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Using Innovation Stories From Digital Platforms to Explore What Motivates Innovation

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DOI
10.4135/9781529629774

Publication date
2023

Document Version
Final published version

Citation (APA)
Ninan, J., & Sergeeva, N. (2023). Using Innovation Stories From Digital Platforms to Explore What Motivates Innovation. SAGE Publishing. https://doi.org/10.4135/9781529629774

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Sage Research Methods: Doing Research Online

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Author: Johan Ninan, Natalya Sergeeva

Pub. Date: 2023

Product: Sage Research Methods: Doing Research Online

DOI: https://doi.org/10.4135/9781529629774

Methods: Narrative research, Case study research, Axial coding

Keywords: innovation, organizations, construction industry, project management, industry

Disciplines: Business and Management

Access Date: June 19, 2023

Publishing Company: SAGE Publications Ltd

City: London

Online ISBN: 9781529629774

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Abstract

The objective of this research study was to investigate the role of narratives in shaping multiple innovations in the UK construction industry. A total of 133 innovation stories published in a year are compiled from a digital portal Infrastructure Industry Innovation Partnership (i3P). The stories are qualitatively analyzed using open coding, axial coding, and constant comparisons to understand their motivations. The resulting framework explains how narrative shapes innovation across health, safety, sustainability, and productivity. The use of online research methods has increased in the modern era with the internet becoming more interactive and ubiquitous. However, there is still limited knowledge on how to handle these large amounts of digital data. In this case study, we provide some practical steps to improve data collection, analysis and presentation of online data. All innovations for a year were collected to get a representative sample without excluding any to reduce the researcher bias of exclusion. During presentation of findings, steps were undertaken to guard the privacy of respondents.

Learning Outcomes

By the end of this case study, readers should be able to . . .

- Identify sources of digital data to study practice within large number of organizations.
- Improve the validity of online qualitative research findings.
- Safeguard the privacy of respondents while considering data in the digital space.

Project Overview and Context

The nature of the construction industry is different from other sectors due to the unique and temporary nature of projects. Innovations can bring efficiency and effectiveness to the tradition-bound construction industry (Ozorhon et al., 2016). However, construction projects are interorganizational and multileveled (Ninan et al., 2021; Winch, 2010), and hence, the industry-level narratives need to be adopted by firms to enable innovations at project sites.

The research covered in this case study aims to explore the practice of innovation in construction projects as there is a need to understand what 'is' happening in construction innovation, rather than what 'should' happen. Among the different possibilities for innovation in the construction sector, it is worth investigating why a particular innovation is pursued by practitioners to shape future innovations for industry improvement, specifically the role of narratives in shaping innovation. For example, existing research on organizations note how stories about earlier events were used to motivate and persuade team members (Deuten & Rip, 2000; Enninga & van der Lugt, 2016).

Narratives provide a way to manage the tensions prevalent in the industry as they render human intentions meaningful (Bruner, 1990) and influence practice along a particular direction (Carlsen & Pitsis, 2020). Weick and Roberts (1993) highlight narratives as a fabric that holds groups together as they improvise their ways through difficult situations. They shape an individual's 'entire web of beliefs' (Tversky & Kahneman, 1981), and hence, have performative implications as they constitute words that get things done (Sergeeva & Winch, 2021). For example, Ninan et al. (2022) studied project narratives of an infrastructure project on Twitter and recorded that these narratives brought about a change in preference of the community in the form of less resistance to traffic diversions during project construction and even provided a common rationale for the different internal stakeholders to work together. Whilst we acknowledge that factors such as incentives and rewards can motivate innovation (Gann & Salter, 2000; Liu & Chan, 2017), we argue that narratives shape or guide innovation in a particular direction.

Narratives can be identified and studied at multiple levels: individual, project, firm, industry; and their interactions are of particular interest and importance for meaning making, strategy and policy making (Sergeeva & Green, 2019). Industry-level narratives are 'grand narratives' that occur in texts at particular times in history and that provide meaning for all the practitioners in the industry (Fenton & Langley, 2011). In contrast, firm-level narratives are narratives within organization which provides meaning for the practitioners associated with the firm. We seek to investigate the role of narratives in shaping innovation and transforming construction by considering multiple innovations stories in the UK construction industry. In the process, we ask (1) what are the innovations in the construction industry? and (2) how do narratives shape these innovations?

Section Summary

- Construction projects are interorganizational and multileveled.

- In order to improve construction innovation, there is a need to understand what 'is' happening in construction innovation, rather than what 'should' happen.
- Narratives can influence practice along a particular direction.

Research Design

We adopted a unique research method to capture and analyze multiple innovations compiled from an innovation repository in the UK, Infrastructure Industry Innovation Portal (i3P), in order to address the research questions. We chose to study innovations in the construction sector across different organizations in the UK rather than focus on one company because of two reasons. First, the construction industry in the UK is an important focus for government policymakers due to its size, poor efficiency, low skill level, labor intensiveness, and its large multiplier effect into the wider economy (Raiden et al., 2018). Second, the UK setting enables an investigation on the role of narratives in construction innovation, as innovation is routinely stressed through multiple industry reports such as Egan (1998), HM Government (2013) and Farmer (2016) in an attempt to improve the performance of the construction industry.

The innovation stories are obtained from an industry wide online digital portal, i3P, where different companies post their innovation stories. The portal, set up in 2016, is a spin-off from Crossrail's Innovate 18 program and was subsequently jointly developed by the Knowledge Transfer Network (KTN), Tideway and Crossrail in an attempt to connect industry partners and enable industry collaboration on innovation. We chose to study the i3P portal for the following reasons. First, it provides a platform for different organizations to share ideas, partner with others, and innovate for potential industry improvements. Second, the innovation cases posted online can be categorized as 'online naturalistic' data (Ninan, 2020) because they exist naturally without the intervention of the researcher (Silverman, 2015). Third, there is limited respondent bias as it eliminates recollection and question bias issues observed in the data collected through interviews as here, we try to make sense of the original text as the actors themselves wrote or said it (Whittle et al., 2008). Finally, the written format of innovation stories in the platform encourages reflective thinking and allows muted voices to be heard thereby overcoming the limitations of standard interviews (Patterson, 2005). Thus, we studied 133 innovation

stories posted on i3P between 1 January 2019 and 31 December 2019.

In the portal, each innovation was recorded with three sub-headings – motivation, solution, benefits. Within each innovation story, we looked at the innovation and the narratives that motivated this innovation. For example, we discuss an innovation to use exoskeletons in construction sites, which is an innovation in health and safety. From our empirical data on the motivators for this innovation, we saw that there was a firm-level narrative aimed to reduce the estimated 6.6 million working days which were lost due to musculoskeletal disorders, which we categorized as a narrative of profit maximization. There was also an industry-level narrative of health and safety that enabled this innovation. Thus, we found evidence of firm-level and industry-level narratives motivating an innovation.

Section Summary

- An industry wide online platform compiles data from different companies.
- Innovation cases posted online can be categorized as 'online naturalistic' data because they exist naturally without the intervention of the researcher.
- Studying the different motivations for an innovation can expose the narratives which shaped that innovation.

Research Practicalities

There were some practical and ethical considerations in this research study. We focused on studying all the innovations in a fixed period of time in order to avoid bias of excluding some innovations we felt irrelevant during the data collection. The innovation stories are thus representative of the data in the platform as we studied 133 innovation stories posted on i3P between 1 January 2019 and 31 December 2019. Additionally, the year considered was not an unusual year and can be considered as representative of innovation stories from other years (Kaminsky, 2021).

We adopted qualitative coding by using open coding, axial coding, and constant comparisons to analyze the data collected systematically and generate the theoretical model (Eisenhardt & Graebner, 2007; Groat & Wang, 2002). First, we used open coding to break down, examine and categorize the data into open cate-

gories (Strauss & Corbin, 1990). We went through each innovation story and open coded the type of innovation and the narrative surrounding them. For each new story, the codes evolved as they were assigned to categories that fully represent the meaning. For example, we initially assigned innovations that improve time to a category 'improving time', which was expanded to 'innovations that improve productivity' to include improvements of productivity, time, and cost together. Second, we used axial coding to find the relation between these innovation categories and narrative categories. Axial coding involved putting categories back together in new ways to provide new insights (Strauss & Corbin, 1990). For example, using the axial coding we considered the relation between 'narratives of improving productivity' at the industry-level, 'narratives of profit maximization' at the firm-level and 'innovations that improve productivity' at the project-level. While open coding fractures the data, axial coding allows theory to emerge from data as the researcher investigates 'what is really going on' in the data (Tie et al., 2019). Third, constant comparison was used to improve the quality of the theory by comparing codes generated from the open codes and axial codes with the new data as data collection and analysis are taken up in parallel. Through the systematic use of open coding, axial coding, and constant comparisons, we were able to arrive at broad categories of innovations such as 'innovations that enable project completion', 'innovations that improve productivity', 'innovations in health and safety', and 'innovations in sustainability'. We also arrived at broad categories of narratives that enable innovation such as 'narratives of improving productivity', 'narratives of health and safety', 'narratives of sustainability', 'narratives of profit maximation', and 'narratives of image creation'.

Many scholars have highlighted that the privacy of respondents can be compromised in the research using online data sources due to the traceability of quotes (Beaulieu & Estalella, 2012; Ninan, 2020). Traceability is not a major concern in construction management research settings as compared to data relating to sensitive topics such as assisted dying (Dehkhoda et al., 2020) or medical conditions (Rier, 2007), where the online data presented in research can be traced back to reveal the medical condition of an individual. However, efforts should still be taken in construction management research to minimize any potential risks to people and organizations engaging in the digital space. There are ways to overcome traceability and make quotes 'Google-proof', such as cutting the length of verbatim quotes and hiding not only the respondent's name but also identifiers like place, associations, etc. (Ninan, 2020). In this research, we have removed identifiers from the innovations so that the organizations are not identified in the innovations thereby maintaining the confidentiality of the organizations. For example, we removed identifiers such as the name of the organization and the name of the site when GoPro cameras were used to monitor lifting at a construction site, as seen below,

"During the lift of the Water Treatment Plant shed at *** (name of organization and name of the site),

there was limited clearance between the building being lifted and the handrails of the structure it was being lifted over. This meant that the clearance at both ends of the structure needed to be monitored carefully at all stages of the lift." (Innovation 85)

We also purposefully reduced the length of verbatim quotes by removing words from the middle of the text to provide only the relevant information necessary for the authenticity of the research. Thus, we made the text harder to trace and thereby addressed some of the privacy and confidentiality challenges of human research participants in research using online data sources or the re-use of existing data sets (Ruggiano & Perry, 2019).

Section Summary

- Capture all instances for a year to get a representative sample without excluding any to reduce the researcher bias of exclusion.
- Steps should be taken to safeguard the privacy of respondents due to the traceability of quotes for research using online data sources.
- Qualitative coding evolves as categories represent the meaning of all data.

Method in Action

The research study was carried out according to the plan; however, some adjustments were made as the research progressed. One of the suggestions received early in the research process was to take adequate steps to ensure qualitative rigor while collecting and analyzing data from online databases, following which we took multiple steps during the research process. Firstly, we displayed instances in a table to present the qualitative data without destroying the meaning of the data through intense coding following the suggestion by Miles and Huberman (1994). For instance, an indicative table exhibiting the different constructs and evidence is shown in Table 1.

Table 1. Displaying instances in table

Constructs	Evidence

	Positioner Actuator Manipulator (PAM) used to save time (Innovation 84)
Innovations that improve productivity	New vibrating ripper used to increase productivity five times (Innovation 71)
	Digital document management software used to reduce operational inefficiencies (Innovation 116)

Secondly, the contextual data in the findings section were anchored in the existing literature on innovations in the construction sector for triangulation and validation (Eisenhardt, 1989). For instance, there was an innovation to have a tag on the helmet which vibrates when a worker enters an exclusion zone to reduce the injuries to workers entering working zones around construction plants. To support this instance of using technology to reduce accidents, we referenced the work of Datta et al. (2020) where they used digital innovations such as 4D CAD for visualization to improve safety performance in construction sites. We thus enfolded the findings, discussions and propositions in supported and contrasting literature for validation.

Thirdly, we tried to show data through quotations extracted from the innovation stories. Sandelowski (1994) records that quotes are used in qualitative research to support researcher claims, as well as to illustrate ideas and illuminate experiences. For instance, to support an instance where an organization opted to transport materials through the river rather than by road to reduce pollution and lorry movements in the city, we used a quotation from the innovation story as below,

> "Through our 'Sustainable transport–more by river' strategy, we are ensuring that we transport as many materials as we can by river, taking lorry movements off London's roads to limit pollution, congestion and to protect road-users. River transport produces less emissions than the road equivalent (per tonne km), even when compared with Euro VI HGVs [European Union's Heavy Goods Vehicle emission standards]." (Innovation 39)

Finally, we consolidated all the 133 innovations captured from the i3P portal from 1 January 2019 to 31 December 2019 in appendix of the manuscript along with its date of posting. Showing the innovations in the appendix is part of audit trail where enough details are provided for other researchers to enable them to repeat the research in a similar setting (Cooney, 2011). Part of the appendix is shown in Table 2.

Table 2. Innovations considered in this research study shown in Appendix.

Sl. No	Title of Innovations	Date
1	Magnetic safety barrier	7 January 2019
2	Hydraulic stone splitter	7 January 2019
..	…	…
23	Boom mounted excavator camera	6 February 2019
24	Digital tools design construction	6 February 2019
25	Briefing pack	6 February 2019
..	…	…
47	Context capture	16 April 2019
48	Hospital grab and go	16 April 2019
49	Implementing waste hierarchy CLAIRE	25 April 2019
...	…	…
131	Cantilevered cable feeds	21 November 2019
132	Colour code site priorities phases	10 December 2019
133	Lessons learned site level	10 December 2019

Another suggestion we received from the reviewers was to show the trace of data. They recommended we triangulate all the data in the manuscript with the serial numbers of the innovations in the appendix (Table 2).

We referenced the serial numbers in all the quotations and instances in table to triangulate the presentation of the data.

Section Summary

- Enfold the findings, discussions and propositions in supporting and contrasting literature for validation.
- Give additional data in the appendix of the manuscript for audit trail.
- Triangulate all the data in the manuscript by referencing the serial number of stories in annexure with all quotations and tables.

Practical Lessons Learned

One of the challenges we faced during the initial stages of our research study was to collect data regarding innovation from different organizations in the construction industry. We understood early on that data collection through interviews with a few organizations would not give us enough information on the practice of innovation in the sector. Hence, we opted to use innovation stories from an industry wide online portal. Such data compiled from digital sources is widely acknowledged as 'new ways of seeing' (Bansal et al., 2018), and they can give significant insights on the practice of management in organizations which can inform how they can be managed better. As more work migrates online, many interactions concerning those work is only available in the digital environment. Many conversations relating to construction projects are only evident online, and they are not currently captured or analyzed. Observing digital space and analyzing the data from these sources can help us understand how people interact in construction industry.

However, researchers have to be careful using online data sources. The traceability of quotes can reveal identity or personnel and organizations active in the construction management setting. Steps to avoid traceability such as google-proofing quotations can be adopted by limiting the length of quotations and hiding identifiers. There can also be challenges of poor representativeness of data as all organizations may not be represented in the digital space (Kaplan & Haenlein, 2010). Additionally, non-verbal cues such as changes in tone of voice may not be understood from digital data (Germain et al., 2018).

In this research study we have only used data from the digital platform. Looking back at our data collection phase, it would have been beneficial to triangulate the data collected from digital platforms with interview data. Using interview data would have addressed one of the main limitations of using digital data, i.e., the limited engagement of the researcher with the context, thereby restricting their ability to probe deeper or ask follow-up questions (Roberts, 2015). For example, Ninan et al. (2022) studied external stakeholder management using news articles and semi-structured interviews. They note that news articles provide insights into 'what was communicated strategically to external stakeholders', while the interviews with the project team provide insights into 'what really happened on site'. Contrasting the data collected from these two sources, they shed light on the practice of strategic communication of information to external stakeholders. Thus, naturalistic data can be used to either verify or disprove informant's claims.

Section Summary

- Data collection through interviews with a few organizations would not be adequate to study the practice of innovation in the sector.
- Data compiled from digital sources is widely acknowledged as 'new ways of seeing' as more and more interactions occur in the online space.
- Triangulating data collected from digital platforms with interview data can improve a researcher's engagement with setting.

Conclusion

The objective of this research study was to investigate the role of narratives in shaping innovation in the construction industry. From our data, we saw that innovators actively look for areas where they can intervene, and narratives improve the visibility of some areas thereby guiding innovations to them. We were able to contrast between innovations and narratives at the firm-level and industry-level narratives and how they motivate innovations by using data compiled from digital sources. With this research method case, we call on researchers to look for other data sources relevant to their area of interest which can inform practice in the modern digital world. Sources can range from electronic versions of federal periodicals to online repositories of public comments to more interactive internet resources, all of which provide rich data for understanding a

phenomenon under consideration of the researcher (Natow, 2019).

We discussed several practical considerations we adopted while collecting the data, analyzing the dataset and presenting the findings. While collecting the data, we captured all the innovations for the year to get a representative sample without excluding any to reduce the researcher bias of exclusion. While analyzing the dataset, we used open coding, axial coding, and constant comparisons. In the process, we were able to refine the categories generated and improve the theoretical contribution. While presenting the findings, we took steps to guard privacy of respondents by making the quotations 'Google-proof'. We also triangulated all the data in the manuscript by referencing the serial number of stories in annexure with all quotations and tables.

Classroom Discussion Questions

1. What are some online data sources for your area of research?
2. What are some of the steps to reduce traceability of online data sources?
3. How might you improve the validity of qualitative research findings?

Multiple-Choice Quiz Questions

1. What are NOT some 'Google-proofing' strategies to guard privacy of respondents?

- **a.** Cutting the length of verbatim quotes

Incorrect Answer

Feedback: This is not the correct answer. The correct answer

is C.

○ **b.** Removing identifiers such as place and associations

Incorrect Answer

Feedback: This is not the correct answer. The correct answer is C.

○ **c.** Not showing any data

Correct Answer

Feedback: Well done, correct answer

2. How can you study practices from a large number of organiza-

tions?

- **a.** Interview people from two to three organizations.

Incorrect Answer

Feedback: This is not the correct answer. The correct answer is B.

- **b.** Study data from portals where large number of organizations are active

Correct Answer

Feedback: Well done, correct answer

- **c.** Circulate a questionnaire to your contacts and ask them to circulate it further

Incorrect Answer

Feedback: This is not the correct answer. The correct answer is B.

3. Which of these are NOT ways to improve qualitative rigour?

- **a.** Enfolding findings in supporting and contrasting literature

Incorrect Answer

Feedback: This is not the correct answer. The correct answer is B.

- **b.** Not using audit trial

Correct Answer

Feedback: Well done, correct answer

◯ **c.** Publishing data in appendix

Incorrect Answer

Feedback: This is not the correct answer. The correct answer is B.

References

Bansal, P. (Tima, Smith, W. K., & Vaara, E. (2018). New ways of seeing through qualitative research. *Academy of Management Journal*, 61(4), 1189–1195. https://doi.org/10.5465/amj.2018.4004

Beaulieu, A., & Estalella, A. (2012). Rethinking research ethics for mediated settings. *Information, Communication & Society*, 15(1), 23–42. https://doi.org/10.1080/1369118X.2010.535838

Bruner, J. (1990). *Acts of meaning*. Harvard University Press.

Carlsen, A., & Pitsis, T. S. (2020). We are projects: Narrative capital and meaning making in projects. *Project Management Journal*, 51(4), 357–366. https://doi.org/10.1177/8756972820929479

Cooney, A. (2011). Rigour and grounded theory. *Nurse Researcher*, 18(4), 17–22. https://doi.org/10.7748/nr2011.07.18.4.17.c8631

Datta, A., Ninan, J., & Sankaran, S. (2020). 4D visualization to bridge the knowing-doing gap in megaprojects: An Australian case study. *Construction Economics and Building*, 20(4), 25–41. https://doi.org/10.5130/AJCEB.v20i4.7015

Dehkhoda, A., Owens, R. G., & Malpas, P. J. (2020). A netnographic approach: Views on assisted dying for individuals with dementia. *Qualitative Health Research*, 30(13), 2077–2091. https://doi.org/10.1177/1049732320925795

Deuten, J. J., & Rip, A. (2000). Narrative infrastructure in product creation processes. *Organization*, 7(1), 69–93. https://doi.org/10.1177/135050840071005

Egan, J. (1998). *Rethinking construction*. Department of the Environment, Transport and Region (DETR).

Eisenhardt, K. M. (1989). Building theories from case study research. *The Academy of Management Review*, 14(4), 532. https://doi.org/10.2307/258557

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32. https://doi.org/10.5465/amj.2007.24160888

Enninga, T., & van der Lugt, R. (2016). The innovation journey and the skipper of the raft: About the role of narratives in innovation project leadership. *Project Management Journal*, 47(2), 103–114. https://doi.org/10.1002/pmj.21578

Farmer, M. (2016). *The Farmer review of construction labour model: Modernise or die*. Construction Leadership Council.

Fenton, C., & Langley, A. (2011). Strategy as practice and the narrative turn. *Organization Studies*, 32(9), 1171–1196. https://doi.org/10.1177/0170840611410838

Gann, D. M., & Salter, A. J. (2000). Innovation in project-based, service-enhanced firms: The construction of complex products and systems. *Research Policy*, 29(7–8), 955–972. https://doi.org/10.1016/S0048-7333(00)00114-1

Germain, J., Harris, J., Mackay, S., & Maxwell, C. (2018). Why should we use online research methods? Four doctoral health student perspectives. *Qualitative Health Research*, 28(10), 1650–1657. https://doi.org/10.1177/1049732317721698

Groat, L., & Wang, D. (2002). *Architectural research methods*. Wiley & Sons.

HM Government. (2013). *Construction 2025. Industrial strategy: Government and industry in partnership*. HM Government.

Kaminsky, J. (2021). Who are we talking to? Situating construction engineering and management knowledge. *Journal of Construction Engineering and Management*, 147(2), 1–23. https://doi.org/10.1061/(ASCE)CO.1943-7862.0001977

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68. https://doi.org/10.1016/j.bushor.2009.09.003

Liu, A. M. M., & Chan, I. Y. S. (2017). Understanding the interplay of organizational climate and leadership in construction innovation. Journal of Management in Engineering, 33(5), https://doi.org/04017021. https://doi.org/10.1061/(ASCE)ME.1943-5479.0000521

Miles, M., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.

Natow, R. S. (2019). Online qualitative data sources for federal regulatory policy studies. *American Behavioral Scientist*, 63(3), 315–332. https://doi.org/10.1177/0002764218820567

Ninan, J. (2020). Online naturalistic inquiry in project management research: Directions for research. Project Leadership and Society, 1(1), https://doi.org/100002. https://doi.org/10.1016/j.plas.2020.100002

Ninan, J., Clegg, S., Burdon, S., & Clay, J. (2021). Overt obstacles and covert causes: An exploratory study of poor performance in megaprojects. Project Leadership and Society, 2, https://doi.org/100011. https://doi.org/10.1016/j.plas.2021.100011

Ninan, J., Mahalingam, A., & Clegg, S. (2022). Asset creation team rationalities and strategic discourses: Evidence from India. *Infrastructure Asset Management*, 9(3), 114–122. https://doi.org/10.1680/jinam.19.00062

Ozorhon, B., Oral, K., & Demirkesen, S. (2016). Investigating the components of innovation in construction projects. *Journal of Management in Engineering*, 32(3), 04015052. https://doi.org/10.1061/(ASCE)ME.1943-5479.0000419

Patterson, A. (2005). Processes, relationships, settings, products and consumers: The case for qualitative diary research. *Qualitative Market Research*, 8(2), 142–156. https://doi.org/10.1108/13522750510592427

Raiden, A., Loosemore, M., King, A., & Gorse, C. (2018). *Social value in construction*. Routledge. https://doi.org/10.1201/9781315100807

Rier, D. A. (2007). Internet social support groups as moral agents: The ethical dynamics of HIV+ status disclosure. *Sociology of Health & Illness*, 29(7), 1043–1058. https://doi.org/10.1111/j.1467-9566.2007.01023.x

Roberts, L. D. (2015). Ethical issues in conducting qualitative research in online communities. *Qualitative Research in Psychology*, 12(3), 314–325. https://doi.org/10.1080/14780887.2015.1008909

Ruggiano, N., & Perry, T. E. (2019). Conducting secondary analysis of qualitative data: Should we, can we, and how?*Qualitative Social Work*, 18(1), 81–97. https://doi.org/10.1177/1473325017700701

Sandelowski, M. (1994). Focus on qualitative methods. The use of quotes in qualitative research. *Research in Nursing & Health*, 17(6), 479–482. https://doi.org/10.1002/nur.4770170611

Sergeeva, N., & Green, S. D. (2019). Managerial identity work in action: Performative narratives and anecdotal stories of innovation. *Construction Management and Economics*, 37(10), 604–623. https://doi.org/10.1080/01446193.2019.1566625

Sergeeva, N., & Winch, G. M. (2021). Project narratives that potentially perform and change the future. *Project Management Journal*, 52(3), 264–277. https://doi.org/10.1177/8756972821995340

Silverman, D. (2015). *Interpreting qualitative data*. Sage.

Strauss, A., & Corbin, J. M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Sage.

Tie, Y. C., Birks, M., & Francis, K. (2019). Grounded theory research: A design framework for novice researchers. SAGE Open Medicine, 7, https://doi.org/2050312118822927. https://doi.org/10.1177/2050312118822927

Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453–458. https://doi.org/10.1126/science.7455683

Weick, K. E., & Roberts, K. H. (1993). Collective mind in organizations: Heedful interrelating on flight decks. Administrative Science Quarterly, 38(3), https://doi.org/357. https://doi.org/10.2307/2393372

Whittle, A., Mueller, F., & Mangan, A. (2008). In search of subtlety: Discursive devices and rhetorical competence. *Management Communication Quarterly*, 22(1), 99–122.

Winch, G. M. (2010). *Managing construction projects: An information processing approach* (2nd ed.). Wiley-Blackwell.

https://doi.org/10.4135/9781529629774