent variables are operationalized based on a review of the relevant literature (Table 1).

The language of leadership motivation consists of 3 dimensions and 26 indicators. Organizational internal communication satisfaction consists of 8 dimensions and 24 indicators. Meanwhile, the agility of librarians is measured through 3 dimensions with 29 indicators. Respondents were asked to indicate their level of perception using a five-point Likert scale.

Table 1. Indicators and operational definitions of variables

Variable	Dimensions	Indicators	Reference
Leadership Communication	Directing-Giving Language	DL_1 - DL_{10}	Mayfield dan Mayfield (2018)
	Empathetic Language	EL_1 - El_8	
	Meaning-Making Language	ML_1 - ML_8	
Organization Communication Satisfaction	Feedback	FB_1 - FB_4	Tkalac Verčič *et al.*(2021)
	Vertical Communication	VC_1 - VC_4	
	Horizontal Communication	HC_1 - HC_4	
	Informal Communication	IC_1 - IC_4	
	Organizational Information	OI_1 - OI_4	
	Communication Climate	CC_1 - CC_4	
	Media Quality	MQ_1 - MQ_4	
	Meeting Communication	MC_1 - MC_4	
Librarian's Agility	Proactive	PA_1 - PA_{11}	Alavi (2016)
	Adaptive	AD_1-AD_{16}	
	Ressilience	RS_1-RS_{12}	

Before the data collection phase, the questionnaire undergoes pre-testing and trial to ensure validity and reliability. The trial results involving 30 librarians showed that the curriculum was valid and reliable, with calculation criteria> tables and higher than 0.7 Cronbach's Alpha values.

Population, Sampling and Sample Size

The 121 librarians who work in the Ministry of Agriculture's special library in the Republic of Indonesia comprise the study's population, spread across 30 provinces. The research was conducted by census.

Data Collection

The online questionnaire was developed using the Microsoft.form platform to facilitate filling out responses and collecting data. Librarians received the questionnaire via the social networking app WhatsApp, and they completed it within a month. A reminder message is sent to respondents every week to complete a questionnaire. After the end of the data collection period, a total of 103 responses were received, because participation was voluntary and governed by informed consent, allowing librarians to withdraw at any time without consequence. Moreover, practical barriers such as time constraints, technical issues, or overlooked reminders may have further limited responses.

Data Analysis

The data analysis that was done consists of descriptive statistical analysis and inferential statistical analysis. SPSS version 30.0 is used to assess descriptive analysis. Statistical analysis of inferentia was carried out to explain the relationship between variables using multivariate analysis of the Structural Equation Model - Partial Least Square (SEM-PLS). This study used SmartPLS 3.2.9 version to analyze the relationships between leadership communication, organizational communication satisfaction, and librarians' agility, all measured by multiple indicators. PLS-SEM was chosen for its suitability with small samples, non-normal data, and its ability to handle complex, multidimensional constructs. The research variables are constructed from many dimensions and reflective indicators. For this reason, a high-order model was tested, with an evaluation of model measurements and an evaluation of the structural model.

Result and Discussion

Demographic

Table 2 provides an overview of the demographic characteristics of the respondents. Among the 103 participants, a significant majority comprised 65.05% of women. Regarding educational background, the most significant proportion was filled by undergraduate education at 59.22%, followed by diplomas and master's degrees at 20% of respondents. Regarding the level of functional positions of the library, the majority (36.89%) are the first expert librarians, while the smallest segment (0.97%) is the principal expert librarian. The working period of librarians is dominated by those who work for 6-20 years (42.72%).

Table 2. Demographic details of respondents

		Frequency	Percent
Gender	Male	35	33,98
	Female	67	65,05
Program Level	Diploma	20	19,42
	Degree	61	59,22
	Master	20	19,42
	PhD	1	0,97
Functional positions	Principal Librarian	1	0,97
	Associate Librarian	12	11,65
	Young Expert Librarian	25	24,27
	First Member Librarian	38	36,89
	Skilled Librarian	11	10,68
	Supervisory Librarian	5	4,85
	Skilled Librarian	11	10,70
Working period	1-5 years	43	41,74
	6-20 years	44	42,72
	>20 years	16	15,53

Descriptive Analysis of Research Variables

The assessment of librarians' perception of leadership communication, organizational communication satisfaction and librarians' agility uses a Likert scale consisting of five points. For the leadership communication variable, respondents were asked to indicate their level of approval with statements on a scale where 1 indicates "never" and 5 indicates "always." After analysis, the overall average score for leadership communication was 3.74. In the variable of librarians' satisfaction with organizational communication, score 1 indicates "very dissatisfied" and 5 indicates "very satisfied". According to the results of the analysis, the overall average score for organizational communication satisfaction was 3.77. In the librarians' agility assessment, respondents assessed their agility by self-assessment with a score of 1 meaning "very inappropriate" and score of 5 meaning "very appropriate". The average score for the agility of librarians working at the Ministry of Agriculture is 3.94.

Measurement Model Assessment

The model applied to this study uses a reflective-reflective approach. The following procedures are used to evaluate the reflective construction: discriminant validity employing HTMT, 1) loading factor estimation, 2) indicator reliability, 3) internal consistency reliability, and 4) average variance extracted (AVE) (Hair & Alamer, 2022).

The first step is to assess the loading factor. If the loading factor is above 0.70 for all research indicators, the construction in the study shows good credibility for all research indicators. Based on Table 3, The loading factor for a few first-order indicator items is less than

0.70. As a result, the model no longer includes the indication item. The loading factor values of the remaining indicators range from 0.717 to 0.967, suggesting that they are reliable indicators for a given construction. (Sarstedt et al., 2022).

Table 3 Assessment of measurement models: reliability and validity of latent variables

Constructs	Item	Loading Factor	Cronbach's alpha	Composite reliability	AVE
Directing-Giving Language	DL1	0.903	0.968	0.972	0.776
	DL2	0.893			
	DL3	0.891			
	DL4	0.870			
	DL5	0.903			
	DL6	0.903			
	DL7	0.893			
	DL8	0.901			
	DL9	0.822			
	DL10	0.824			
Empathetic Language	EL2	0.769	0.945	0.955	0.755
	EL3	0.900			
	EL4	0.785			
	EL5	0.916			
	EL6	0.875			
	EL7	0.904			
	EL8	0.918			
Meaning-Making Language	ML1	0.936	0.934	0.958	0.883
	ML2	0.951			
	ML4	0.932			
Feedback	FB2	0.901	0.875	0.923	0.800
	FB3	0.858			
	FB4	0.923			
Vertical Communication	VC1	0.904	0.940	0.957	0.847
	VC2	0.948			
	VC3	0.934			
	VC4	0.893			
Horizontal Communication	HC1	0.904	0.946	0.961	0.860
	HC2	0.930			
	HC3	0.947			
	HC4	0.928			
Informal Communication	IC1	0.729	0.773	0.868	0.689
	IC3	0.896			
	IC4	0.855			
Organizational Information	OI1	0.887	0.937	0.955	0.841
	OI2	0.928			
	OI3	0.933			
	OI4	0.920			
Communication Climate	CC1	0.949	0.970	0.978	0.917
	CC2	0.967			

	CC3	0.960			
	CC4	0.954			
Media Quality	MQ1	0.851	0.933	0.952	0.833
	MQ2	0.939			
	MQ3	0.926			
	MQ4	0.931			
Meeting Communication	MC1	0.949	0.954	0.967	0.879
	MC2	0.941			
	MC3	0.937			
	MC4	0.923			
Proactive	PA2	0.751	0.918	0.932	0.605
	PA3	0.745			
	PA4	0.862			
	PA5	0.829			
	PA6	0.832			
	PA7	0.727			
	PA9	0.741			
	PA10	0.740			
	PA11	0.764			
Adaptive	AD1	0.775	0.957	0.961	0.607
	AD2	0.732			
	AD3	0.789			
	AD4	0.765			
	AD5	0.751			
	AD6	0.785			
	AD7	0.840			
	AD8	0.734			
	AD9	0.803			
	AD10	0.733			
	AD11	0.751			
	AD12	0.825			
	AD13	0.717			
	AD14	0.809			
	AD15	0.818			
	AD16	0.823			
Ressilience	RS1	0.767	0.938	0.947	0.618
	RS3	0.757			
	RS4	0.728			
	RS5	0.769			
	RS6	0.762			
	RS7	0.807			
	RS8	0.798			
	RS9	0.843			
	RS10	0.755			
	RS11	0.819			
	RS12	0.835			

Cronbach's Alpha and Composite Reliability were used to evaluate the reliability of internal consistency. Construct reliability was evaluated using Cronbach's alpha (α) and composite reliability (CR), which need to be more than 0.70 to validate the study's internal reliability. Cronbach's alpha (α) values ranged from 0.773 to 0.970, and CR values ranged from 0.868 to 0.978, as indicated in Table 3. Strong internal consistency reliability is indicated by these results.

Convergent validity was evaluated using the average variance extracted (AVE). Convergent validity is demonstrated when the construct captures at least 50% of the variance of its elements, as indicated by an AVE of 0.50 or above. Every build had an AVE above 0.50, ranging from 0.605 to 0.917, which was higher than the suggested cutoff, as indicated in Table 3. Consequently, this study met the requirements for the convergent validity of the measurements.

Finally, discriminant validity measurements must be evaluated to ascertain how much each model construct varies experimentally. The Heterotrait-Monotrait Ratio (HTMT), which computes the average ratio of the correlation between indicators of distinct constructs to that between indicators within the same construct, was used to evaluate discriminant validity. 0.9 is the highest permissible criterion. The HTMT matrix is shown in Table 4, where values less than 0.9 signify adequate discriminant validity. The built model was found to have acceptable validity and reliability based on measurement model analysis.

Tabel 4 Discriminant validity assessment using the Heterotrait-Monotrait ratio

	DL	EL	ML	FB	VC	HC	IC	IO	CC	MQ	MC	PA	AD	RS
DL														
EL	0.845													
ML	0.892	0.884												
FB	0.459	0.344	0.48											
VC	0.766	0.786	0.767	0.628										
HC	0.494	0.477	0.489	0.562	0.655									
IC	0.584	0.576	0.616	0.554	0.785	0.833								
IO	0.643	0.544	0.586	0.616	0.742	0.752	0.717							
CC	0.527	0.516	0.513	0.759	0.694	0.636	0.576	0.883						
MQ	0.466	0.478	0.475	0.672	0.626	0.752	0.777	0.834	0.819					
MC	0.497	0.458	0.465	0.68	0.651	0.745	0.674	0.859	0.866	0.838				
PA	0.242	0.211	0.289	0.482	0.339	0.405	0.507	0.369	0.474	0.438	0.378			
AD	0.372	0.381	0.359	0.52	0.429	0.477	0.563	0.398	0.467	0.494	0.364	0.847		
RS	0.416	0.404	0.415	0.462	0.498	0.477	0.631	0.472	0.492	0.416	0.385	0.779	0.866	

Structural Model Assessment

Examining the structural model's constituent parts came next, following the validation and reliability of the dimensions. The structural model was evaluated using the PLS-SEM algorithm to determine how well it predicted the results. Consequently, the following actions were performed in order to evaluate the structural model (Hair & Alamer, 2022): The model

should be checked for collinearity, the path's magnitude and significance should be assessed, the coefficient of determination (R2) should be evaluated, and the predictive capacity outside the sample should be checked.

Table 5. Hypothesis testing results for structural model

Path	β	T Values	P values	VIF	F square	R square
H1: Leadership Communication → Organizational Communication Satisfaction	0.655	11.562	0.000	1.750	0.750	0.311
H2: Leadership Communication → Librarians' Agility	0.027	0.241	0.405	1.000	0.001	
H3: Organizational Communication Satisfaction → Librarians' Agility	0.540	5.273	0.000	1.750	0.242	
H4: Leadership Communication → Organizational Satisfaction Communication → Librarians' Agility	0.353	4.211	0.000			

Finding the variance inflation factor (VIF) value aids in analyzing the structural model to address the collinearity issue. As recommended (Shmueli et al., 2019), a significant collinearity issue is indicated by a VIF value of 5 or above, some less than 3 indicate no collinearity and a value between 5 and 3 is reasonable given the theoretical explanation. The VIF values for model construction vary from 1.000 to 1.750, indicating that the model is made sensible and does not suffer from prominent collinearity issues.

To determine the path links between the variables in the research model, a second-order structural model was built on Figure 2. According to Shmueli et al. (2019), In the structural model, weak, modest, moderate, and large effect sizes are indicated by path coefficients (β), which vary from 0 to 0.10, 0.11 to 0.30, 0.30 to 0.50, and > 0.50, respectively.

The next phase involves testing four hypotheses to explain the relationship between leadership communication, organizational satisfaction of internal communication and librarian agility. The hypothesis test results provide comprehensive insights into the factors of leadership communication and organizational internal communication satisfaction that affect the proactive, adaptive and resilient attitude of librarians in the Ministry of Agriculture.
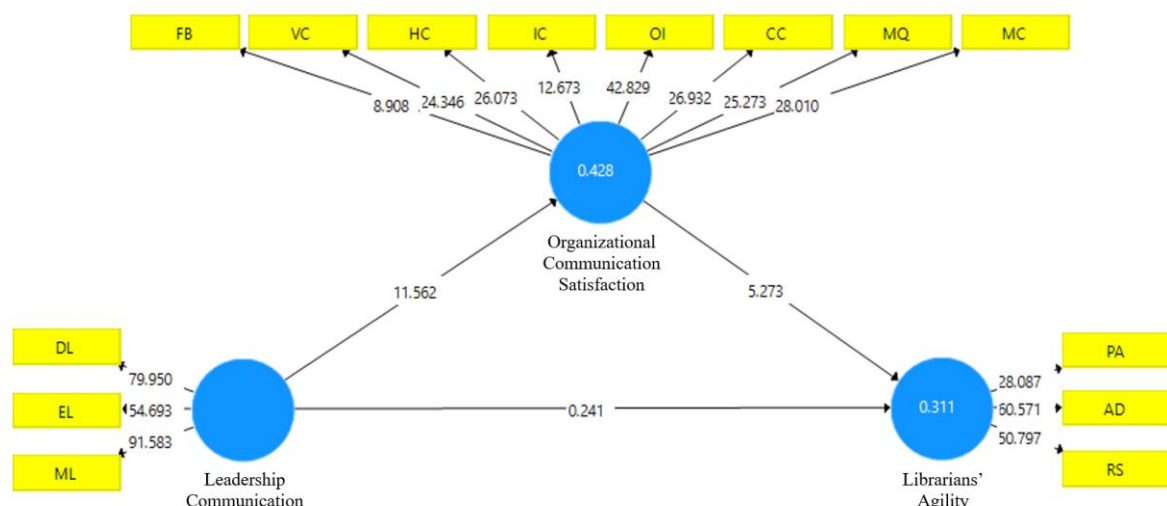

Figure 2 Structural model output from PLS algorithm

The results showed that leadership communication (β= 0.655) was significant and positively related to the satisfaction of internal communication in the organization, with a strong effect measure. Leadership communication (β=0.027) was insignificant and positively related to librarian's agility with a weak measure of effect. Satisfaction with internal communication of the organization (β= 0.540) was significant and positively related to the agility of librarians, with a strong effect measure. For the mediation effect, the satisfaction of the organization's internal communication (β= 0.353) mediated a positive and significant relationship between leadership communication and librarians' agility, with a medium effect size.

Discussion

According to the study's demographic component, women make up the majority of responders (65.05%), which reflects the trend of female dominance in the librarian profession in Indonesia. These findings align with previous studies that indicate that women tend to have more careers in fields related to information services and education (Molaro & Hammond, 2023; Neville, 2023). Based on data from the directory of functional officials of librarians and library assistants throughout Indonesia in 2023, the number of female librarians is higher (63.17%) than male librarians (36.83%). This proportion may be related to gender stereotypes associating women with communication and ministry skills.

Regarding education, respondents with a bachelor's background (59.22%) dominated, indicating that higher education is the main requirement in the librarian profession. The number of librarians with a master's degree (19.42%) shows increased professional qualifications, although a tiny segment (0.97%) still have a PhD. This amount indicates the need to encourage more librarians to continue their education to a higher level to improve their competence and contribution to information management. Regarding functional positions, most respondents were First Expert Librarians (36.89%), while the Principal Librarian segment (0.97%) was very small. This proportion indicates that many librarians are in the early stages of their career development. The low number of librarians at the main expert level indicates challenges in improving the career path, which can be caused by limited training opportunities or performance evaluation. Most respondents have a working period of 6-20 years (42.72%), which shows sufficient experience in this profession. However, the high number of librarians with a working period of 1-5 years (41.74%) indicates the regeneration of librarians, which has the potential to bring innovations in this field. The findings of this study show that librarians' professional development should be prioritized, especially in improving education and career paths.

Librarians from the Ministry of Agriculture reported that the level of leadership communication, organizational communication satisfaction and librarians' agility was relatively moderate with average scores of 3.74, 3.77 and 3.94 respectively on a 5-point Likert scale. This finding answers our first research question, indicates that communication carried out by leaders was considered quite frequent and consistent by librarians. Most librarians feel that there is effective communication from leadership, organizational communication was running well and was able to meet their expectations and most librarians consider themselves to be able to adapt, be responsive to change, and have strong initiative in facing challenges in the work environment.

To answer our second research question, we formulated four hypotheses, all of which are supported by our findings. First, H1 is supported, as leadership communication has a strong and significant positive effect on organizational communication satisfaction (β = 0.655, T_{value} = 11.562, P_{value} = 0.000), indicating that better leadership communication enhances librarians' satisfaction with organizational communication. These findings support the theory that effective communication from leaders contributes to creating a communicative, open, and

supportive work environment. Leaders who can convey their vision, provide clear direction, and build trusting relationships can increase satisfaction with internal organizational communication.

However, H2 is not supported, as the direct effect of leadership communication on librarians' agility is very weak and statistically insignificant ($\beta = 0.027$, $T_{value} = 0.241$, $P_{value} = 0.405$), suggesting that leadership communication alone does not directly impact agility. This metric demonstrates that librarian agility cannot be impacted by leadership communication alone. Other elements, such company culture, job motivation, or the degree of structural support the organization offers, may also have an impact on an individual's agility.

H3 is supported, showing a significant positive relationship between organizational communication satisfaction and librarians' agility ($\beta = 0.540$, $T_{value} = 5.273$, $P_{value} = 0.000$), meaning that higher satisfaction with organizational communication substantially improves librarians' agility. These findings underscore the importance of communication satisfaction in supporting librarians' adaptive behaviour. Adequate, straightforward, and supportive communication of employee needs provides librarians with a sense of comfort and confidence to innovate and adapt to work dynamics.

Lastly, H4 is also supported, confirming a significant indirect effect of leadership communication on librarians' agility through organizational communication satisfaction ($\beta = 0.353$, $T_{value} = 4.211$, $P_{value} = 0.000$). These findings highlight that leadership communication impacts librarians' agility through increased communication satisfaction. In other words, communication satisfaction is an important pathway reinforcing the indirect relationship between the leader's communication style and the librarians' agility.

In terms of structural model evaluation, the analysis results show no collinearity problems with VIF values ranging from 1,000 to 1,750, so the model used can be considered valid. The coefficient of determination (R^2) of 0.311 for communication satisfaction indicates that the model is strong enough to account for the variability.

Conclusion

This study has demonstrated the critical role of communication satisfaction as a mediator between leadership communication and employee agility in the context of the Ministry of Agriculture's library. The results indicate that open and supportive communication from leaders significantly enhances communication satisfaction, which in turn fosters employee agility. Theoretically, this study enriches our understanding of the complex relationships between leadership communication, communication satisfaction, and employee agility. It underscores the importance of considering communication satisfaction as a key mediator in organizational communication models, particularly within library settings. Practically, this research emphasizes the need for library leaders to develop and maintain open and supportive communication channels. By doing so, they can enhance communication satisfaction among library staff, ultimately supporting the development of employee agility. This is particularly important in dynamic library environments where adaptability and innovation are crucial.

While this study provides valuable insights, it has several limitations. The findings may not be fully generalized to other organizational contexts due to the specific focus on the Ministry of Agriculture's library. Additionally, the study did not investigate potential moderating factors such as individual traits or corporate culture, which could influence the relationships observed. To broaden the applicability of these findings, future research should aim to replicate this study into diverse library settings. Investigating the impact of moderating factors such as individual traits, corporate culture, and technological integration on the relationships between leadership communication, communication satisfaction, and employee

agility would be particularly beneficial. Furthermore, longitudinal studies could provide deeper insights into how these dynamics evolve over time.

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Authors' Contributions

All authors have contributed to the final manuscript. The contribution of all authors: conceptualization, methodology, formal analysis, writing original draft preparation, writing review, and editing. All authors have read and agreed to the published version of the manuscript.

Conflict of Interest

All authors have no conflict of interest related to this study.

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