

THE ROLE OF TRANSFORMATIVE COMMUNICATION IN CREATING A CULTURE OF INNOVATION

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PAPER INFO	ABSTRACT
Received: April 2023 Revised: April 2023 Approved: April 2023	Background: An organization's survival, growth, and competitive advantage depend on its agility or ability to respond quickly and effectively to changes in its internal and external environment. Creating various innovations, including implementing new systems, strategies, and programs, requires creativity to run effectively. An organizational culture that is accommodative to the changes that occur is needed to make this happen. Many studies on communication and its relationship to organizational culture suggest a reciprocal influence between the two. However, the role of transformative communication carried out by leaders in creating an organizational innovation culture has not been widely studied. A research model was developed to explain the relationship between constructs based on an analysis of the employees of a public company in Indonesia. Aim: This study emphasizes the role of transformative communication as a mediator of transformational leadership in achieving organizational innovation culture in the company implementing a new system. Method: Analysis using structural equation modeling with partial least squares estimation was applied. This research contributes to the application of transformative communication more specifically. Findings: The study's findings indicate that transformative communication plays a significant role in mediating the effects of transformational leadership on the development of an organizational innovation culture. This study concludes with some suggestions for potential future research.
KEYWORDS	<i>new system, transformational leadership, transformative communication, organizational innovation culture</i>
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INTRODUCTION

For most companies, the transformation process from the introduction until the implementation of innovations, including new organizational systems, is tiresome and challenging. An organizational culture adaptable to changes is required since organizational culture may affect individual adoption by influencing how people interact with each other (Heinze & Heinze, 2020). Thus, the transformation process generally necessitates a cultural achievement transition stage receptive to innovations and other positive new things. In terms of structure, operations, and, most importantly, people's attitudes, beliefs, and actions, the transformation will also cause profound changes in corporate culture (Philip & McKeown, 2004).

In transforming organizational culture, the organization will encounter significant changes. Organizations need to build commitment by creating a conducive work environment to enable the implementation of sustainable innovation. On the other side, there is a contradiction in which a robust organizational culture can operate as a significant hindrance to

the performance of changes because if the company's strategic direction is innovation-driven, some degree of non-compliance between individual and organizational principles is needed (Stacho et al., 2016). While according to Schein, resistance to new technology is prompted by the cultural change implications of its adoption, not by the technology itself (Grote & Baitsch, 1991).

In the relationship between organizational culture and how well a new idea is adopted, leaders should try to make their workplaces more flexible, decisive, and risk-taking. They should also be supportive and team-oriented. The key to successfully implementing innovations and other new systems as part of knowledge management is to start from the top of the organization and work the way down with consistency of purpose (Novak et al., 2020); (Society & Society, 2014). Leadership is the most critical factor influencing change (Austin & Ciaassen, 2008).

Transformational leaders are perceived as charismatic and visionary leaders who can elicit employee identification, trust, and confidence (Yue et al., 2019). In change management, transformational leadership has attracted considerable research interest. Transformational Leadership should encourage cultural shifts within a company for long-term goals and values that reward innovative endeavors (Nguyen & Luu, 2019). Transformational leaders must implement strategies to change the culture and organizational climate that support innovation and increase effectiveness, including mission-driven, results-oriented, improvement-oriented, relationship-centered, and participation-based (Glisson, 2015). When leaders exhibit innovation-related behaviors, they cultivate an environment that encourages employees to come up with creative solutions to issues, hence increasing the system's option to adapt to changing conditions in the external environment (Carmeli et al., 2010). Transformational leadership styles, an organizational innovation culture, and work pressure were identified as factors that may help firms prepare for change (Von Treuer et al., 2018).

Firms' and organizations' innovative capability is determined by internal elements such as their size and structure, their learning and strategic direction, and external factors such as their network of partners, communication, and the industrial environment (Chaubey & Sahoo, 2019). Leaders can create organizational cultures that foster participation, agreement, innovation, care, and commitment by understanding worker codes of conduct, language, and symbol systems (Snyder et al., 2016). Transformational leadership is an appropriate style for creative people, as intellectual stimulation and inspirational motivation assist creative individuals and innovators in their leadership efforts. On the other hand, fear of failure, uncertainty avoidance, and a lack of trust work against transformational leadership and communication (Laužikas & Miliūtė, 2019). To keep people from resisting changes, leaders should use the digital platform to communicate with their staff (Ipinazar et al., 2021).

Change initiatives will be unsuccessful if the strategy or change mission is not presented in an understandable manner (Muthusamy, 2019). Many studies have been conducted to examine the role of organizational culture and communication together, which have various impacts, such as the creation of innovation for a more positive working environment, the formation of organizational commitment, and turnover intention (Smollan & Morrison, 2019); (Susita et al., 2020); (de Leon, 2020). Communication is required throughout the organization at all times and at all stages of the process. Transformational leadership requires transformative communication to assist the change process in the organization effectively. This research

focuses on how communication can mediate the formation of organizational culture in encouraging innovation, including the transformation process of implementing new systems.

In general, many studies have been conducted on leadership communication. However, fewer studies focus on the role of communication in adaptation actions for innovations and other new systems implementation. The discussion of transformative communication is generally related to transformational leadership. A leader's communication is necessary to drive followers toward societal change or development and persuade individuals to accomplish goals (Maartandan Suppiah et al., 2018). Communication is one of the critical leadership activities, among others, in deploying policies within the organization. Many leaders face obstacles, including lack of time and poor systematic policy integration. The leader must view the policy deployment as part of the job (Society & Society, 2014). Leadership communication needs to be adapted to the context of the underlying communication culture starting from the individualist to the collective perspective (Mayfield & Mayfield, 2017). Leaders require transformative communication to foster an organizational atmosphere conducive to change. Managers may orchestrate strategic intent and organizational transformation using the appropriate analogies and narratives related to altering industry conditions. Excellent communication from managers and leaders will transform the individual during the organization's transformation process (Muthusamy, 2019).

This study emphasizes the role of transformative communication as a mediator of transformational leadership in achieving organizational innovation culture in the company implementing a new system. This research contributes to the application of transformative communication more specifically.

Hypotheses used were:

- 1) H1: Transformational leadership influences organizational innovation culture;
- 2) H2: Transformational leadership influences transformative communication;
- 3) H3: Transformative communication influences organizational innovation culture; and
- 4) H4: Transformative communication mediating the relation between transformational leadership and organizational innovation culture.

METHOD

We conducted this research on an Indonesian public company – an SOE subsidiary – engaged in ship scouting & towing services, sea transportation, and maritime services. The company provides pilotage & towing services to ensure smooth and safe anchoring of vessels entering and exiting Seaports, Inland Waterways, and Oil & Gas Offshore Ship-to-Ship Activities (STS). Pilotage is an activity under the State Authority delegated and mandated to each port operator as a state representative. The company operation is under Indonesia Ministry of Transportation (MoT) regulations.

A questionnaire was designed with two main sets of questions: the respondent's profile and questions related to indicators of all the constructs studied. Questionnaires were distributed to the company's employees employing proportional stratified random sampling representing several levels of employees from five operational areas, central workshop services, and the head office. As a test, an Indonesian-language questionnaire in a Google Form was distributed to 30 employees to obtain input on content and wording. After revising the questionnaire based

on comments on the initial testing, the final questionnaire was distributed to employees according to the respondent's sample plan.

The collection of the completed questionnaires was carried out in February 2021. The questionnaires were distributed to 319 employees out of a total population of 866 employees. The response rate is 100%, but 4 data are not valid questionnaires. So that the data collected and can be continued for analysis amounted to 315 questionnaires. The data has met the sample size criteria based on the Slovin formula with an error tolerance of 5%. Further, the data collected was analyzed by description analysis, factor analysis, and structural equations analysis using SPSS and Amos.

Measuring transformative communication (TC) was carried out with six measurement items adapted from (Muthusamy, 2019), focusing on positive communication's effects. Transformational leadership (TL) measurements were adapted from previous studies (Wipulanusat et al., 2018) by adding aspects of consideration leadership with five items. Organizational innovation culture (OIC) was measured by five measurement items adapted from previous studies (Saha & Kumar, 2018) with several adjustments. This research's relevant dimensions of organizational innovation culture were supportive and innovative culture. Measuring items of all three constructs were rated on a 5-point Likert scale, with 1 as strongly disagree to 5 as strongly agree.

This research applies PLS-SEM in conducting data assessments using SmartPLS Software 3. Reflective measurement model evaluation is carried out to examine internal consistency (Cronbach's alpha and composite reliability), convergent validity (indicator reliability and average variance extracted), and discriminant validity (Hair, J., Hult, G. T. M., Ringle, C. M., & Sarstedt, 2017). However, (Hair et al., 2019) provide a step-by-step procedure as was done in this research. Per the procedure, the first step must be to evaluate the reliability indicator in assessing the size of the outer loading (indicator reliability). This research applied a minimum loading's value limit of 0.708, as (Hair et al., 2019) recommended. After removing the items with loading indicator values below the limit, the number of items for TC, TL, and OIC was 5, 4, and 3, respectively (Table 2).

The second step is assessing internal consistency reliability. This research intentionally uses three alternative measurements: Cronbach's alpha, the most conservative; composite reliability using (Jöreskog, 1971), which overestimates; and rho (A) from (Dijkstra & Henseler, 2015), which is between the other two alternatives, (Hair et al., 2019). Three alternative construct measurements have values between 0.70 and 0.90 (Table 2). These values demonstrate that the internal consistency reliability of all three constructs is "satisfactory to good" category (Diamantopoulos et al., 2012); (Drolet & Morrison, 2001).

The third step assesses construct measurement convergent validity. It is measured using the average variance extracted (AVE) metric. Table 2 shows that the AVE values for TC, TL, and OIC are 0.577, 0.633, and 0.651. These AVE values above 0.5 indicate that the three constructs explain at least 50% of the items' variance.

The fourth stage evaluates discriminant validity using the Fornell-Larcker criterion and heterotrait-monotrait (HTMT). The Fornell-Larcker criterion states that each construct's square root of the AVE should be higher than its highest correlation with any other construct in the model (Fornell & Larcker, 1981). This is the same as comparing the AVE to the squared

correlations between the constructs. The result demonstrates that the AVE constructs' values are higher.

Before evaluating the discriminant validity using HTMT, the bootstrapping procedure must be executed with 5,000 subsamples of the original sample size. HTMT determines the correlation ratio between heterotraits and monotraits. When the value is less than 0.90, discriminant validity exists (Henseler et al., 2015). The value was determined to be less than 0.85 based on other criteria (Hair et al., 2019). In this study, the values obtained were still below the abovementioned limits, proving that all constructs are reliable, valid, and distinct (Table 3).

Table 1. Measurement Information

Construct/item	Code	Loading	Cronbach's alpha	Dijkstra–Henseler's rho (ρ_A)	CR	AVE
<i>Transformative communication (TC)</i>			0.817	0.821	0.872	0.577
The leaders/managers communicate positively.	TC1	0.718				
The leaders/managers share positive saying with fellow employees.	TC2	0.739				
Positive communication is essential in the transformation process.	TC3	0.776				
Positive sayings help to overcome work-related issues.	TC4	0.770				
Shared positive sayings help to overcome the resistance to change.	TC5	0.793				
<i>Transformational leadership (TL)</i>			0.807	0.819	0.873	0.633
The leaders/managers work well with people from various backgrounds.	TL1	0.751				
The leaders/managers respect individuals.	TL2	0.785				
The leaders/managers foster positive working relationships.	TL3	0.821				
The leaders/managers/motivate all people.	TL4	0.823				
<i>Organizational innovation culture (OIC)</i>			0.732	0.741	0.848	0.651
All people are very sociable.	OIC1	0.749				
The organization is a highly innovative, competitive, and dynamic place.	OIC2	0.836				

The organization creates new challenges, and advancement is emphasized. OIC3 0.834

Note(s): CR 5 composite reliability; AVE 5 average variance extracted

Table 2. Measurement Information of Discriminant Validity

		TL	TC	OIC
Fornell-Larcker Criterion	TL	<i>0.796</i>		
	TC	0.628	<i>0.760</i>	
	OIC	0.531	0.590	<i>0.807</i>
Heterotrait-monotrait (HTMT) ratio	TL			
	TC	0.757		
	OIC	0.683	0.752	

Note(s): The square root of AVEs are shown diagonally in italic; TL: transformational leadership; TC: transformative communication; OIC: organizational innovation culture

RESULTS AND DISCUSSION

Before evaluating the structural relationships, it is necessary to examine collinearity to ensure it does not introduce any bias in the regression results. Ideally, the variance inflation factor (VIF) values should be maintained at a level close to or below 3 (Hair et al., 2019). This study found no collinearity because the VIF value was below the threshold (Table 4).

The following step is evaluating the structural model, starting with assessing the model quality. The study employed various criteria to evaluate the research findings, including the coefficient of determination (R^2), effect size (f^2), cross-validated redundancy (Q^2), and path coefficient, as outlined by (Hair et al., 2019). According to (Henseler & Fassott, 2010) and (Hair et al., 2011), R^2 values of 0.75, 0.50, and 0.25 can be classified as substantial, moderate, and weak, respectively. R^2 for TC is 0.393, and for OIC is 0.386. The findings suggest that both endogenous variables (TC and OIC) are impacted by an exogenous variable TL that satisfies the criteria close to moderate.

The classification of effect size f^2 for each path model uses the rule of thumb; values higher than 0.02, 0.15, and 0.35 describe small, medium, and large or significant effect sizes (Cohen, 1988). The construct TL has a significant effect size (0.653) on TC and only a small to medium effect size (0.070) on OIC. TC has a medium effect size (0.177) on OIC.

(Geisser, 1973) and (Stone M., 1974) suggested calculating the Q^2 value to assess the predictive accuracy of the PLS-path model. The Q^2 value is obtained using the blindfolding procedure (Hair, Jr. et al., 2017). Typically, PLS-path models with Q^2 values greater than 0, 0.25, and 0.50 indicate small, medium, and significant predictive relevance. Both Q^2 values for TC and OIC are 0.221 and 0.246 and consider as medium predictive relevance (Table 4). This result indicates that the model has good predictive power.

This research used a two-tailed hypothesis test with confidence level 95%. Transformational leadership positively and significantly influences organizational innovation culture ($\beta = 0.266$, $t = 4.333$); H1 is accepted. Transformational leadership positively and

significantly influences transformative communication ($\beta = 0.628$, $t = 13.344$); H2 is accepted. Transformative communication positively and significantly influences organizational innovation culture ($\beta = 0.423$, $t = 6.600$); H3 is accepted. The mediator effect size is calculated with v formula (adjusted R^2_{med}) and using adjusted indirect effect criteria 0.01 for small, 0.075 for medium, and 0.175 for large (Lachowicz et al., 2018); (Ogbeibu et al., 2021). The result indicates transformative communication mediates the relationship between transformational leadership and organizational innovation culture ($\beta = 0.266$, $v = 0.177$); H4 is accepted with a large mediating effect (Figure 1 and Table 4). The direct effect of transformational leadership on organizational innovation culture ($\beta = 0.266$) is only half of the indirect effect when the relationship is mediated by transformative communication ($\beta = 0.531$).

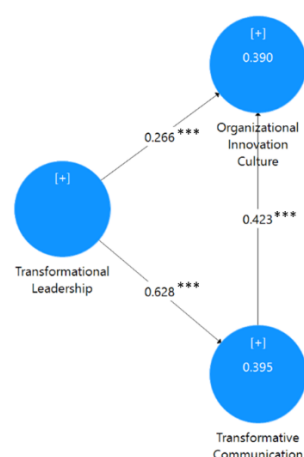


Figure 1. The Simplified Path Diagram. *** $p < 0.001$

Table 4. Structural model evaluation

Relation-ships	β	T value	Variance explained (R^2)	R^2 adjusted	Predictive relevance (Q^2)	Effect size (f^2)	VIF
TL $\rightarrow$ OIC	0.266	4.333	0.390	0.386	0.246	0.070	1.653
TL $\rightarrow$ TC	0.628	13.344	0.395	0.393	0.221	0.653	1.000
TC $\rightarrow$ OIC	0.423	6.600				0.177	1.653

Note (s): $n = 5,000$ subsample; *** $p < 0.001$; the indirect effect β (TL $\rightarrow$ TC $\rightarrow$ OIC) = 0.531; TL: transformational leadership; TC: transformative communication; OIC: organizational innovative culture

Table 5. Summary of Hypotheses and Results

Hypothesis	Relationship	Results
Hypothesis 1	Transformational leadership has a significant positive influences on organizational innovation culture	Supported
Hypothesis 2	Transformational leadership has a significant positive influences on transformative communication	Supported

Hypothesis 3	Transformative communication has a significant positive influences on organizational innovation culture	Supported
Hypothesis 4	Transformative communication mediating the relation between transformational leadership and organizational innovation culture	Supported

Figure 2 shows the IPMA (importance-performance map analysis) for all indicators of unstandardized effects on organizational innovation culture. This figure aims to identify items from the two independent variables that are significant in achieving organizational innovation culture but still show low performance. The result indicates that although all items have approximately similar performance, they are in a wide range of significant levels. The most critical item is TL4, followed by TL2 & TL3 and TL1. The items having a medium impact on organizational innovation culture are TC1, TC3, and TC5. Finally the least significant item is TC2. The primary factor that calls for significant consideration in developing an innovative culture within an organization is the leader's motivation of all employees. The item that exhibits the most negligible impact is the act of leaders disseminating affirmative expressions among their colleagues.

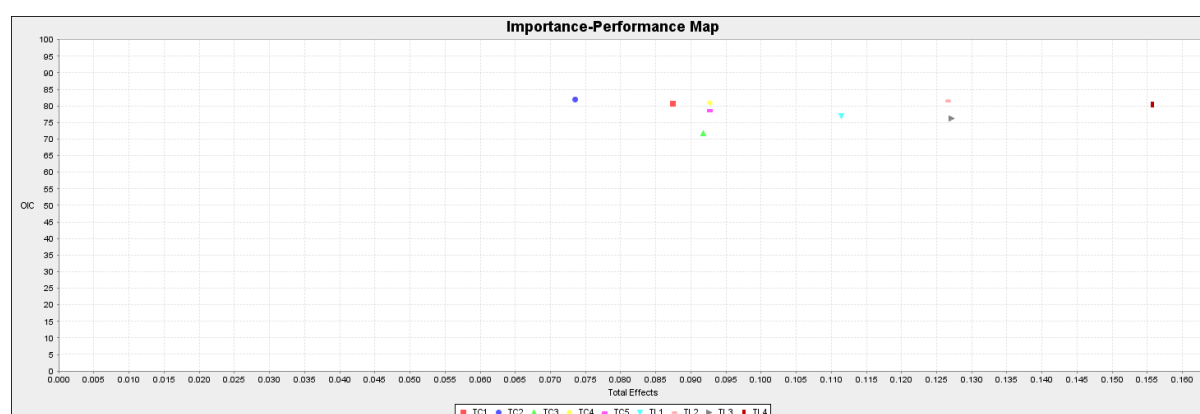


Figure 2. The Importance-Performance Map Analysis (IPMA) Indicators, Unstandardized Effects

Quantitative research studies have provided valuable insights into the relationship between transformational leadership, communication, and organizational culture. This study demonstrates that transformational leadership has a significant direct impact on transformative communication and organizational innovation culture. However, the main effect of leadership that encourages organizational transformation is the formation of transformative communication. Subsequently, transformative communication directly and profoundly influences organizational innovation culture. This research result shows that three direct relationship hypotheses are proven. Finally, the transformative communication mediation function also confirms the fourth hypothesis and plays an important role.

Most previous studies have proven that communication is crucial in influencing organizational culture; however, fewer studies focus on the role of communication in adaptation actions for innovations and other new systems implementation. Our study specified that only particular communication creates specific innovation culture. This research focuses

on organizational culture, which serves as an enabler in the creation of innovation. Creative ideas originating from individuals within an organization and from adopting ideas external to the organization must be continuously maintained and developed into an organizational culture to improve performance continuously.

Using data from one selected large organization in Indonesia, this study shows the impact of transformational leadership that organizations need to realize organizational innovation culture. This research is limited to an organizational culture that supports the creation of innovation, especially changes and adaptation in adopting a new management system and its implementation strategy. And this research also shows that, like organizational culture in general, that innovation also requires a culture conducive to supporting the creation of an innovative environment.

As (Pacanowsky & O'Donnell-Trujillo, 1982a) exhibited, communication is crucial for developing corporate cultures. Effective communication is essential to continuous and consistent implementation across all levels and phases of an organization's operations. This study shows that the role of transformational leadership is becoming critical, particularly the use of transformative communication, which has a double impact on forming the innovation culture.

Transformational leadership is necessary concerning organizational changes, especially in creating an environment where employees feel comfortable and not afraid of the impact of implementing new ideas within the organization. This study sheds light on one of the four critical characteristics of transformational leadership identified by (Wipulanusat et al., 2020), which pertains to creating an environment conducive to implementing change ideas. This characteristic is inspirational motivation achieved through the application of positive communication.

This research demonstrates that the primary driver for establishing an innovative culture comes from the stages of the leader's motivation to everyone, followed by transformative communication. Positive communication includes content, a communication style that supports transformation, and overcoming obstacles at work. Equally important is the communication from leaders who can overcome resistance to changes, including changes in organizational systems to improve organizational performance. Thus, this research has found that the relationship between transformational leadership and organizational innovation culture is stronger when transformative communication is introduced to foster a culture of experimentation and learning from failure rather than promoting the leader's vision.

Theoretical Implications

Many studies have demonstrated a positive correlation between transformational leadership, communication, and organizational culture. The present research enhances understanding of the interconnections between leadership, communication, and organizational culture. In the rapidly evolving age of digital technology, there is a pressing demand for innovation and transformation. To date, communication has been regarded as an element of transformational leadership and has consequently been subject to limited scrutiny. This study contributes that the incorporation of communication possessing transformational-oriented attributes represents a crucial component in bolstering the establishment of an innovative organizational culture.

Furthermore, transformative communication is shaped mainly from the aspect of motivating people, which is one of the aspects of transformational leadership. Through positive communication, an innovation culture will be achieved and finally can positively impact various aspects of organizational innovation culture, such as organizational learning, creativity, and risk-taking.

Managerial Implications

As previously discussed, the IPMA (importance-performance map analysis) chart is beneficial for identifying essential items that have low performance in achieving construct targets. This managerial implication is based on reading the chart. Organizations must maintain and improve some aspects of transformational leadership that are vital to achieving an innovation culture.

One of the most important aspects of transformational leadership is motivating all people. Focusing on that aspect can help a manager implement a new system or foster innovation. Motivation is a crucial factor for individuals, particularly in implementing novel systems or innovations, as it mitigates apprehension and potential risks. Half of the endeavors toward establishing a culture of innovation can be actualized by concentrating on this facet. Another aspect that calls for attention is establishing a work environment that fosters mutual respect and positive working relationships. The aspect of flexibility in working with individuals from diverse backgrounds can be developed, despite its lower level of importance compared to other leadership aspects.

Since communication is required throughout the organization at all times and at all stages, leaders should conduct with a specific objective, enabling transformation. From the IPMA results, it can be seen that the emphasis should be placed on positive communication rather than just positive saying. Positive communication can only be used well in an environment where people have enough experience, which is the case in this study. When the distribution of experience levels among individuals within an organization is relatively uniform, there may be a shift in focus.

CONCLUSION

This study focuses on transformational leadership because it relates to the dynamics of change within the organization. Many researchers provide suggestions on their research results to continue involving transactional leadership together with transformational leadership. However, in this study, transactional leadership is not involved intentionally. For future research, we recommend involving transactional leadership in achieving organizational innovation culture in relatively the same context. The context of this research is an organization concerned about implementing good corporate governance, such as state-owned companies and their group members. The aim is to ascertain the contribution of transactional leadership and its implementation in forming a culture of innovation, including applying new ideas and new systems, especially those from outside the organization.

The relationship between transformational leadership, transformative communication, and organizational innovation culture may be influenced by various contextual factors such as industry type, organizational size, and stage of development. Future research should examine

how these factors moderate the relationship between transformational leadership, transformative communication, and organizational innovation culture.

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