Harnessing Informal Communication: The Key to Building Trust and Agility in Remote Teams

Abu Hasan Agus R*, Tsamar Nur Aini, Imroatus Sholihah, Nora Lisah, Shofil Mubarok

Universitas Nurul Jadid, Indonesia

*Email Corresponding author: Abuhasanagusr@unuja.ac.id

Abstract

This research focuses on the role of informal communication in building team cohesion and trust in non-profit organizations. This research explores the mechanisms behind spontaneous and unstructured interactions that support decision-making, conflict resolution, and collective performance. This topic is relevant in the era of dynamic work, where the success of organizations increasingly depends on interpersonal relationships and cross-functional collaboration. This study uses a qualitative method with a case study approach involving in-depth interviews, direct observation, and internal document analysis. Data was collected from team members with diverse roles and experiences, including project managers, field coordinators, administrative staff, and senior volunteers. The analysis process includes data reduction, presentation of data in thematic matrices, and verification through source triangulation. This approach provides an in-depth understanding of the dynamics that affect team cohesion and collective trust. The results show that informal communication increases team trust and cohesion. Team members who frequently engage in spontaneous conversations show a better understanding of common goals, can better resolve conflicts, and show higher trust. Well-documented organizational documents also help reinforce successful work patterns, ensuring the continuity of best practices. The implications of this study include the importance of creating a work environment that encourages informal communication and makes strategic use of organizational documentation. The study provides relevant insights for developing collaboration strategies in the workplace and offers a foundation for further research on interpersonal dynamics in organizations.

INTRODUCTION

Informal communication within an organization reflects an important change in how teams collaborate and maintain cohesion (Manoli & Hodgkinson, 2021; Newman & Ford, 2021; Vuchkovski et al., 2023). In today's workplace, traditional hierarchical structures and formal reporting mechanisms are often incapable of capturing the full spectrum of team interactions (Hsieh & Vergne, 2023; Paoletti et al., 2021; Wu & Ling, 2023).

Instead, spontaneous and unplanned information exchange is often the primary means for team members to share insights, resolve conflicts, and adjust to changing demands (Guo et al., 2023; Luqman et al., 2023; Mandhana, 2022). This phenomenon, observed in various sectors, shows that informal communication is a complementary feature of team dynamics and has become a fundamental part of organizational life. As teams face an increasingly complex and uncertain environment, understanding the role and impact of informal communication is crucial (Loyless, 2023; Newman & Ford, 2021; Zafari et al., 2023). This study explores how informal interactions can be leveraged to improve team trust, cohesion, and performance and identifies the key elements supporting this practice in the work environment.

Based on the aforementioned findings, several references from prior studies support the case being studied in this research. The existing literature provides a strong foundation for exploring the relationship between informal communication and organizational effectiveness. Numerous sources emphasize the value of unstructured interactions in building trust and collaboration within teams. One study by Almulla (2023) demonstrated that informal discussions often catalyze creative problem-solving. In other words, when team members engage in conversations outside formal meetings, they are freer to exchange ideas and develop innovative solutions. This research indicates that not all significant innovations or breakthroughs must emerge from formal sessions; spontaneous, unstructured interactions sometimes lead to new ideas crucial for team success. The above literature is also supported by the findings of Jackson et al. (2024), who observed that such interactions enhance decision-making processes in rapidly evolving scenarios. Furthermore, several other sources show that teams that frequently engage in informal dialogue are better prepared to maintain cohesion and resolve interpersonal conflicts (Alexander et al., 2024; Debray & Spencer-Oatey, 2022; Sjølie et al., 2022). These findings highlight a growing academic consensus: informal communication complements formal processes and plays an essential role in shaping team dynamics. This synthesis of prior research firmly places the current study within a well-established academic framework, reinforcing the importance of examining informal interactions within organizational settings.

This study aims to investigate the mechanism behind the contribution of informal communication to team cohesion and organizational trust. Specifically, the study seeks to understand how spontaneous and unstructured interactions among team members affect collective decision-making, conflict resolution, and overall team performance. The main problem driving this research is the lack of understanding of how informal exchanges can be deliberately developed and managed to improve organizational outcomes. Although previous research has established that such interactions are beneficial, the specific pathways and conditions under which they occur remain unclear. Focusing on a case study approach in a mid-range technology company, this study seeks to identify the factors that allow informal communication to flourish and determine how these factors can be leveraged to improve organizational dynamics and performance.

This research assumes that informal communication is an important yet under-explored component of team dynamics. One hypothesis proposed is that teams with a higher level of spontaneous interaction will show greater trust and cohesion than teams relying solely on formal communication channels. Another assumption is that supportive leadership and collaborative organizational culture will reinforce the benefits of informal interactions.

Preliminary findings from the pilot phase show that teams that frequently engage in informal conversations are more resilient in unexpected challenges, a pattern corresponding to theoretical predictions from the organizational behavior literature. As the research progresses, these hypotheses will be tested through qualitative interviews, participant observations, and thematic analysis, providing a comprehensive understanding of the role of informal communication in building a cohesive and effective organizational environment.

RESEARCH METHOD

The unit of analysis in this study is the work team within a non-profit organization engaged in community development. The research was conducted at Universitas Nurul Jadid, Probolinggo. The research subjects include team members with various roles, such as project managers, field coordinators, administrative staff, and senior volunteers with experience in multiple organizational projects. This study employs a qualitative research approach using a case study method to understand the dynamics of interaction and collaboration within the work team. This approach was chosen because it allows for an in-depth exploration of the informal communication processes within the organizational environment (Bulchand-Gidumal et al., 2024; Damar & Koksalmis, 2024; Hatami et al., 2024). The case study provides an opportunity to investigate factors influencing team cohesion and collective trust based on individual experiences and communication patterns that naturally evolve within the organization (Hossain et al., 2022; Peimani & Kamalipour, 2021; SECUNDO et al., 2021). This study aims to identify how spontaneous interactions affect decision-making, conflict resolution, and overall team performance. Thus, the research design aligns to gain a deep understanding of the role of informal communication in building organizational trust and cohesion.

The sources of information in this study consist of primary and secondary data. Primary data were collected through in-depth interviews with organizational team members with varying levels of responsibility and work experience. Respondents were selected using purposive sampling techniques, considering their active involvement in the project under study. The criteria for selecting informants included their length of experience in the organization, their roles within the team, and their participation in informal communication impacting team dynamics. In addition to interviews, direct observations were conducted on team interactions in various work situations, formal meetings, and spontaneous workplace conversations. Secondary data were obtained from internal organizational documents, such as project reports, meeting notes, and teamwork guidelines. These documents were used to understand organizational communication patterns and provide additional context for interview and observation findings.

The data collection techniques used in this study include in-depth interviews, participatory observations, and document analysis. Semi-structured interviews were conducted to explore individual experiences and perceptions regarding informal communication within the team. Observations were carried out over several weeks to examine patterns of interaction that naturally emerged within the team. Organizational documentation was analyzed to identify references to informal communication in work practices. Data analysis was performed in three main stages: data reduction, presentation, and verification. Data reduction involved identifying key themes from interview transcripts, observation notes, and written documents.

The data were then presented in thematic matrices to map relationships between informal communication and team cohesion. Source triangulation was employed to enhance the validity of the research findings by comparing data from interviews, observations, and documentation. Furthermore, member checking was conducted with respondents to ensure that data interpretations aligned with their experiences.

RESULT AND DISCUSSION
Result
Behavioral Dynamics in Collaborative Teams

The study identified informal communication patterns as important in maintaining group cohesion during critical project milestones. Participants consistently demonstrated spontaneous problem-solving discussions that arose outside the official meeting schedule, often immediately after receiving a new project update. These unexpected interactions are frequent and highly productive, where team members exchange ideas, clarify uncertainties, and resolve minor conflicts quickly. This dynamic allows the group to stay aligned and create an environment of trust crucial to maintaining the team's effectiveness. The data show that these informal exchanges arise naturally, driven by immediate situational needs rather than through formal protocols. These findings emphasize the importance of unplanned, real-time interactions in ensuring collaborative teams adapt quickly to the project's changing demands, as shown in Figure 1.
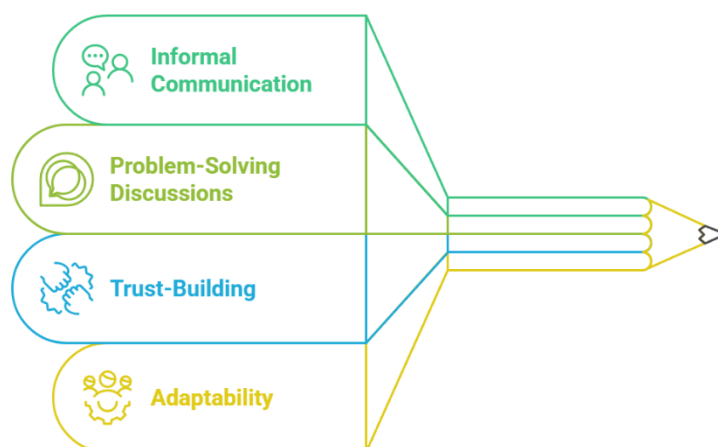

Figure 1. Enhancing Team Cohesion

Figure 1. shows that team members rely heavily on these informal interactions to overcome emerging challenges and cannot wait until the next formal meeting. For example, when a deadline is advanced, team members quickly discuss how to redistribute the workload or adjust the results, often in the aisle or during short breaks. These kinds of ad-hoc conversations often result in innovative solutions that are formalized during formal meetings. By engaging in spontaneous dialogue, team members can align tasks and clarify their roles more effectively, thus avoiding misunderstandings or delays. The repetitive nature of these interactions highlights their integral role in maintaining the group's productivity and morale. These findings align with research showing that informal communication channels often complement structured processes, allowing teams to respond dynamically and maintain alignment under pressure.

Apart from the above, this study shows that informal and spontaneous communication significantly increases group cohesion and productivity. These unplanned interactions facilitate real-time problem-solving and help resolve conflicts quickly, strengthening trust and alignment between team members. This phenomenon is especially evident during critical phases of a project, where the ability to adapt quickly and clarify roles and responsibilities is crucial. This pattern shows that informal communication channels function as a complement and are key to maintaining a robust and responsive collaborative team operational framework.

Individual Experiences in Building Team Trust

The study found that individual experiences play an important role in building trust within the team. Team members often show personal reflection on how they form closer working relationships through open communication and shared responsibilities. Based on the data collected, many stated that the trust grew over time, nurtured by a deep understanding of their challenges. For example, one of the team members revealed, "I was hesitant at first, but after a few projects, we felt like we were relying on each other and opening up to each other" (I_A). These experiences show that building trust depends not only on formal rules but also on personal processes that include openness and mutual respect.

In this study, individuals recounted how they overcame initial obstacles, such as uncertainty and background differences, by strengthening interpersonal relationships. The team members described that through deep conversations and sharing stories, they found common ground that strengthened trust. One participant said, "As we started to get to know each other further, that trust formed on its own" (I_NN). They also emphasized the importance of time in building solid relationships, where past experiences are lessons to develop a more transparent and supportive approach. These processes, while time-consuming, result in more authentic connections and strengthen teamwork. From the interview results from several sources, an analysis was carried out to find the points of the interview results to facilitate the interpretation, as shown in Table 1.

Table 1. Individual Experiences in Building Team Trust

Main Theme	Initial Coding	Final Coding
Trust Formation	"At first I was hesitant..." (I_NN, 2023); "Trust is formed..." (I_NN, 2023)	Trust grows through co-working experience
Open Communication	"Through deep conversations..."; " As we begin to get to know each other further..."	Open communication fosters mutual understanding
Personal Reflection	"Reflecting on past interactions..."	Reflection strengthens interpersonal relationships
Shared Experience	"Trust is fostered by an understanding of challenges..."	Shared challenges form collective trust
Gradual Process	"The trust grew over time..."	The process of building trust takes time
The Value of Openness	"Openness and mutual respect..."	Openness is the key to building close relationships
Equality of Values	"Finding a common ground that reinforces..."	Similarity of values strengthens mutual trust.

Table 1 shows that team trust develops gradually, influenced by individual experiences, open communication, and shared values. Trust does not arise instantly but grows through reflection on past experiences and daily interactions. Deep communication and openness between members play a central role in creating mutual understanding, while the challenges faced together form the foundation of collective trust. In addition, the same values and respect for openness create an environment conducive to close interpersonal relationships. By highlighting how these factors are interrelated, this table emphasizes that fostering trust in a team results from continuous effort, genuine collaboration, and the ability to support each other in the face of shared challenges.

The abounding show shows that experience is key in building team trust. Openness in sharing stories and facing common challenges creates a strong foundation for building closer and more productive relationships. Team members who rely on each other and reflect on past interactions find that trust grows gradually, driven by recognizing the value of openness and cooperation. This process highlights that building trust requires time and active involvement from all members. These findings provide insight into the fact that trust is not only the result of formal systems but is also formed through deep interpersonal dynamics and positive interactions in the work environment.

The Role of Organizational Track Record in Shaping Team Collaboration

The results showed that the team's collaboration pattern was still effective in building trust and cohesion even without formal documentation. The experience of working together and informal communication between team members plays an important role in solving problems and aligning team goals. Team members rely on each other based on their previous experiences, forming a framework that works. Effective collaboration relies more on strong interpersonal relationships between team members than just documentation. The trust built from informal interactions allows teams to adapt quickly, overcome challenges, and work more efficiently without clear written guidelines. The process of open communication and mutual understanding creates a strong foundation for resolving minor conflicts and making decisions collectively. These findings show that shared experiences drive good and efficient collaboration in a team and trust established through continuous interpersonal interaction.

Departing from this, it is also supported by interviews with several informants stating, "We often find solutions in casual chats, even though it is a big problem, because we already know and trust each other (I_B)." The same was expressed in interviews with other informants who stated, "Sometimes we don't need to wait for a formal meeting to solve problems; We can talk right away and find a way out together (I_BC)." Meanwhile, another informant said, "Of course, there are difficult moments, but small conversations between the teams help us to stay solid and adapt quickly (I_A)." One of the informants also supported this, stating, "Trust is built through a lot of small conversations that we never take for granted, and it really helps us work more efficiently (I_ZX)." These findings confirm that informal communication outside formal structures can improve team efficiency.

From the results of the interviews conducted above, it is known that informal communication, such as chatting outside of official meetings, is very helpful in improving team efficiency. Team members often find solutions to big problems through casual

conversations. This shows that getting to know each other and building trust makes it easier to solve problems quickly. Collaboration in a team does not always rely on formal procedures. Spontaneous discussions often speed up decision-making and task completion. Of course, there are challenges, but informal conversations help strengthen relationships between members, maintain harmony, and make it easier for them to adapt quickly to change. Trust built through light, unstructured interactions makes the work environment more efficient, where team members feel more comfortable sharing ideas, solving problems, and working together to achieve common goals.

Discussion

The results of this study show that informal communication plays an important role in improving team cohesion and trust, which is in line with recent research in this field. According to Sumbal et al. (2024), informal interaction supports faster decision-making and encourages problem-solving through unstructured dialogue. This study found that spontaneous exchanges between team members, often outside formal meetings, help resolve conflicts and align goals quickly. This suggests that informal communication can be an important mechanism for adaptive team behavior, especially in dynamic environments. While traditional frameworks often emphasize the importance of formal communication structures, these findings challenge that view by highlighting the crucial role of casual conversations in maintaining team effectiveness. These findings support the argument of Haugstvedt (2021), which identifies the untapped potential of informal networks within organizations.

The importance of this finding lies in its challenge to the traditional organizational communication paradigm that prioritizes formal channels. As demonstrated in this study, informal communication skills to increase team trust and cohesion emphasize the importance of creating a positive work environment, especially in stressful situations. These results align with the research of Whillans et al. (2021), which showed that informal communication fills the gaps between formal structures, allowing teams to adapt more quickly to changing conditions. By fostering personal relationships and allowing for faster problem resolution, informal communication mechanisms provide greater flexibility and responsiveness within teams, especially in environments that require innovation or quick decision-making. Therefore, this study reinforces the argument that informal communication is not only a complement to formal communication but also a vital component for the success of organizations, especially when quick and collaborative action is required.

One of the key findings in the study was that informal communication also facilitated effective management of team roles and responsibilities, with team members engaging in unstructured discussions to clarify their duties. These results have important implications for understanding how teams organize and manage uncertainty. In contrast to formal structures, which often require explicit roles and procedures, informal communication allows for quick negotiation and clarification of tasks when teams encounter complex situations or profound changes. These findings are in line with the research of van de Brake (2023), which found that teams with high levels of informal communication were better able to overcome ambiguity in their roles. This spontaneous exchange helps team members adapt more quickly to changes, such as changes in project requirements or sudden deadlines, so the team remains cohesive and focused on a common goal.

These findings emphasize the adaptive nature of teams in an environment where roles may not always be clearly defined or fixed. In contrast to rigid organizational frameworks, informal communication provides a more flexible way for teams to negotiate responsibilities in real-time. Previous research, including by Atouba (2021), supports this conclusion by showing that informal communication helps reduce the negative impact of unclear role expectations, ultimately increasing team productivity and job satisfaction. The ability of teams to organize themselves through these informal exchanges reflects an important aspect of organizational resilience. This shows that encouraging informal communication can increase efficiency and morale, especially in fast-paced settings or with significant challenges. Therefore, these findings indicate that building trust and managing clear roles requires active involvement in ongoing informal communication.

The results also show that team trust, built through informal communication, catalyzes more effective decision-making, especially in high-pressure situations. These findings highlight the importance of a trust-based culture within teams, where members feel comfortable sharing ideas and making quick decisions. The research of Yu et al. (2022) reinforces this by showing that trust in team interaction speeds up the decision-making process, resulting in better outcomes in situations that require quick action. In this study, trust development through informal interaction was proven to encourage members to take the initiative and share important information, thus facilitating a more dynamic decision-making process. These findings are consistent with the results of Saleem (2023), who concluded that high levels of trust in teams significantly reduce the time it takes to reach consensus and encourage a more responsive and action-oriented environment.

The importance of trust as a facilitator of decision-making is evident in a comparison with previous research that emphasizes the role of interpersonal relationships in reducing friction in decision-making. Trust, as shown by Li et al. (2022), is a key factor in collaboration, especially in an environment that requires quick and collective decisions. In contrast to rigid hierarchical systems, where decision-making authority is centralized, trust-based teams allow for decentralized decision-making, empowering members to act quickly and in unison. These findings confirm that creating an environment of trust, primarily through informal communication channels—can improve teams' ability to operate effectively in the face of dynamic challenges. The positive correlation between trust and speed of decision-making indicates that organizations must invest in building trust between team members to improve performance and agility in responding to changing challenges.

This study makes an original contribution by highlighting the critical role of informal communication in shaping organizational trust and team cohesion within a non-profit context. Unlike traditional research focusing on formal communication channels, this study uncovers how spontaneous, unstructured interactions enhance decision-making, conflict resolution, and adaptive team performance. Theoretically, the research advances the understanding of organizational behavior by integrating elements of social exchange theory and trust-building mechanisms, emphasizing the interplay between interpersonal relationships and collective outcomes. By applying a case study approach in a real-world organizational setting, the study provides empirical evidence supporting the argument that informal communication serves as a crucial foundation for team resilience and efficiency. Furthermore, it challenges conventional

hierarchical models by demonstrating that informal interactions, rather than formal structures alone, significantly contribute to sustainable organizational collaboration. This perspective offers valuable insights for scholars and practitioners seeking to optimize team dynamics in dynamic work environments.

CONCLUSION

This research reveals that informal communication and individual experiences are important in creating team cohesion and trust. The study results show that unstructured interactions, personal reflection, and shared challenges are the foundation for closer and more productive working relationships. A documented organizational track record also proves to be a strategic guide, allowing teams to replicate steps that have proven successful. Thus, this research provides new insights into how interpersonal dynamics and historical knowledge can be integrated to strengthen teamwork. The main takeaway is that effective collaboration depends not only on formal structures but also on personal engagement, openness, and learning from past experiences.

This research contributes significantly to the literature by offering a more holistic approach to understanding team collaboration dynamics. By highlighting the importance of informal interactions, individual reflection, and historical documentation, this research broadens existing perspectives and provides a more substantial basis for subsequent studies. However, this study has limitations, such as limited scope to specific cases and reliance on qualitative data without broader quantitative testing. These limitations point to the need for further research that includes more representative survey methods and the exploration of demographic differences, such as gender and age, to gain a more comprehensive understanding. Thus, these findings can be used to develop more effective policies and collaboration strategies in the future.

ACKNOWLEDGMENT

REFERENCES

Alexander, D., Bloom, G. A., Bentzen, M., & Kenttä, G. (2024). Exploring the Experiences and Perceptions of Coaches, Athletes, and Integrated Support Teams Towards the Management of Three National Paralympic Teams. *Psychology of Sport and Exercise, 71*, 102588. https://doi.org/10.1016/j.psychsport.2023.102588

Almulla, M. A., & Al-Rahmi, W. M. (2023). Integrated Social Cognitive Theory with Learning Input Factors: The Effects of Problem-Solving Skills and Critical Thinking Skills on Learning Performance Sustainability. *Sustainability (Switzerland), 15*(5), 3978. https://doi.org/10.3390/su15053978

Atouba, Y. (2021). How Does Participation Impact IT Workers' Organizational Commitment? Examining the Mediating Roles of Internal Communication Adequacy, Burnout and Job Satisfaction. *Leadership and Organization Development Journal, 42*(4), 580–592. https://doi.org/10.1108/LODJ-09-2020-0422

Bulchand-Gidumal, J., William Secin, E., O'Connor, P., & Buhalis, D. (2024). Artificial Intelligence's Impact on Hospitality and Tourism Marketing: Exploring Key Themes and Addressing Challenges. *Current Issues in Tourism, 27*(14), 2345–2362. https://doi.org/10.1080/13683500.2023.2229480

Damar, S., & Koksalmis, G. H. (2024). A Bibliometric Analysis of Metaverse Technologies in Healthcare Services. *Service Business, 18*(2), 223–254. https://doi.org/10.1007/s11628-024-00553-3

Debray, C., & Spencer-Oatey, H. (2022). Co-Constructing Good Relations Through Troubles Talk in Diverse Teams. *Journal of Pragmatics, 192*, 85–97. https://doi.org/10.1016/j.pragma.2022.02.006

Guo, W., Lu, W., Hao, L., & Gao, X. (2023). Interdependence and Information Exchange Between Conflicting Parties: The Role of Interorganizational Trust. *IEEE Transactions on Engineering Management, 70*(1), 156–172. https://doi.org/10.1109/TEM.2020.3047499

Hatami, M., Qu, Q., Chen, Y., Kholidy, H., Blasch, E., & Ardiles-Cruz, E. (2024). A Survey of the Real-Time Metaverse: Challenges and Opportunities †. *Future Internet, 16*(10), 379. https://doi.org/10.3390/fi16100379

Haugstvedt, H., & Sjøen, M. M. (2021). Exploring Youths' Willingness to Engage with Civil Society and Public Sector Institutions: The Untapped Potential of Religious Communities in Preventing Violent Extremism. *Democracy and Security, 17*(4), 337–355. https://doi.org/10.1080/17419166.2021.1950383

Hossain, M. R., Akhter, F., & Sultana, M. M. (2022). SMEs in Covid-19 Crisis and Combating Strategies: A Systematic Literature Review (SLR) and A Case from Emerging Economy. *Operations Research Perspectives, 9*, 100222. https://doi.org/10.1016/j.orp.2022.100222

Hsieh, Y. Y., & Vergne, J. P. (2023). The Future of the Web? The Coordination and Early-Stage Growth of Decentralized Platforms. *Strategic Management Journal, 44*(3), 829–857. https://doi.org/10.1002/smj.3455

Jackson, I., Ivanov, D., Dolgui, A., & Namdar, J. (2024). Generative Artificial Intelligence in Supply Chain and Operations Management: A Capability-Based Framework for Analysis and Implementation. *International Journal of Production Research, 62*(17), 6120–6145. https://doi.org/10.1080/00207543.2024.2309309

Li, Y., Kou, G., Li, G., & Peng, Y. (2022). Consensus Reaching Process in Large-Scale Group Decision Making Based on Bounded Confidence and Social Network. *European Journal of Operational Research, 303*(2), 790–802. https://doi.org/10.1016/j.ejor.2022.03.040

Loyless, L. H. (2023). Competence in Virtual Communication: Remote Transformational Leadership. *Public Administration Review, 83*(3), 702–709. https://doi.org/10.1111/puar.13618

Luqman, A., Zhang, Q., & Hina, M. (2023). Employees' Proactiveness on Enterprise Social Media and Social Consequences: An Integrated Perspective of Social Network and Social Exchange Theories. *Information and Management, 60*(6), 103843. https://doi.org/10.1016/j.im.2023.103843

Mandhana, D. M. (2022). Messy Talk: An Unanticipated Process of Problem-Solving and Knowledge Creation. *Journal of Communication Management, 26*(3), 221–235. https://doi.org/10.1108/JCOM-04-2021-0039

Manoli, A. E., & Hodgkinson, I. R. (2021). Exploring Internal Organisational Communication Dynamics in the Professional Football Industry. *European Journal of Marketing, 55*(11), 2894–2916. https://doi.org/10.1108/EJM-05-2019-0422

Newman, S. A., & Ford, R. C. (2021). Five Steps to Leading Your Team in the Virtual COVID-19 Workplace. *Organizational Dynamics, 50*(1), 100802. https://doi.org/10.1016/j.orgdyn.2020.100802

Paoletti, J., Bisbey, T. M., Zajac, S., Waller, M. J., & Salas, E. (2021). Looking to the Middle of the Qualitative-Quantitative Spectrum for Integrated Mixed Methods. *Small Group Research, 52*(6), 641–675. https://doi.org/10.1177/1046496421992433

Peimani, N., & Kamalipour, H. (2021). Online Education and the Covid-19 Outbreak: A Case Study of Online Teaching During Lockdown. *Education Sciences, 11*(2), 1–16. https://doi.org/10.3390/educsci11020072

Saleem, A., & Dare, P. S. (2023). Unmasking the Action-Oriented ESD Approach to Acting Environmentally Friendly. *Sustainability (Switzerland), 15*(2), 1675. https://doi.org/10.3390/su15021675

Secundo, G., Mele, G., Vecchio, P. Del, Elia, G., Margherita, A., & Ndou, V. (2021). Threat or Opportunity? A Case Study of Digital-Enabled Redesign of Entrepreneurship Education in the COVID-19 Emergency. *Technological Forecasting and Social Change, 166*, 120565. https://doi.org/10.1016/j.techfore.2020.120565

Sjølie, E., Espenes, T. C., & Buø, R. (2022). Social Interaction and Agency in Self-Organizing Student Teams During Their Transition from Face-to-Face to Online Learning. *Computers and Education, 189*, 104580. https://doi.org/10.1016/j.compedu.2022.104580

Sumbal, M. S., Amber, Q., Tariq, A., Raziq, M. M., & Tsui, E. (2024). Wind of Change: How ChatGPT and Big Data Can Reshape the Knowledge Management Paradigm? *Industrial Management and Data Systems, 124*(9), 2736–2757. https://doi.org/10.1108/IMDS-06-2023-0360

van de Brake, H. J., & Berger, S. (2023). Can I Leave My Hat On? A Cross-Level Study of Multiple Team Membership Role Separation. *Personnel Psychology, 76*(1), 221–248. https://doi.org/10.1111/peps.12495

Vuchkovski, D., Zalaznik, M., Mitręga, M., & Pfajfar, G. (2023). A Look at the Future of Work: The Digital Transformation of Teams from Conventional to Virtual. *Journal of Business Research, 163*, 113912. https://doi.org/10.1016/j.jbusres.2023.113912

Whillans, A., Perlow, L., & Turek, A. (2021). Experimenting During the Shift to Virtual Team Work: Learnings from How Teams Adapted Their Activities During the COVID-19 Pandemic. *Information and Organization, 31*(1), 100343. https://doi.org/10.1016/j.infoandorg.2021.100343

Wu, T., & Ling, Q. (2023). Fusing Hybrid Attentive Network with Self-Supervised Dual-Channel Heterogeneous Graph for Knowledge Tracing. *Expert Systems with Applications, 225*, 120212. https://doi.org/10.1016/j.eswa.2023.120212

Yu, X., Shen, Y., & Khazanchi, D. (2022). Swift Trust and Sensemaking in Fast Response Virtual Teams. *Journal of Computer Information Systems, 62*(5), 1072–1087. https://doi.org/10.1080/08874417.2021.1978114

Zafari, K., Biggemann, S., & Garry, T. (2023). Development of Business-to-Business Relationships in Turbulent Environments. *Industrial Marketing Management, 111*, 1–18. https://doi.org/10.1016/j.indmarman.2023.03.002