

**The Impact of Data Transparency on Remote Projects:
Qualitative Study From Cloud-Based Collaboration
Platforms**

Researcher Name:
Rahaf Mohammed Al-Jeraisi

Academic Number :
253000602

Supervisor:
Dr. Fayez Jrad

Jul. 2026

أثر شفافية البيانات في تحسين أداء المشاريع عن بعد: دراسة نوعية باستخدام
منصات التعاون السحابية

اسم الباحثة:
رهف محمد الجريسي

الرقم الأكاديمي:
253000602

إشراف:
د. فايز أبو جراد

يونيو، ٢٠٢٦ م

Table of Content	Page
Title Page (English)	i
Title Page (Arabic)	ii
Table of Contents	iii
Acknowledgments	V
Abstract	vi
Abstract (Arabic)	vii
Chapter One: Introduction	8
1.1 Introduction	8
1.2 Research Problem	9
1.3 Research Significance	10
1.4 Practical Importance	12
1.5 Research Objectives	12
1.6 Research Questions	13
Chapter Two: Literature Review	14
Chapter Three: Research Methodology	15
3.1 Population, Sampling, and Data Collection	15
3.2 Data Analysis	15
Chapter Four: Fields of Study	16
Chapter Five: Discussion	17
5.1 Discussion of the Qualitative Findings	17
Data Transparency as the Foundation of Virtual Project Success	18
Cloud Collaboration Platforms as Enablers of Data Transparency	18
Data Transparency and Decision-Making	19
Data Transparency, Collaboration, and Project Performance	20
Challenges Limiting Data Transparency	21
Technical Challenges	21
Organizational Challenges	21
Human and Cultural Challenges	22
Recommendations for Improving Data Transparency	23
Overall Interpretation of the Findings	24
5.2 Theoretical Implications	24
5.3 Practical Implications	25
5.4 Limitations of the Study	25
5.5 Recommendations for Future Research	25
Appendix A: English Interview Questions	27
Appendix B: Arabic Interview Questions	30
Appendix C: Participant 1 Interview	33
Appendix D: Participant 2 Interview	39

Table of Content	Page
Appendix E: Participant 3 Interview	44
Appendix F: Participant 4 Interview	50
Appendix G: Participant 5 Interview	56
References	61

Acknowledgments

First and foremost, all praise and thanks are due to Allah Almighty, whose countless blessings, guidance, and mercy have enabled me to complete this research and every stage of my academic journey. Without His grace and support, this accomplishment would not have been possible.

I would like to express my deepest gratitude to my supervisor, Dr. Fayez Jrad, for his invaluable guidance, continuous encouragement, constructive feedback, and unwavering support throughout this research. His expertise, patience, and insightful advice played a vital role in shaping this study and guiding me through every stage of the research process. I am truly grateful for his dedication and mentorship.

My sincere appreciation goes to all the participants who generously shared their time, knowledge, and professional experiences during the interviews. Their valuable insights formed the foundation of this research and greatly enriched its findings.

I would also like to express my heartfelt gratitude to my parents and my family for their unconditional love, endless encouragement, patience, and unwavering belief in me. Their constant support has been my greatest source of strength throughout this journey.

A special thank you goes to my father, whose wisdom, sacrifices, and continuous encouragement have always inspired me to pursue my goals with determination. I am equally grateful to my mother for her endless love, prayers, and reassurance. Her unwavering support has given me the strength to overcome challenges and persevere during moments of uncertainty and stress.

Finally, I extend my appreciation to everyone who, in one way or another, contributed to the successful completion of this research. Your support and encouragement have been deeply appreciated and will always be remembered.

Abstract

The Impact of Data Transparency on Improving Virtual Project Performance: An Analytical Study Using Cloud Collaboration Platforms

The increasing reliance on virtual work environments has fundamentally transformed project management practices, making cloud collaboration platforms essential for communication, coordination, and information sharing among geographically distributed teams. Despite the widespread adoption of these platforms, many organizations continue to face challenges related to data transparency, which can negatively affect collaboration, decision-making, and overall project performance. This study aims to explore the impact of data transparency on improving virtual project performance through the use of cloud collaboration platforms.

The study employed a qualitative research approach using semi-structured interviews with experienced professionals working in various sectors, including software engineering, higher education, digital marketing, and project management. Participants were selected using purposive sampling to ensure they possessed substantial experience in managing or participating in virtual projects. The interview data were analyzed using Braun and Clarke's (2006) Thematic Analysis, which enabled the identification of recurring themes and patterns related to data transparency in virtual project environments.

The findings revealed that data transparency significantly enhances virtual project performance by improving communication, facilitating collaboration, accelerating decision-making, reducing errors and duplication of work, strengthening adherence to project schedules, and improving the quality of project deliverables. The study also identified several factors that promote transparency, including centralized cloud collaboration platforms, standardized documentation, effective leadership, regular communication, and continuous training. Conversely, technical limitations, fragmented communication channels, inconsistent documentation, organizational barriers, and human factors were identified as the primary challenges affecting data transparency.

The study concludes that cloud collaboration platforms alone are insufficient to ensure successful virtual project management. Rather, organizations should integrate technological capabilities with effective data governance, transparent communication practices, and supportive organizational cultures to maximize project performance. The findings contribute to the existing literature on virtual project management and provide practical recommendations for organizations seeking to improve collaboration and project outcomes through enhanced data transparency.

Keywords: Data Transparency, Virtual Projects, Cloud Collaboration Platforms, Project Performance, Qualitative Research, Thematic Analysis.

الملخص

أثر شفافية البيانات في تحسين أداء المشاريع الافتراضية: دراسة تحليلية باستخدام منصات التعاون السحابية

أدى الاعتماد المتزايد على بيانات العمل الافتراضية إلى إحداث تحول جوهري في أساليب إدارة المشاريع، حيث أصبحت منصات التعاون السحابية عنصرًا أساسيًا في دعم التواصل والتنسيق وتبادل المعلومات بين فرق العمل الموزعة جغرافيًا. وعلى الرغم من الاستخدام الواسع لهذه المنصات، لا تزال العديد من المؤسسات تواجه تحديات تتعلق بشفافية البيانات، مما قد يؤثر سلبًا في التعاون، وسرعة اتخاذ القرار، والأداء العام للمشاريع الافتراضية. هدفت هذه الدراسة إلى استكشاف أثر شفافية البيانات في تحسين أداء المشاريع الافتراضية باستخدام منصات التعاون السحابية.

اعتمدت الدراسة المنهج النوعي، حيث تم جمع البيانات من خلال مقابلات شخصية شبه منظمة مع مجموعة من المهنيين ذوي الخبرة في مجالات هندسة البرمجيات، والتعليم العالي، والتسويق الرقمي، وإدارة المشاريع. وتم اختيار المشاركين باستخدام العينة القصدية لضمان امتلاكهم خبرة عملية في إدارة أو تنفيذ المشاريع الافتراضية. وقد تم تحليل بيانات المقابلات باستخدام منهج التحليل الموضوعي (Thematic Analysis) وفقًا لإطار Braun and Clarke (2006)، مما أتاح تحديد الأنماط والموضوعات الرئيسية المتعلقة بشفافية البيانات في بيئات المشاريع الافتراضية.

أظهرت نتائج الدراسة أن شفافية البيانات تسهم بصورة ملحوظة في تحسين أداء المشاريع الافتراضية من خلال تعزيز التواصل بين أعضاء الفريق، وتحسين التعاون، وتسريع عملية اتخاذ القرار، وتقليل الأخطاء وتكرار العمل، وتعزيز الالتزام بالجدول الزمنية، ورفع جودة مخرجات المشاريع. كما بينت النتائج أن استخدام منصات التعاون السحابية المركزية، وتوحيد الوثائق، ووضوح قنوات التواصل، ودعم القيادة، والتدريب المستمر تمثل عوامل رئيسية لتعزيز شفافية البيانات. وفي المقابل، برزت عدة تحديات تحد من تحقيق الشفافية، من أهمها المشكلات التقنية، وتعدد مصادر المعلومات، وضعف التوثيق، والعوامل التنظيمية والبشرية.

وتخلص الدراسة إلى أن نجاح المشاريع الافتراضية لا يعتمد على التكنولوجيا وحدها، وإنما يتطلب دمج منصات التعاون السحابية مع ممارسات فعالة لحوكمة البيانات، والتواصل الشفاف، وثقافة تنظيمية تشجع على مشاركة المعرفة والتعاون. وتسهم هذه الدراسة في إثراء الأدبيات المتعلقة بإدارة المشاريع الافتراضية، كما تقدم مجموعة من التوصيات العملية للمؤسسات الراغبة في تحسين أداء مشاريعها من خلال تعزيز شفافية البيانات.

الكلمات المفتاحية: شفافية البيانات، المشاريع الافتراضية، منصات التعاون السحابية، أداء المشاريع الافتراضية، البحث النوعي، التحليل الموضوعي.

Introduction

The rapid advancement of digital technologies and the widespread adoption of cloud-based collaboration platforms have fundamentally transformed the way organizations plan, coordinate, and execute projects. Advances in communication technologies, together with the increasing prevalence of remote and hybrid work arrangements, have accelerated the adoption of virtual teams across diverse sectors, including software engineering, higher education, digital marketing, and project management (Larson & DeChurch, 2020). As organizations increasingly rely on geographically dispersed teams, effective project management is no longer determined solely by the availability of technology but also by the accessibility, accuracy, and transparency of project information.

Virtual teams provide organizations with numerous advantages, including greater flexibility, access to global talent, improved resource utilization, and reduced operational costs. However, they also introduce significant challenges related to communication, coordination, and information sharing. Unlike traditional co-located teams, virtual teams depend almost entirely on digital communication technologies and cloud-based information systems to coordinate project activities and support collaborative decision-making (Daim et al., 2012). Consequently, incomplete, outdated, or inaccessible information may lead to communication breakdowns, duplicated work, delayed decision-making, misunderstandings, and reduced project performance. Moreover, remote work environments often limit spontaneous knowledge sharing and increase the likelihood of information silos, making data transparency a critical requirement for successful virtual collaboration (Yang et al., 2022).

Cloud collaboration platforms—including Microsoft Teams, Google Drive, Microsoft OneDrive, Jira, Trello, Slack, Zoom, and similar technologies—have become indispensable tools for supporting virtual project management. These platforms provide centralized repositories for project documentation, facilitate real-time collaboration, maintain version histories, enable task management, and improve communication among geographically dispersed teams (Larson & DeChurch, 2020). Nevertheless, simply implementing these technologies does not guarantee effective collaboration. Many organizations continue to underutilize the collaborative capabilities of cloud platforms by using them primarily as document storage systems rather than integrated digital workspaces that promote transparency, accountability, and continuous knowledge sharing (Aroles et al., 2021).

Data transparency has therefore emerged as one of the most important factors influencing the success of virtual projects. Transparent project environments enable stakeholders to access accurate, timely, and relevant information, thereby improving coordination, facilitating faster decision-making, reducing misunderstandings, minimizing duplicated work, and enhancing overall project performance (Daim et al., 2012). Conversely, inadequate transparency may result in fragmented information, inconsistent documentation, restricted access to project resources, and ineffective communication, all of which negatively affect project outcomes and organizational performance (Yang et al., 2022).

Although previous studies have examined virtual teams, remote collaboration, and cloud-based technologies extensively, relatively limited research has specifically explored the role of data transparency within cloud collaboration platforms as a key determinant of virtual project performance. Existing literature has primarily focused on technological adoption or

communication practices independently, while the interaction between data transparency, cloud collaboration platforms, and project performance remains insufficiently explored, particularly from the perspectives of professionals working across different industries (Aroles et al., 2021; Larson & DeChurch, 2020).

To address this gap, the present study adopts a **qualitative research approach** using **semi-structured interviews** with experienced professionals from multiple sectors, including software engineering, higher education, digital marketing, and project management. The interviews provide rich insights into participants' experiences, perceptions, and practices regarding data transparency in virtual project environments. The collected data were analyzed using **Braun and Clarke's (2006) Thematic Analysis**, enabling the identification and interpretation of recurring themes related to data transparency, cloud collaboration platforms, project performance, organizational challenges, and improvement strategies (Braun & Clarke, 2006).

Through the analysis of participants' experiences, this study seeks to provide a deeper understanding of how data transparency contributes to improving virtual project performance. It further examines the organizational and technological factors that facilitate or hinder transparency within virtual work environments. The findings are expected to contribute to the existing body of knowledge on virtual project management while offering practical recommendations for organizations seeking to enhance communication, collaboration, decision-making, and overall project performance through the effective use of cloud collaboration platforms.

Research Problem

The increasing adoption of virtual and hybrid work environments has fundamentally transformed the way organizations manage projects. Although cloud collaboration platforms have enabled geographically dispersed teams to communicate and coordinate more effectively, many organizations continue to face challenges in maintaining data transparency across virtual projects. Team members frequently work with fragmented information distributed across multiple communication channels and cloud platforms, resulting in inconsistent documentation, delayed information sharing, duplicated work, and reduced coordination among project stakeholders (Daim et al., 2012; Yang et al., 2022).

Cloud collaboration platforms such as Microsoft Teams, Google Drive, OneDrive, Jira, Trello, and Slack provide advanced capabilities for centralized document management, real-time collaboration, version control, and information sharing. However, many organizations fail to fully utilize these capabilities, using the platforms primarily for file storage rather than as integrated environments that support transparent communication, knowledge sharing, and collaborative decision-making (Larson & DeChurch, 2020). As a result, project managers often spend considerable time verifying information, resolving inconsistencies, and coordinating updates instead of focusing on strategic project management activities.

Limited data transparency can negatively affect several dimensions of virtual project performance, including decision-making speed, collaboration among team members, adherence to project schedules, accountability, and the quality of project deliverables. Although previous studies have examined virtual collaboration and the adoption of cloud-based technologies, relatively limited research has specifically explored how data transparency within cloud collaboration platforms influences virtual project performance from the perspectives of professionals working in different industries.

Accordingly, this study seeks to explore the role of data transparency in improving virtual project performance through the use of cloud collaboration platforms. By employing a qualitative research approach based on semi-structured interviews with experienced professionals, the study aims to identify the factors that facilitate or hinder data transparency, examine how transparency influences communication and project outcomes, and provide practical recommendations for organizations seeking to improve the management and performance of virtual projects.

Research Significance

This study is expected to contribute to both academic knowledge and professional practice by providing a comprehensive understanding of the role of data transparency in improving virtual project performance through the use of cloud collaboration platforms.

From a theoretical perspective, the study contributes to the growing body of literature on virtual project management, cloud collaboration technologies, and data transparency. Although previous research has examined remote work, virtual collaboration, and the adoption of cloud-based platforms, relatively limited attention has been given to data

transparency as a critical factor influencing the success of virtual projects. By exploring professionals' experiences and perceptions across different sectors, this study extends the existing literature and provides deeper insight into how transparent information-sharing practices influence collaboration, communication, decision-making, and overall project performance (Daim et al., 2012; Larson & DeChurch, 2020).

From a methodological perspective, the study contributes by adopting a qualitative research approach based on semi-structured interviews and analyzing the collected data using Braun and Clarke's (2006) Thematic Analysis. This approach enables an in-depth exploration of participants' experiences and facilitates the identification of recurring themes related to data transparency, organizational practices, cloud collaboration platforms, implementation challenges, and strategies for improving virtual project performance (Braun & Clarke, 2006).

From a practical perspective, the findings are expected to assist project managers, organizational leaders, and decision-makers in understanding how transparent information-sharing practices can improve communication, collaboration, decision-making, accountability, and project outcomes within virtual work environments. The study also identifies common organizational, technical, and human challenges that hinder data transparency and offers practical recommendations for overcoming these barriers.

Furthermore, the findings provide guidance for organizations seeking to maximize the value of cloud collaboration platforms—including Microsoft Teams, Google Drive, OneDrive, Jira, Trello, and Slack—by encouraging their use as integrated collaboration environments rather than merely document storage systems. Emphasizing centralized information management, standardized documentation, effective leadership, and open communication practices can help organizations strengthen transparency, reduce duplicated work and communication gaps, improve coordination among geographically distributed teams, and ultimately enhance the overall performance of virtual projects.

Overall, this study highlights that data transparency should be viewed not merely as a technological capability but as a strategic organizational practice that supports effective collaboration and sustainable success in virtual project environments.

Practical Importance

The findings of this study provide practical value for organizations that rely on cloud collaboration platforms to manage virtual projects. By exploring professionals' experiences across multiple sectors, the research identifies practical approaches for improving data transparency and enhancing virtual project performance.

The study offers guidance for project managers and organizational leaders by highlighting the importance of centralized information management, standardized documentation, effective communication, and clearly defined access permissions. These practices can improve collaboration, facilitate faster decision-making, reduce duplicated work, and strengthen accountability among geographically distributed teams.

Furthermore, the study emphasizes that technology alone is insufficient to achieve transparency. Organizations should complement cloud collaboration platforms with effective leadership, employee training, and organizational policies that encourage knowledge sharing and consistent documentation. The findings may therefore assist organizations in maximizing the capabilities of platforms such as Microsoft Teams, Google Drive, OneDrive, Jira, Trello, and Slack to improve project coordination and overall organizational performance.

Research Objectives

The primary objective of this study is to explore the impact of data transparency on improving virtual project performance through the use of cloud collaboration platforms.

Specifically, the study aims to:

- 5.2 Examine the level of data transparency within virtual projects that utilize cloud collaboration platforms.
- 5.3 Explore how cloud collaboration platforms facilitate data sharing and transparency among virtual team members.
- 5.4 Investigate the influence of data transparency on decision-making, collaboration, adherence to project schedules, and the quality of project deliverables.
- 5.5 Identify the organizational, technical, and human challenges that limit data transparency in virtual projects.
- 5.6 Propose practical recommendations for enhancing data transparency and improving virtual project performance.

Research Questions

This study seeks to answer the following research questions:

RQ1: How is data transparency implemented and maintained in virtual projects that use cloud collaboration platforms?

RQ2: How do cloud collaboration platforms support data sharing and transparency among virtual project teams?

RQ3: How does data transparency influence decision-making, collaboration, project timelines, and the quality of project deliverables in virtual projects?

RQ4: What organizational, technical, and human challenges hinder data transparency in virtual project environments?

RQ5: What strategies can organizations adopt to improve data transparency and enhance virtual project performance?

Literature Review

The growing adoption of virtual work has transformed project management by increasing reliance on digital communication and cloud-based collaboration technologies. As organizations continue to adopt remote and hybrid work models, ensuring effective information sharing has become one of the most significant challenges affecting project success (Larson & DeChurch, 2020). Unlike traditional co-located teams, virtual teams depend heavily on digital platforms to exchange information, coordinate activities, and monitor project progress. Consequently, the quality and transparency of shared information play a crucial role in determining the effectiveness of collaboration and decision-making within virtual projects.

Cloud collaboration platforms—including Microsoft Teams, Google Drive, OneDrive, Jira, Trello, Slack, and Zoom—have become essential components of virtual project management by providing centralized environments for communication, document management, task coordination, and real-time collaboration (Daim et al., 2012). These platforms enable geographically dispersed teams to access shared information regardless of location or time zone, thereby improving coordination and reducing communication delays. However, the successful implementation of these technologies depends not only on their technical capabilities but also on organizational practices that promote transparency, accountability, and standardized information management (Aroles et al., 2021).

Data transparency refers to the availability of accurate, timely, and accessible information to authorized project stakeholders. Transparent information-sharing enables team members to make informed decisions, coordinate tasks effectively, reduce misunderstandings, and minimize duplicated work. Previous studies have shown that organizations with higher levels of transparency generally experience better collaboration, greater trust among team members, faster decision-making, and improved project performance (Larson & DeChurch, 2020; Yang et al., 2022). Conversely, fragmented information, inconsistent documentation, and restricted access to project data often create communication barriers that negatively affect project outcomes.

Despite the growing importance of cloud collaboration technologies, previous research has largely focused on technology adoption or remote work practices rather than examining how data transparency influences virtual project performance. Moreover, relatively few studies have explored this relationship through the experiences of professionals working across different sectors. Therefore, this study seeks to address this gap by exploring how data transparency within cloud collaboration platforms contributes to improving the performance of virtual projects and identifying the factors that facilitate or hinder transparent information sharing.

3. Research Methodology

This study adopts a **qualitative research approach** to explore the impact of data transparency on improving virtual project performance through cloud collaboration platforms. A qualitative approach was selected because it enables an in-depth understanding of participants' experiences, perceptions, and practices regarding data transparency in virtual project environments. Semi-structured interviews were employed as the primary data collection method, allowing participants to describe their experiences while providing the researcher with the flexibility to explore emerging ideas and gain rich insights into the phenomenon under investigation.

3.1 Population, Sampling, and Data Collection

The target population consists of project managers, engineers, team leaders, and project team members working in organizations that rely on cloud-based collaboration platforms to manage virtual projects. These organizations represent various sectors, including software engineering, higher education, digital marketing, and project management.

A **purposive sampling technique** was employed to select participants who possessed substantial experience in managing or participating in virtual projects. A total of **12 professionals** participated in the study, representing diverse organizational roles and industries. This sampling strategy ensured that participants could provide rich, relevant, and experience-based insights related to data transparency in virtual project environments.

Data were collected through **semi-structured interviews**, which allowed participants to discuss their experiences while ensuring consistency across interviews. The interview guide was organized around five main themes: **(1) data transparency in virtual projects, (2) the use of cloud collaboration platforms, (3) the impact of data transparency on project performance, (4) challenges affecting data transparency, and (5) recommendations for improving transparency and virtual project performance.**

Each interview lasted approximately **10–15 minutes** and was conducted after obtaining participants' informed consent. All interviews were audio-recorded with participants' permission, transcribed verbatim, and anonymized to maintain confidentiality and protect participants' identities.

3.2 Data Analysis

The qualitative data were analyzed using **Braun and Clarke's (2006) Thematic Analysis**, a widely recognized and flexible method for identifying, analyzing, and interpreting patterns within qualitative data. The analysis followed the six phases proposed by Braun and Clarke (2006). Initially, the interview transcripts were read several times to achieve familiarity with the data. Meaningful data segments were then assigned initial codes that represented significant concepts and recurring ideas. Similar codes were grouped into broader themes that reflected common patterns across participants' experiences.

The preliminary themes were subsequently reviewed and refined to ensure internal consistency and clear distinctions between themes. Each theme was then clearly defined and

named according to its conceptual meaning. Finally, representative quotations from the interviews were selected to support the interpretation of each theme and provide authentic evidence for the study's findings. This systematic analytical process enabled the researcher to develop a comprehensive understanding of how data transparency influences virtual project performance through the use of cloud collaboration platforms.

4. Fields of Study

This research is interdisciplinary, sitting at the intersection of three major academic and professional domains:

4.1. Information Systems (IS) & Cloud Computing

This field examines the technical infrastructure that enables virtual work. The study focuses on Software-as-a-Service (SaaS) architectures and how their native transparency features (real-time syncing, audit trails, and automated dashboards) redefine the "digital workspace."

4.2. Project Management & Organizational Behavior

This domain focuses on the Socio-Technical aspect of the research. It explores how management methodologies (such as Agile or Scrum) are transformed when applied to virtual environments. It specifically looks at team dynamics, the reduction of information silos, and the difference in performance metrics between remote and office-based counterparts.

4.3. Human-Computer Interaction (HCI)

The research touches on HCI by analyzing how the User Interface (UI) of collaboration tools impacts the way workers interact with data. It explores whether a more "transparent" interface leads to better cognitive alignment and reduced "digital exhaustion" (Zoom/Meeting fatigue).

5. Discussion

5.1 Discussion of the Qualitative Findings

This study aimed to explore the impact of data transparency on improving virtual project performance through the use of cloud collaboration platforms. The findings of the semi-structured interviews revealed a strong consensus among participants that data transparency is a fundamental determinant of successful virtual project management. Although participants represented different industries—including software engineering, higher education, digital marketing, and project management—they consistently emphasized that transparent access to accurate, timely, and reliable information positively influences communication, collaboration, decision-making, project quality, and overall project performance.

The findings further demonstrate that data transparency should not be viewed solely as a technological capability provided by cloud collaboration platforms. Rather, it represents an organizational practice supported by effective leadership, standardized documentation, clear communication channels, and an organizational culture that encourages knowledge sharing. These findings reinforce the socio-technical systems perspective, which argues that organizational performance is shaped by the interaction between technological systems and human behavior rather than technology alone (Bostrom & Heinen, 1977).

5.2 Data Transparency as the Foundation of Virtual Project Success

One of the strongest themes emerging from the interviews was that data transparency serves as the foundation upon which successful virtual collaboration is built. Nearly all participants described the level of transparency within their organizations as moderate to high, particularly when centralized cloud collaboration platforms were used to manage project documentation and communication.

Participants explained that transparency allows project members to access project documents, monitor task progress, understand project priorities, and remain aligned with organizational objectives without depending on continuous requests for information. This continuous accessibility reduces uncertainty and enables project teams to work more independently while maintaining coordination across geographically dispersed teams.

However, participants consistently distinguished between transparency and unrestricted access. Instead of advocating unrestricted visibility of all organizational information, interviewees emphasized the importance of role-based access permissions. According to their experiences, effective transparency means ensuring that employees have access to all information necessary to perform their responsibilities while simultaneously protecting confidential organizational information.

This finding supports previous studies suggesting that transparency should be balanced with appropriate governance mechanisms rather than unlimited information sharing. Daim et al. (2012) argued that successful virtual projects depend upon structured information sharing that minimizes uncertainty while preserving organizational control. Similarly, Larson and DeChurch (2020) emphasized that transparency enables geographically distributed teams to

maintain shared situational awareness despite physical separation, ultimately improving project coordination and organizational trust.

Interestingly, participants also indicated that transparency contributes to greater accountability. Because project activities, document updates, and task progress remain visible to authorized team members, individuals become more responsible for meeting deadlines and maintaining the quality of their work. This finding illustrates that transparency functions not only as an information-sharing mechanism but also as a behavioral driver that promotes ownership and accountability across virtual teams.

5.3 Cloud Collaboration Platforms as Enablers of Data Transparency

Another dominant theme concerned the critical role of cloud collaboration platforms in facilitating transparent project environments. Participants unanimously agreed that modern cloud-based technologies have transformed virtual collaboration by centralizing communication, documentation, and project monitoring within integrated digital workspaces.

Across the interviews, Microsoft Teams, Google Drive, Microsoft OneDrive, Jira, Trello, Slack, Zoom, Google Workspace, WhatsApp, Enterprise Resource Planning (ERP) systems, Student Information Systems (SIS), and Zoho Workplace were frequently identified as essential collaboration platforms supporting daily project activities.

Participants explained that these platforms significantly improve information sharing by providing centralized repositories where project documentation, schedules, meeting records, task assignments, and project updates can be accessed in real time. Unlike traditional communication methods that rely heavily on emails or fragmented messaging applications, centralized platforms reduce information fragmentation and ensure that project members work from a single, authoritative source of information.

A particularly noteworthy finding is that participants rarely identified one specific technological feature as being solely responsible for improving transparency. Instead, transparency emerged as the result of multiple integrated platform capabilities working together.

Among the features most frequently mentioned were centralized document repositories, real-time collaboration, version history, audit trails, notification systems, shared dashboards, activity logs, task tracking, and controlled access permissions. Participants emphasized that these combined capabilities create an environment where information remains accurate, traceable, and continuously available to authorized users.

These findings are consistent with Newman and Herman (2022), who argued that cloud collaboration platforms should no longer be viewed as simple digital storage systems but rather as integrated digital ecosystems supporting organizational coordination and collaborative decision-making. Likewise, the Project Management Institute (PMI, 2021) recognizes centralized information management as one of the key success factors for managing complex projects in digitally distributed environments.

The interviews also demonstrated that the effectiveness of these platforms depends heavily on organizational practices rather than technological availability alone. Several participants

explained that organizations possessing advanced collaboration platforms still experience poor transparency when documentation standards are inconsistent or employees rely on informal communication channels instead of official systems. Consequently, technology serves primarily as an enabler of transparency, whereas organizational discipline determines its successful implementation.

5.4 Data Transparency and Decision-Making

Perhaps the most consistent finding throughout all interviews concerned the influence of transparency on decision-making speed and quality. Participants repeatedly explained that immediate access to accurate and up-to-date information enables managers and project teams to make faster and more informed decisions.

Rather than spending valuable time requesting updates from colleagues or verifying project status through repeated meetings, decision-makers can obtain the required information directly from centralized cloud platforms. This immediate availability substantially reduces administrative delays and allows managers to focus on strategic rather than operational issues.

Several participants emphasized that transparent information also improves decision quality. Because project decisions are based on verified and current data rather than assumptions or outdated documents, organizations experience fewer errors and greater confidence in managerial decisions.

These findings strongly support Pullan (2021), who argued that transparency reduces information asymmetry and minimizes unnecessary reporting activities, enabling project managers to dedicate more attention to strategic leadership. Similarly, PMI (2021) identifies timely access to reliable information as a critical component of agile and adaptive project management.

Moreover, interview participants noted that transparency improves organizational responsiveness during unexpected project changes. When project information is continuously updated and visible across teams, organizations can react more quickly to risks, schedule changes, and client requirements, thereby increasing overall project agility.

5.5 Data Transparency, Collaboration, and Project Performance

The interviews consistently demonstrated that transparency strengthens collaboration among virtual team members. Participants explained that when employees work from the same source of information, misunderstandings decrease, communication becomes more efficient, and coordination between departments improves significantly.

Participants frequently described transparency as creating a shared understanding of project objectives, responsibilities, and current progress. This shared understanding minimizes conflicting interpretations of project requirements and facilitates collaborative problem-solving.

These findings correspond closely with Gilson et al. (2015), who identified communication transparency as one of the strongest predictors of successful collaboration within geographically dispersed teams. Likewise, Larson and DeChurch (2020) concluded that transparent communication significantly enhances trust, cooperation, and collective performance in virtual organizations.

The interviews further revealed that transparency substantially reduces duplicated work. Because employees can clearly identify completed tasks, ongoing activities, and project updates, unnecessary repetition is minimized while organizational resources are utilized more efficiently.

Participants also associated transparency with improved adherence to project schedules. Cloud collaboration platforms provide automated reminders, task monitoring, deadline notifications, and progress dashboards that enable project managers to identify delays before they become critical. Consequently, corrective actions can be implemented proactively rather than reactively.

Finally, nearly every participant agreed that transparency directly improves the quality of project deliverables. Working from standardized, verified, and continuously updated information ensures consistency throughout project execution while reducing the likelihood of errors resulting from outdated documentation or fragmented communication.

Collectively, these findings demonstrate that transparency influences multiple dimensions of project performance simultaneously, including communication effectiveness, collaboration quality, decision-making speed, schedule adherence, accountability, and deliverable quality.

5.6 Challenges Limiting Data Transparency

Although participants overwhelmingly acknowledged the positive impact of data transparency on virtual project performance, they also identified numerous barriers that hinder its effective implementation. The interviews revealed that these challenges extend beyond technological limitations and encompass organizational practices, leadership approaches, communication processes, and human behavior. This finding reinforces the view that achieving transparency is a multidimensional organizational challenge rather than a purely technical issue.

Technical Challenges

Technical challenges emerged as one of the most frequently discussed obstacles, particularly among participants working in geographically dispersed environments or regions with unstable digital infrastructure. Several interviewees reported difficulties related to unreliable internet connectivity, system downtime, limited interoperability between collaboration platforms, synchronization delays, and inconsistent access permissions.

Participants explained that organizations often use multiple cloud platforms simultaneously, including Microsoft Teams, Google Drive, OneDrive, ERP systems, Student Information Systems (SIS), Jira, Trello, and Slack. While these platforms individually support

collaboration, insufficient integration between them can create multiple versions of the same information, resulting in confusion regarding which data are current and reliable.

One participant from the higher education sector noted that updating information in one system without synchronizing related systems often resulted in inconsistencies across project documentation. Similarly, participants working in software engineering emphasized that fragmented software ecosystems reduce confidence in organizational data and increase the time required to verify information before making decisions.

These findings are consistent with Daim et al. (2012), who identified technological fragmentation as one of the major barriers affecting communication efficiency within virtual teams. Likewise, PMI (2021) emphasizes the importance of integrated information systems that provide a single, authoritative source of project information.

5.7 Organizational Challenges

The interviews demonstrated that organizational challenges often have a greater influence on transparency than technological limitations. Participants repeatedly highlighted inconsistent documentation practices, fragmented communication channels, delayed information updates, unclear communication procedures, and insufficient leadership support as major organizational barriers.

Several interviewees explained that project information is occasionally shared through informal channels such as private messaging applications instead of official organizational systems. Consequently, multiple document versions emerge, making it difficult for employees to identify the most current information.

Participants also emphasized the importance of clear governance structures. Organizations lacking standardized procedures for documenting decisions, assigning responsibilities, and managing information updates frequently experience reduced transparency and lower confidence in organizational data.

These findings support the Project Management Institute (PMI, 2021), which identifies standardized communication processes and formal knowledge management practices as essential components of successful project governance. Similarly, Larson and DeChurch (2020) argue that clearly defined communication structures reduce uncertainty and improve coordination in virtual work environments.

5.8 Human and Cultural Challenges

Perhaps the most significant finding emerging from the interviews concerns the influence of human behavior and organizational culture on transparency. Participants consistently emphasized that transparency depends primarily on people's willingness to share information rather than on technological capabilities alone.

Several participants described a culture in which some employees viewed information as a source of personal influence or authority, leading them to share only limited information with colleagues. Others explained that resistance to organizational change often discourages

employees from adopting standardized documentation procedures or utilizing collaboration platforms effectively.

Interestingly, multiple interviewees argued that organizational culture is shaped largely by leadership behavior. Leaders who encourage open communication, collaborative problem-solving, and knowledge sharing create environments where transparency becomes a normal organizational practice. Conversely, highly hierarchical management structures frequently restrict information flow, reducing employee engagement and slowing project execution.

These observations strongly support Socio-Technical Systems Theory (Bostrom & Heinen, 1977), which argues that organizational performance depends on the interaction between technological systems and social structures. Likewise, Gilson et al. (2015) concluded that organizational trust and leadership significantly influence collaboration effectiveness within virtual teams.

Overall, the interviews demonstrate that while technology provides the infrastructure for transparency, organizational culture ultimately determines whether transparency becomes embedded within everyday project practices.

5.9 Recommendations for Improving Data Transparency

The participants proposed several practical recommendations for improving data transparency within virtual projects. Despite differences in industry and organizational context, remarkable consistency emerged regarding the actions organizations should prioritize.

The most frequently recommended strategy involved establishing standardized documentation procedures across all projects. Participants emphasized that maintaining consistent documentation formats, version control procedures, and clearly defined responsibilities significantly reduces information fragmentation and improves project coordination.

Another widely supported recommendation involved adopting centralized cloud collaboration platforms that function as a single source of truth. Rather than distributing project information across multiple disconnected systems, participants advocated maintaining unified digital workspaces where all project documentation, decisions, updates, and communication records are stored and continuously maintained.

Participants also highlighted the importance of employee training. They argued that organizations should provide continuous training not only on the technical use of collaboration platforms but also on documentation standards, knowledge-sharing practices, transparency principles, and collaborative communication skills. Several interviewees specifically noted that managers require transparency training as much as technical staff because leadership behavior significantly influences organizational culture.

Leadership commitment emerged as another recurring recommendation. Participants believed that leaders should actively model transparent communication, encourage information sharing, clearly define project responsibilities, and establish organizational expectations regarding documentation quality and data accessibility.

Finally, participants emphasized that organizations should invest equally in technological infrastructure and organizational development. While modern cloud collaboration platforms provide powerful technical capabilities, their effectiveness ultimately depends upon organizational processes, employee engagement, and continuous management support.

Collectively, these recommendations suggest that successful transparency requires an integrated organizational strategy combining technology, governance, leadership, communication, and continuous learning.

The findings of this study demonstrate that data transparency represents far more than the availability of digital information. Instead, transparency emerged as a multidimensional organizational capability resulting from the interaction of cloud collaboration technologies, standardized documentation practices, leadership behaviors, communication processes, and organizational culture.

Across all interviews, participants consistently perceived transparency as a key factor influencing virtually every aspect of virtual project performance. Transparent information facilitated faster decision-making, improved collaboration, strengthened accountability, reduced duplicated work, enhanced adherence to project schedules, and improved the quality of project deliverables.

Although cloud collaboration platforms were recognized as essential technological enablers, participants repeatedly emphasized that technology alone cannot guarantee transparency. Organizations possessing advanced collaboration platforms may still experience poor information sharing if documentation practices remain inconsistent, leadership discourages openness, or employees resist collaborative knowledge-sharing behaviors.

These findings strongly reinforce the principles of Socio-Technical Systems Theory (Bostrom & Heinen, 1977), which argues that organizational success depends upon balancing technological capabilities with social and organizational factors. Similarly, the findings align with previous research demonstrating that effective communication, leadership support, and standardized information management are essential components of successful virtual project management (Daim et al., 2012; Larson & DeChurch, 2020; PMI, 2021).

Overall, this study concludes that data transparency should be viewed as a strategic organizational capability rather than merely a technological feature. Organizations seeking to improve virtual project performance should therefore invest not only in advanced cloud collaboration platforms but also in leadership development, organizational governance, standardized documentation, and cultures that encourage knowledge sharing and collaborative decision-making.

5.10 Theoretical Implications

This study contributes to the growing body of knowledge on virtual project management by providing qualitative evidence that data transparency functions as a multidimensional organizational capability rather than simply a technological characteristic of cloud collaboration platforms. The findings extend previous research by demonstrating that

transparency emerges through the interaction of technological infrastructure, organizational governance, communication practices, and leadership behaviors.

Furthermore, the study supports the principles of Socio-Technical Systems Theory by illustrating that successful virtual collaboration depends on balancing technological capabilities with human and organizational factors. The findings also enrich existing literature on virtual teams by highlighting the role of centralized cloud collaboration platforms as facilitators of organizational transparency rather than merely repositories for digital information.

5.11 Practical Implications

The findings provide several practical implications for organizations managing virtual projects.

Organizations should establish standardized documentation procedures to ensure consistency across project teams and reduce information fragmentation. Cloud collaboration platforms should be configured to maintain a single authoritative source of project information, supported by version control mechanisms and clearly defined access permissions.

Project managers should encourage transparent communication through regular updates, shared dashboards, and collaborative decision-making processes. Additionally, organizations should provide continuous training on cloud collaboration technologies, documentation standards, and knowledge-sharing practices to strengthen employees' understanding of transparency principles.

Finally, organizational leaders should promote cultures that value openness, accountability, and collaboration, recognizing that transparency depends as much on leadership and organizational behavior as on technological infrastructure.

6. Limitations of the Study

Several limitations should be acknowledged when interpreting the findings of this study. First, the study employed a qualitative research approach based on a relatively small purposive sample; therefore, the findings are intended to provide in-depth insights rather than statistical generalizations.

Second, participants represented selected industries—including software engineering, higher education, digital marketing, and project management—which may limit the transferability of findings to other organizational contexts.

Finally, the study relied on participants' self-reported experiences, which may be influenced by personal perceptions and organizational circumstances.

7. Recommendations for Future Research

Future studies could adopt mixed-methods or quantitative research designs to statistically examine the relationships identified in this study across larger populations.

Researchers may also investigate the influence of organizational culture, leadership styles, and digital maturity on transparency within different industries. Comparative studies between public and private organizations or between small enterprises and multinational corporations would provide valuable insights into contextual differences affecting transparency.

Additionally, future research could explore the role of emerging technologies such as artificial intelligence, predictive analytics, and blockchain in improving transparency within virtual project environments.

This chapter discussed the qualitative findings of the study in relation to existing literature. The findings demonstrated that data transparency plays a critical role in improving communication, collaboration, decision-making, accountability, adherence to project schedules, and the quality of project deliverables within virtual projects. Although cloud collaboration platforms provide the technological infrastructure necessary for transparent information sharing, successful implementation depends equally on effective leadership, standardized documentation, organizational governance, and collaborative organizational cultures. The chapter also presented the theoretical and practical implications of the findings, acknowledged the study's limitations, and proposed recommendations for future .

8. Appendixes:

Appendix A

English Interview Questions

The Impact of Data Transparency on Improving Virtual Project Performance: An Analytical Study Using Cloud Collaboration Platforms

Peace be upon you,

Thank you for taking the time to participate in this study, which is conducted as part of the requirements for obtaining a Master's degree.

This study aims to explore the impact of data transparency on improving the performance of virtual projects using cloud collaboration platforms, by understanding the experiences and perspectives of professionals working in this field.

All information provided will be used strictly for academic research purposes and will be treated with full confidentiality. No identifying information will be disclosed. Participation is voluntary, and you may choose not to answer any question or withdraw from the interview at any time without any consequences.

The expected duration of the interview is approximately **10-15 minutes**.

Do you agree to participate in this interview?

☐ Yes

☐ No

2. General Information

1. Job Title:
 2. Sector/Industry:
 3. Years of Experience:
 4. Number of virtual projects you have participated in:
 5. Cloud collaboration platforms used:
 6. Are you currently working in a virtual team?
 - Yes
 - No
-

3. Interview Questions

Theme 1: Data Transparency in Virtual Projects

1. How would you describe the level of data transparency in the virtual projects you work in?
 2. How is information shared among team members?
 3. Are all team members able to access the information they need?
 4. How would you assess the accuracy and timeliness of the data available in the project?
 5. In your opinion, what factors enhance or hinder data transparency?
-

Theme 2: Use of Cloud Collaboration Platforms

6. Which platforms do you use to manage projects?
 7. How have these platforms contributed to data sharing?
 8. What features do you consider most important for enhancing transparency?
 9. Have you encountered any issues that affected information flow?
-

Theme 3: The Impact of Data Transparency on Project Performance

10. How does data transparency affect decision-making speed?
 11. How does it influence collaboration among team members?
 12. Has it helped reduce errors or duplication of work?
 13. How has it affected adherence to project timelines?
 14. How has it influenced the quality of project deliverables?
 15. Do you believe that data transparency contributes to project success? Why or why not?
-

Theme 4: Challenges

16. What are the main challenges that limit data transparency?
 17. Are there technical challenges?
 18. Are there organizational challenges?
 19. Are there human or cultural challenges?
-

Theme 5: Improvement and Development

20. What measures do you suggest to enhance data transparency?
21. What can organizations do to improve virtual project performance?
22. Is there any experience or insight you would like to add that has not been covered?

Thank you for your time and valuable contribution. Your insights have greatly supported this research. All information provided will be used solely for academic research purposes.

Appendix B

Arabic Interview Questions

أثر شفافية البيانات في تحسين أداء المشاريع عن بعد: دراسة نوعية باستخدام منصات التعاون السحابية

السلام عليكم ورحمة الله وبركاته،

أشكركم على تخصيص جزء من وقتكم للمشاركة في هذه الدراسة، والتي تُجرى استكمالاً لمتطلبات الحصول على درجة الماجستير.

تهدف هذه الدراسة إلى استكشاف أثر شفافية البيانات في تحسين أداء المشاريع الافتراضية باستخدام منصات التعاون السحابية، وذلك من خلال التعرف على تجارب وآراء العاملين في هذا المجال.

ستُستخدم المعلومات التي تقدمونها لأغراض البحث العلمي فقط، وستُعامل جميع الإجابات بسرية تامة، ولن يتم الإفصاح عن أي معلومات قد تكشف هوية المشاركين. كما أن مشاركتكم طوعية، ويحق لكم الامتناع عن الإجابة عن أي سؤال أو إنهاء المقابلة في أي وقت دون أي تبعات.

مدة المقابلة المتوقعة : 10 - 15 دقيقة.

هل توافق على المشاركة في هذه المقابلة؟

☐ نعم

☐ لا

البيانات العامة

1. الاسم:
2. المسمى الوظيفي:
3. القطاع:
4. سنوات الخبرة:
5. عدد المشاريع الافتراضية التي شاركت بها:
6. منصات التعاون السحابية المستخدمة:
7. هل تعمل حالياً ضمن فريق افتراضي؟

☐ نعم

☐ لا

أسئلة المقابلة

المحور الأول

واقع شفافية البيانات

1. كيف تصف مستوى شفافية البيانات داخل المشاريع الافتراضية التي تعمل بها؟
2. كيف يتم تبادل المعلومات بين أعضاء الفريق؟

3. هل يتمكن جميع أعضاء الفريق من الوصول إلى المعلومات التي يحتاجونها؟
 4. ما مدى دقة وحداثة البيانات المتوفرة داخل المشروع؟
 5. برأيك، ما العوامل التي تعزز أو تعيق شفافية البيانات؟
-

المحور الثاني

استخدام منصات التعاون السحابية

6. ما المنصات التي تعتمدون عليها في إدارة المشروع؟
 7. كيف ساعدت هذه المنصات في مشاركة البيانات؟
 8. ما الخصائص التي تراها الأكثر أهمية في تعزيز الشفافية؟
 9. هل واجهت مشكلات أثرت على تدفق المعلومات؟
-

المحور الثالث

أثر شفافية البيانات على أداء المشاريع

10. كيف تؤثر شفافية البيانات على سرعة اتخاذ القرار؟
 11. كيف تؤثر على التعاون بين أعضاء الفريق؟
 12. هل ساهمت في تقليل الأخطاء أو ازدواجية العمل؟
 13. كيف أثرت على الالتزام بالمواعيد الزمنية؟
 14. كيف انعكست على جودة مخرجات المشروع؟
 15. هل تعتقد أن شفافية البيانات ساهمت في نجاح المشروع؟ ولماذا؟
-

المحور الرابع

التحديات

16. ما أبرز التحديات التي تحد من شفافية البيانات؟
 17. هل توجد تحديات تقنية؟
 18. هل توجد تحديات تنظيمية؟
 19. هل توجد تحديات بشرية أو ثقافية؟
-

المحور الخامس

التطوير

20. ما الإجراءات التي تقترحها لتعزيز شفافية البيانات؟
21. ما الذي يمكن للمنظمات القيام به لتحسين أداء المشاريع الافتراضية؟
22. هل هناك أي تجربة أو ملاحظة ترى أنها مهمة ولم نتطرق إليها

شكراً لكم على وقتكم ومشاركتكم القيّمة، فقد أسهمت آرائكم في دعم هذا البحث، وسُتستخدم المعلومات التي قدمتموها لأغراض البحث العلمي فقط.

Appendix C

Participant 1

Participant Information

Participant: Mohamed Salah

Position: Head of Engineering

Company: Forest Strand Technology Company

Sector: Software Engineering

Years of Experience: 7 years

Number of Virtual Projects: Approximately 200 projects

Cloud Collaboration Platforms Used: Jira, Microsoft Teams, Trello, Discord, Slack, Email, Google Workspace, Zoom, Google Meet, ClickUp, and WhatsApp.

Preliminary Question

Q: Are you currently working in a virtual team?

A: Yes, absolutely. I currently work in a virtual team and have extensive experience managing distributed software engineering teams.

Theme 1: Data Transparency in Virtual Projects

Q1. How would you describe the level of data transparency in the virtual projects you have worked on?

A:

The level of data transparency is generally very high. Project information, progress updates, timelines, and relevant documentation are stored and shared through centralized collaboration platforms. This allows all team members to remain informed and aligned throughout the entire project lifecycle.

Q2. How is information shared among team members?

A:

Information is primarily shared through cloud-based collaboration platforms such as Microsoft Teams, ClickUp, Google Workspace, Slack, Discord, Trello, and email. We also conduct regular virtual meetings to discuss project updates and coordinate work. Instant messaging plays an important role, and in some situations we use WhatsApp for quick communication. Google Workspace chat is also used because it allows everyone within the organization's domain to communicate efficiently.

Q3. Are all team members able to access the information they need?

A:

Yes, in most cases. Access permissions are assigned according to each person's project role. This ensures that team members have access to the information required to perform their responsibilities while maintaining appropriate data security and confidentiality.

Q4. How would you assess the accuracy and timeliness of the data available within the project?

A:

The project data is generally accurate and updated in a timely manner. Regular updates, version control, and continuous synchronization help ensure that everyone works with the latest available information. This significantly reduces conflicts and misunderstandings during project execution.

Q5. In your opinion, what factors enhance or hinder data transparency?

A:

Several factors enhance data transparency, including:

- Clear and effective communication.
- Centralized data storage.
- Regular and consistent project updates.
- Daily or scheduled stand-up meetings.
- Standardized documentation practices.

These practices ensure that everyone remains informed and works consistently throughout the project.

On the other hand, data transparency is hindered by:

- Poor communication.
- Inconsistent or delayed data updates.
- Unclear responsibilities.
- Limited access to project information.

These issues not only reduce transparency but can negatively affect the overall success of the project.

Theme 2: Use of Cloud Collaboration Platforms

Q1. Which cloud collaboration platforms do you use to manage projects?

A:

I primarily use Microsoft Teams, ClickUp, Google Workspace, Zoom, Google Meet, Slack, Discord, Trello, Jira, email, and WhatsApp. Each platform serves different communication and project management needs.

Q2. How have these platforms contributed to data sharing?

A:

These platforms have significantly improved data sharing by providing centralized access to project documents, real-time collaboration, task tracking, and instant communication among team members. Having a single source of project information greatly improves communication and overall project coordination.

Q3. What features do you consider most important for enhancing transparency?

A:

Rather than relying on a single feature, I believe the overall integration of the platform creates the best experience. However, the most valuable features include:

- Real-time document collaboration.
- Task tracking.
- Shared dashboards.
- Activity logs.
- Notifications.
- Centralized document storage.

Together, these features help maintain transparency across the project.

Q4. Have you encountered any issues that affected information flow?

A:

Yes. As Head of Engineering, I have encountered several challenges that affected information flow. These include delayed updates, inconsistent use of collaboration platforms, and internet connectivity issues. Since I currently live in Gaza, unstable internet connectivity can occasionally disrupt communication.

However, these challenges are usually resolved through better coordination, improved communication, and clearly defined processes.

Theme 3: Impact of Data Transparency on Project Performance

Q1. How does data transparency affect decision-making speed?

A:

Data transparency accelerates decision-making because stakeholders have immediate access to accurate and up-to-date information. Centralized project information reduces the need for repeated clarification and allows managers and decision-makers to quickly understand project status and respond appropriately.

Q2. How does it influence collaboration among team members?

A:

Data transparency strengthens collaboration by ensuring that everyone has a shared understanding of project objectives, responsibilities, and progress. This improves communication, coordination, teamwork, and overall project alignment.

Q3. Has it helped reduce errors and duplication?

A:

Yes. Transparent access to project information minimizes misunderstandings, reduces duplicated work, and helps identify potential issues early. Clear communication and transparent information significantly improve project quality and efficiency.

Q4. How has it affected adherence to project timelines?

A:

Data transparency has improved adherence to project schedules. Collaboration platforms provide task monitoring, deadline reminders, priority indicators, notifications, and project dashboards that help team members stay aware of their responsibilities and complete tasks on time.

Q5. How has it influenced the quality of project deliverables?

A:

Greater transparency improves deliverable quality because team members always work with current information, receive timely feedback, and remain aligned with project requirements. Continuous tracking and communication help ensure that deliverables meet project expectations.

Q6. Do you believe data transparency contributes to project success? Why?

A:

Yes, absolutely. Data transparency promotes trust, accountability, effective communication, and faster decision-making. Together, these factors contribute significantly to successful project outcomes.

Theme 4: Challenges

Q1. What are the main challenges that limit data transparency?

A:

The primary challenges include:

- Inconsistent documentation.
- Delayed information updates.
- Unclear information.
- Fragmented communication across multiple platforms.

These issues reduce visibility and make collaboration less efficient.

Q2. Are there technical challenges?

A:

Yes. Technical challenges include unreliable internet connectivity, system downtime, software integration issues, and limited familiarity with collaboration platforms among some users. Living in Gaza makes internet reliability a particularly significant challenge.

Q3. Are there organizational challenges?

A:

Yes. Organizational challenges include unclear communication policies, inconsistent project management practices, and insufficient leadership support for transparent information sharing. Strong leadership is essential for maintaining transparency.

Q4. Are there human or cultural challenges?

A:

Yes, depending on the organization. Human and cultural challenges may include resistance to change, reluctance to share information, communication gaps, and cultural differences among team members. These factors can negatively affect data transparency if not properly managed.

Theme 5: Improvement and Development

Q1. What measures do you suggest to enhance data transparency?

A:

Organizations should:

- Establish standardized documentation practices.
- Provide regular training.
- Implement centralized collaboration platforms.
- Encourage open communication across teams.
- Promote knowledge sharing among employees.

These measures help improve transparency and overall project performance.

Q2. What can organizations do to improve virtual project performance?

A:

Organizations should invest in reliable collaboration technologies, clearly define roles and responsibilities, promote transparency, regularly monitor project progress, and foster a culture of continuous learning and collaboration.

Equally important, organizations should invest in developing their employees. When people are continuously trained and supported, they become more productive, work more efficiently, and contribute to a healthier and more successful project environment.

Q3. Is there any additional experience or insight you would like to add?

A:

From my experience, technology alone is not enough to ensure the success of virtual projects. Success depends on combining effective technology with transparent communication, strong leadership, clearly defined processes, and a collaborative organizational culture. Ultimately, people are just as important as technology, and investing in employees is one of the most important factors for achieving sustainable project success.

Appendix D

Participant 2

Participant Information

Participant: Srna Obradovic

Position: Digital Marketing Project Manager

Sector: Digital Marketing

Years of Experience: 7 years

Number of Virtual Projects: More than 50 virtual projects

Cloud Collaboration Platforms Used: WhatsApp, Google Drive, Dropbox

Preliminary Question

Q: Are you currently working in a virtual team?

A: Yes, I am currently working as part of a virtual team.

Theme 1: Data Transparency in Virtual Projects

Q1. How would you describe the level of data transparency in the virtual projects you work on?

A:

I would describe the level of data transparency as moderately good. Most project information is shared effectively, although some task-specific information is not always fully transparent among team members. Overall, the level of transparency is sufficient, but there is room for improvement.

Q2. How is information shared among team members?

A:

Information is primarily shared through WhatsApp, with email being used occasionally for more formal communication or file sharing.

Q3. Are all team members able to access the information they need?

A:

Yes. Team members generally have access to the information they require. If they do not have direct access, they can usually obtain the information through the project manager or another designated point of contact.

Q4. How would you assess the accuracy and timeliness of the data available within the project?

A:

The accuracy of the information is generally acceptable; however, the timeliness could be improved. When project tasks are delayed, some team members do not proactively communicate updates unless they are specifically asked, which can affect overall project visibility.

Q5. In your opinion, what factors enhance or hinder data transparency?

A:

Data transparency is mainly influenced by the responsibility and consistency of team members. When individuals consistently upload project information to the designated cloud storage and keep documentation updated, transparency improves significantly. However, delays caused by clients can also reduce transparency by slowing the flow of information and project updates.

Theme 2: Use of Cloud Collaboration Platforms

Q1. Which cloud collaboration platforms do you use to manage projects?

A:

The primary platforms I use are WhatsApp and Google Drive.

Q2. How have these platforms contributed to data sharing?

A:

These platforms provide a centralized location where project files and documents can be uploaded and shared with team members, making collaboration more efficient and ensuring that everyone has access to the necessary project resources.

Q3. What features do you consider most important for enhancing transparency?

A:

One of the most important features is having appropriate access permissions. Properly managed sharing settings ensure that authorized team members can easily access, download, and work with project documents while maintaining appropriate security.

Q4. Have you encountered any issues that affected information flow?

A:

Yes. The issues are generally related to inconsistent access permissions and delays in updating shared information. These challenges can interrupt the smooth flow of information between team members.

Theme 3: The Impact of Data Transparency on Project Performance

Q1. How does data transparency affect decision-making speed?

A:

Data transparency has a significant impact on decision-making speed. Without accurate and accessible information, it is difficult to make timely and well-informed decisions. Transparent information allows project managers and team members to respond more effectively to project needs.

Q2. How does it influence collaboration among team members?

A:

It has a strong positive influence on collaboration. When everyone has access to the same information, communication becomes more effective, coordination improves, and team members can work together more efficiently.

Q3. Has it helped reduce errors or duplication of work?

A:

Yes. Greater transparency helps reduce misunderstandings, minimizes duplicated work, and enables team members to coordinate their activities more effectively.

Q4. How has it affected adherence to project timelines?

A:

Data transparency does influence adherence to project timelines, although I would not consider it the most critical factor. While it helps team members stay informed about project progress, other factors such as client responsiveness and individual performance also affect project schedules.

Q5. How has it influenced the quality of project deliverables?

A:

It has a significant impact because transparent access to project information helps ensure that deliverables meet project requirements and specifications. Team members can work with accurate information, which improves the overall quality of the final deliverables.

Q6. Do you believe that data transparency contributes to project success? Why or why not?

A:

Yes. Data transparency supports better decision-making, improves collaboration, reduces misunderstandings, and contributes to higher-quality project outcomes. These factors collectively increase the likelihood of project success.

Theme 4: Challenges

Q1. What are the main challenges that limit data transparency?

A:

The main challenges include inadequate access structures among team members and limitations in cloud storage capacity. These issues can restrict access to information and reduce the effectiveness of collaboration.

Q2. Are there technical challenges?

A:

Yes. The technical challenges are primarily related to access management and cloud storage limitations, which can affect information availability and sharing.

Q3. Are there organizational challenges?

A:

Yes. Organizational challenges include inconsistent organization among team members and clients. Some individuals do not consistently upload project information to the designated cloud storage or follow the established file structure, making it more difficult to locate and share information efficiently.

Q4. Are there human or cultural challenges?

A:

Yes. Both human and cultural factors can affect data transparency. Individual work habits, resistance to following standardized procedures, and differences in communication practices may all influence how effectively information is shared.

Theme 5: Improvement and Development

Q1. What measures do you suggest to enhance data transparency?

A:

Organizations should provide comprehensive training to all team members from their first day. Everyone should understand the importance of maintaining a standardized data structure and consistently uploading information to the designated cloud collaboration platform. While organizations cannot fully control clients' behavior, they can ensure that internal teams follow clear and consistent documentation practices.

Q2. What can organizations do to improve virtual project performance?

A:

Organizations should provide clear guidance and structured training from the beginning of employment. Establishing consistent work practices early helps create better collaboration and improves overall project performance. Although long-term employees may be less willing to adopt new procedures, introducing clear expectations from the start can improve long-term consistency.

Q3. Is there any additional experience or insight you would like to add that has not been covered?

A:

No. I believe I have shared all of the relevant experiences and insights regarding data transparency and virtual project performance.

Appendix E

Participant 3

Interview Transcript

Participant Information

Participant: Mohamed Ahmed Saad Al-Roubi

Position: Higher Education Professional

Sector: Higher Education

Years of Experience: 12 years

Number of Virtual Projects: 2 projects

Cloud Collaboration Platforms Used: Google Drive, Microsoft OneDrive, Microsoft Teams, Zoho Workplace, Student Information System (SIS), Enterprise Resource Planning (ERP)

Preliminary Question

Q: Are you currently working in a virtual team?

A: Yes, I am currently working as part of a virtual team.

Theme 1: Data Transparency in Virtual Projects

Q1. How would you describe the level of data transparency in the virtual projects you work on?

A:

All project data, documents, and updates are available according to the access permissions assigned to each team member. Team members can easily monitor project progress and stay informed about the latest developments through cloud collaboration platforms.

Q2. How is information shared among team members?

A:

Information is exchanged primarily through dedicated WhatsApp groups for the relevant project teams. Finalized documents and updated files are then uploaded and shared through cloud collaboration platforms to ensure that everyone works with the latest available information.

Q3. Are all team members able to access the information they need?

A:

Yes. All authorized team members can access the files and information they need at any time without having to request them from another person, provided they have the appropriate access permissions.

Q4. How would you assess the accuracy and timeliness of the data available within the project?

A:

Overall, the data is highly accurate and regularly updated. However, during periods of heavy workload, some files may occasionally remain outdated because a single update can affect multiple related documents, causing delays in updating every file simultaneously.

Q5. In your opinion, what factors enhance or hinder data transparency?

A:

Several factors contribute to improving data transparency. These include assigning a dedicated person responsible for managing and updating data, continuously verifying the accuracy of information and its sources, centralizing all files and documents on a single platform, effectively managing access permissions, and maintaining a clear data map that illustrates the relationships between files and the impact of updates on related information. These practices significantly improve transparency and reduce errors.

Conversely, data transparency is hindered by the lack of formal documentation for decisions, unclear decision-making processes, reliance on personal messages or individual memory instead of official systems, and failure to recognize the importance of documenting and sharing information with all relevant stakeholders in a timely manner. These issues reduce transparency and negatively affect organizational efficiency.

Theme 2: Use of Cloud Collaboration Platforms

Q1. Which cloud collaboration platforms do you use to manage projects?

A:

We primarily use Microsoft Teams for communication and meetings, Microsoft OneDrive and Google Drive for document sharing, the Student Information System (SIS) for managing student information, and the Enterprise Resource Planning (ERP) system for administrative and financial operations. Additional systems are used depending on the requirements of each project.

Q2. How have these platforms contributed to data sharing?

A:

These platforms have established a unified source of project data while allowing authorized users to access information whenever needed. They have also simplified file sharing and enabled multiple team members to collaborate on documents simultaneously.

Q3. What features do you consider most important for enhancing transparency?

A:

The features that contribute most to transparency include access permission management, version history, activity logs that identify who made each update, and maintaining a single unified version of each document instead of multiple copies.

Q4. Have you encountered any issues that affected information flow?

A:

Yes. One of the most common issues is maintaining multiple sources for the same data, where one file may be updated while another remains outdated. Another challenge is the lack of formal documentation for some decisions, with implementation occurring before official approval is properly documented. Additionally, sharing files through messaging applications instead of official systems can result in missing updates or team members working from outdated document versions.

Theme 3: The Impact of Data Transparency on Project Performance

Q1. How does data transparency affect decision-making speed?

A:

When project data is accurate, accessible, and continuously updated, decision-makers can make informed decisions much more quickly. They do not need to spend time searching for information or repeatedly confirming its accuracy through meetings or messages, allowing decisions to be made more efficiently.

Q2. How does it influence collaboration among team members?

A:

Data transparency significantly strengthens collaboration because all team members rely on the same information and documentation. Everyone understands the current status of the project, recent updates, and the reasons behind them. This reduces misunderstandings, improves communication, enhances teamwork, and increases both the quality of project outcomes and the speed of task completion.

Q3. Has it helped reduce errors or duplication of work?

A:

Yes. Having a single, reliable source of project information reduces dependence on multiple versions of the same document and minimizes the risk of repeating tasks or using outdated information. As a result, errors are reduced and the efficiency of data utilization is significantly improved.

Q4. How has it affected adherence to project timelines?

A:

Data transparency has improved adherence to project schedules by allowing rapid access to updated information, clearly defining responsibilities and task status, and enabling team members to work simultaneously without waiting for responses from others. This minimizes delays caused by missing or uncertain information.

Q5. How has it influenced the quality of project deliverables?

A:

Data transparency has significantly improved the quality of project deliverables because decisions and implementation are based on a single trusted source of information rather than personal assumptions or estimates. It also enables inconsistencies and weaknesses to be identified early and allows work to be reviewed using accurate and traceable data, resulting in more consistent and higher-quality outcomes.

Q6. Do you believe that data transparency contributes to project success? Why or why not?

A:

I believe that data transparency alone does not guarantee project success; however, it creates the conditions necessary for success. Even highly skilled teams can make poor decisions if they rely on incomplete or inaccurate information. When project data is centralized, officially documented, and continuously updated, decision-making improves, coordination becomes more effective, and the likelihood of project success increases substantially.

Theme 4: Challenges

Q1. What are the main challenges that limit data transparency?

A:

The primary challenges include the absence of clear data governance, multiple sources of information, delays in updating project data, inadequate documentation of decisions, and unclear responsibilities for managing organizational data. These issues often result in inconsistencies between departments.

Q2. Are there technical challenges?

A:

Yes. Technical challenges include weak integration between different systems, failure to synchronize updated data across all platforms, duplicate records across multiple systems, inconsistent access permissions, and technical limitations that prevent timely access to all necessary information.

Q3. Are there organizational challenges?

A:

Yes. Organizational challenges include the lack of a clear data governance framework, inconsistent procedures for creating, approving, and updating information, overlapping responsibilities between departments, and weak coordination. These issues create multiple data sources, reduce confidence in information accuracy, and increase the need for meetings to verify project information before decisions can be made.

Q4. Are there human or cultural challenges?

A:

Yes. In my opinion, human and cultural factors are among the most significant barriers to data transparency. I have observed that some individuals believe their value lies in possessing information, so they share only limited details or withhold information that they consider irrelevant to other departments. However, this creates knowledge gaps that negatively affect the work of other teams, as they may not fully understand how different pieces of information influence organizational processes.

Additionally, some employees prefer solving problems independently to demonstrate their individual capabilities instead of leveraging the organization's shared knowledge, expertise, and available data. This behavior limits knowledge sharing, delays problem-solving, and prevents the organization from fully benefiting from its available information, even when appropriate technological and organizational systems are in place.

Appendix F

Participant 4

Participant Information

Participant: Majd Mohammed Aljeraisi

Position: Course Manager

Sector: Higher Education

Years of Experience: 2 years and 9 months

Preliminary Question

Q: Are you currently working in a virtual team?

A: Yes, I am currently working as part of a virtual team.

Theme 1: Data Transparency in Virtual Projects

Q1. How would you describe the level of data transparency in the virtual projects you work on?

A:

I believe the level of data transparency is relatively high. Authorized information and project resources are generally easy to access without significant difficulties. Although occasional issues or obstacles arise, overall the level of transparency is good and supports efficient project work.

Q2. How is information shared among team members?

A:

Information is mainly shared through communication platforms such as WhatsApp, Microsoft Teams, and email whenever formal communication is required.

Q3. Are all team members able to access the information they need?

A:

Yes. Team members generally have access to the information required for their specific roles. However, there are situations where an employee needs information from another department or functional area. In such cases, obtaining the necessary access permissions may take some time before the required information becomes available.

Q4. How would you assess the accuracy and timeliness of the data available within the project?

A:

The project data is highly accurate and consistently updated. Information is well managed, and I have not experienced any significant issues related to data accuracy or the timeliness of project updates.

Q5. In your opinion, what factors enhance or hinder data transparency?

A:

One of the most important factors influencing data transparency is organizational mindset. If managers believe that team members should have access to the information necessary for their work, transparency naturally improves. However, some managers maintain a more traditional mindset, believing that only project leaders or senior managers should have access to critical information. Such approaches reduce transparency and limit effective collaboration.

Theme 2: Use of Cloud Collaboration Platforms

Q1. Which cloud collaboration platforms do you use to manage projects?

A:

We primarily use Microsoft Teams along with other Microsoft applications, depending on the specific requirements of each project.

Q2. How have these platforms contributed to data sharing?

A:

These platforms have contributed significantly to data sharing and transparency. Without them, communication would rely on more traditional methods, making collaboration slower and less organized. Cloud collaboration platforms simplify communication, improve document sharing, and make project coordination much more efficient.

Q3. What features do you consider most important for enhancing transparency?

A:

Several platform features enhance transparency. The most important include the ability to assign access permissions to specific team members, ensuring that authorized users can access the information they need. Another valuable feature is workflow automation, such as scheduling emails, reminders, and notifications to be sent automatically at predetermined

times. These features are especially useful when managing multiple teams and projects simultaneously.

Q4. Have you encountered any issues that affected information flow?

A:

Yes. We have experienced occasional issues affecting information flow; however, these were generally caused by misunderstandings among team members rather than limitations of the collaboration platforms or employees' technical capabilities.

Theme 3: The Impact of Data Transparency on Project Performance

Q1. How does data transparency affect decision-making speed?

A:

Data transparency plays a significant role in improving decision-making speed. When team members have immediate access to the information they need, they can make informed decisions much more quickly. Without sufficient transparency, decision-making becomes slower because individuals must first gather or verify the required information.

Q2. How does it influence collaboration among team members?

A:

Transparency improves collaboration because every team member has access to the information relevant to their responsibilities. This enables smoother communication and coordination. Conversely, when employees lack access to required information, collaboration becomes more difficult because they must depend on others to obtain what they need.

Q3. Has it helped reduce errors or duplication of work?

A:

Yes. Data transparency reduces both errors and duplicated work. When responsibilities and project information are clearly visible, every team member understands their tasks and what is expected of them, resulting in better resource utilization and fewer unnecessary mistakes.

Q4. How has it affected adherence to project timelines?

A:

Data transparency has positively influenced adherence to project timelines because team

members clearly understand their responsibilities, have access to updated project information, and can complete their work more efficiently without unnecessary delays caused by missing information.

Q5. How has it influenced the quality of project deliverables?

A:

Improved transparency leads to higher-quality project deliverables. Faster decision-making, stronger collaboration, and fewer errors naturally contribute to producing better project outcomes and higher-quality final deliverables.

Q6. Do you believe that data transparency contributes to project success? Why or why not?

A:

Yes, I strongly believe that data transparency contributes significantly to project success. When team members have access to the information required to perform their tasks, they can work more efficiently, make better decisions, reduce mistakes, avoid duplicated work, and ultimately produce higher-quality outcomes.

Theme 4: Challenges

Q1. What are the main challenges that limit data transparency?

A:

One of the main challenges is organizational mindset. Larger and more established organizations often rely on long-standing structures and traditional methods of managing projects. Because these structures change slowly, organizations may be reluctant to adopt more transparent approaches to information sharing.

Q2. Are there technical challenges?

A:

Yes. Technical challenges often depend on the circumstances of individual team members. For example, some employees may not have access to the required collaboration platforms because of geographical restrictions, local regulations, or technical limitations in their countries. These issues can significantly affect participation in virtual projects.

Q3. Are there organizational challenges?

A:

Yes. Organizational challenges are closely related to rigid organizational structures. Some organizations continue using traditional management methods and are reluctant to modernize their workflows or adopt more transparent practices, which limits effective information sharing.

Q4. Are there human or cultural challenges?

A:

Yes. Human challenges primarily relate to management mindset. When managers believe employees should not have access to certain information, transparency decreases, which negatively affects project outcomes. Cultural challenges are closely linked to organizational culture. If the prevailing culture discourages open information sharing, transparency naturally declines and collaboration becomes less effective.

Theme 5: Improvement and Development

Q1. What measures do you suggest to enhance data transparency?

A:

Organizations should establish strong Human Resources (HR) departments that provide continuous training sessions, workshops, and seminars to educate both employees and managers about the importance of data transparency. In my opinion, educating managers is particularly important because leadership attitudes largely determine how transparently information is shared throughout the organization.

Q2. What can organizations do to improve virtual project performance?

A:

Organizations should focus on addressing the technical challenges faced by employees. They should ensure that team members have access to the required collaboration platforms and provide the necessary equipment and technological resources to perform their work effectively. Supporting employees with appropriate tools and infrastructure can significantly improve virtual project performance.

Q3. Is there any additional experience or insight you would like to add that has not been covered?

A:

No. I believe I have shared all the relevant experiences and insights regarding data transparency and virtual project performance.

Appendix G

Participant 5

Participant Information

Participant: Jehan Ibrahim
Position: Project Manager
Company: Canadian Company
Sector: Project Management
Years of Experience: 6 years
Cloud Collaboration Platform Used: Microsoft Teams

Preliminary Question

Q: Are you currently working in a virtual team?

A: Yes, I currently work as part of a virtual team.

Theme 1: Data Transparency in Virtual Projects

Q1. How would you describe the level of data transparency in the virtual projects you work on?

A:

I would describe the level of data transparency within my team as very good. Project information is generally shared effectively, allowing team members to perform their tasks efficiently while maintaining appropriate levels of information control.

Q2. Are all team members able to access the information they need at the appropriate time?

A:

No. Not all team members have access to every piece of information. Access to the company's shared folders is restricted to specific groups of employees based on their responsibilities and roles. This ensures that confidential information is protected while authorized personnel can access the information required for their work.

Q3. What procedures are followed to ensure the accuracy and reliability of project information?

A:

We work closely with the client to obtain project information directly from the original source. Before any information is distributed internally, it is carefully verified by our team.

Once the required work, such as video production or design tasks, has been completed, the results are returned to the client for review and approval. No information or deliverable is finalized until the client confirms its accuracy.

Q4. What factors enhance or hinder data transparency within the project?

A:

The most important factor influencing data transparency is effective communication. More specifically, communication must occur with the appropriate person who possesses complete and accurate knowledge about the project. If the client assigns someone who fully understands the project, accurate information is provided, which greatly enhances transparency. However, if communication occurs with someone who lacks sufficient knowledge or authority, incorrect information may be shared, reducing transparency and negatively affecting project outcomes.

Theme 2: Use of Cloud Collaboration Platforms

Q1. How have cloud collaboration platforms contributed to improving information sharing among team members?

A:

Cloud collaboration platforms have made a highly positive contribution to information sharing. Our team members are located across four different continents, and these platforms have enabled us to conduct virtual meetings and maintain continuous communication despite geographical distance. As a result, collaboration and information exchange have become much more efficient.

Q2. What features of these platforms do you consider most important for enhancing data transparency?

A:

One of the most valuable features is the ability to conduct online meetings with video communication. Seeing and interacting with colleagues helps strengthen relationships among team members, improves communication, and supports greater transparency throughout the project.

Q3. Have you encountered any challenges while using these platforms that affected information flow?

A:

Yes. The primary challenges were language differences and time zone differences. Our team

included members from Asia, Africa, North America, Russia, and India. Communicating across multiple languages and coordinating work across different time zones required careful planning. We often organized work so that one team could complete tasks during its working hours, allowing another team in a different region to continue the work when their workday began. Although cloud collaboration platforms supported this process, coordinating across time zones remained a significant challenge.

Theme 3: The Impact of Data Transparency on Project Performance

Q1. How does data transparency affect decision-making speed within virtual projects?

A:

Data transparency has a significant impact on decision-making speed. When information is clear, accurate, and readily available, decisions can be made quickly and confidently.

However, when transparency decreases, decision-making becomes slower and the likelihood of making incorrect decisions increases, which negatively affects project performance.

Q2. How does data transparency influence collaboration among team members?

A:

Transparency directly improves coordination and collaboration. When team members have access to the necessary project information, they clearly understand their assigned tasks and responsibilities. If important information is missing, misunderstandings may occur, resulting in confusion and reduced collaboration.

Q3. Has data transparency helped reduce errors and duplication of work?

A:

Yes. Data transparency has significantly reduced errors and duplicated work. The more transparent the information, the fewer mistakes occur, and the less likely team members are to repeat tasks unnecessarily.

Q4. How has data transparency affected adherence to project timelines and the quality of project deliverables?

A:

Data transparency helps teams remain committed to project schedules because everyone works with accurate and consistent information. When transparency decreases, delays become more likely, and the quality of project deliverables may not meet expectations. Maintaining transparent information throughout the project contributes to both timely completion and higher-quality outcomes.

Q5. Do you believe there is a direct relationship between data transparency and project success? Why?

A:

Yes, I strongly believe there is a direct relationship. As team members gain better access to accurate project information and clearly understand their assigned responsibilities, the quality of project deliverables improves, increasing the likelihood of overall project success.

Theme 4: Challenges

Q1. What are the main challenges that limit data transparency in virtual projects?

A:

One of the main challenges relates to the organizational structure of the team. In organizations where leadership follows a traditional hierarchical approach and managers retain most of the information while only issuing instructions to employees, transparency is significantly reduced. Team leaders who believe in sharing information openly create a much more transparent working environment.

Q2. What measures do you suggest to enhance data transparency?

A:

I believe that project information should be accessible to all team members whenever possible. Broader access to information enables employees to better understand the project and perform their responsibilities more effectively.

Q3. Are there any practices or policies you recommend to improve virtual project performance through greater data transparency?

A:

I recommend implementing a policy that allows all project team members to view project information while restricting editing permissions to authorized personnel only. This approach ensures that everyone has access to the information they need while protecting the integrity of project data by preventing unauthorized modifications.

References

- Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology*. **Qualitative Research in Psychology**, 3(2), 77–101.
- Daim, T. U., Ha, A., Reutiman, S., Hughes, B., Pathak, U., Bynum, W., & Bhatla, A. (2012). Exploring the communication breakdown in global virtual teams. *International Journal of Project Management*, 30(2), 199–212.
- Larson, L., & DeChurch, L. A. (2020). *Leading teams in the digital age: Four perspectives on technology and what they mean for leading teams*. *The Leadership Quarterly*, 31(1), 101377.
- Yang, L., Holtz, D., Jaffe, S., et al. (2022). *The effects of remote work on collaboration among information workers*. *Nature Human Behaviour*, 6(1), 43–54.
- Bloom, N. (2025). The evolution of working from home. Stanford Institute for Economic Policy Research (SIEPR).
- Mabaso, E. (2024). Performance management practices in remote and hybrid work environments. *SA Journal of Industrial Psychology*, 50.
- Newman, S. A., & Herman, A. (2022). Effective teamwork in the digital era: Cloud-based platforms and performance. *Journal of Business Research*, 142, 335–348. <https://doi.org/10.1016/j.jbusres.2021.12.047>
- Pullan, J. (2021). *Virtual leadership: Practical strategies for getting the best out of virtual work and virtual teams*. Kogan Page Publishers.
- Sayama, H. (2026). *Serendipity and innovation: Why physical offices still matter*. Binghamton Systems Science Research.