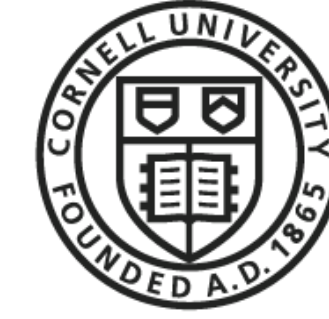




CAHRS ResearchLink



ILR School

No. 2 October 2018

Don't Abandon the Water Cooler Yet: Flexible Work Arrangements and the Unique Effect of Face-to-Face Informal Communication on Idea Generation and Innovation

The Challenge

Flexible work arrangements (FWAs), especially those offering employees a degree of control over when and where they work, have become increasingly prevalent in recent years. Research has shown that these arrangements generally lead to higher levels of job satisfaction as well as lower levels of stress, work-family conflict, absenteeism, and turnover among employees. At the same time, however, some suggest that FWAs may not be appropriate in all situations, particularly in the context of creative teamwork (i.e., in the prototypical 21st century organization). It is important, in this view, to have all team members face to face in the office to encourage informal interactions that spark insights and innovations. Surprisingly, this supposition has yet to be rigorously tested.

The present study was designed to fill this void, first by examining the effects of remote work (i.e., percent of time team members work outside the office) on the frequency, spontaneity, content, and mode of their communication and, then, by assessing the extent to which variations in team communication patterns influence the level of team creativity (i.e., the degree to which teams generate novel ideas that lead to improvements in work processes and/or to new and innovative products and services). As Figure 1 on page 5 shows, the study primarily distinguished between two types of team communication: (1) formal face-to-face communication (e.g., planned meetings about work-related matters) and (2) informal face-to-face communication. Within informal face-to-face communication, two forms were examined: (2a) spontaneous communication about work-related matters and (2b) non-work-related communication. Further, in examining the efficacy of both forms of informal communication for team idea generation and innovation, the study compared electronic modes (e.g., email, instant message, audio/visual) to face-to-face interactions.

The Major Results

Here, in brief, are the major findings of the study:

- ◇ The extent to which team members work remotely does not significantly impact the frequency of their teams' formal face-to-face work-related communication. Further, this type of communication, however important it may be for other purposes, plays a less central role in fostering team idea generation than does informal face-to-face communication, whether work-related or non-work-related.

At the same time, however, the more frequently team members work outside the office the less likely they are to engage one another in informal face-to-face work-related communication. The same is true with respect to informal face-to-face non-work-related communication, although the effect is less strong.

And here's the kicker. The less frequently team members engage in informal face-to-face work-related communication, the less likely their teams are to generate new ideas and, by extension, be innovative. This relationship also holds in the case of informal non-work-related communication, although, again, it is less robust.

- ◇ It might be thought that when team members work remotely, the dearth of informal face-to-face work-related (and even non-work-related) communication within teams would and could be compensated for by increasing the use of various forms of electronically-mediated communication (Skype, instant messaging, emails and the like). While remote working does indeed increase the use of e-mediated communication, this does not obviate the need for informal face-to-face encounters when it comes to boosting team idea generation and, by extension, innovation.

Implications For Practice

In today's knowledge-based, technology-abetted economy, companies find it increasingly tempting to adopt FWAs to offer employees a degree of flexibility in deciding when and where to do their work. There is no question that many employees prefer these arrangements and respond favorably to them. As the present study shows, however, FWAs may have their costs, particularly in companies that rely on teams for the creativity and innovation needed to compete in rapidly changing markets. Firms of this type, then, might choose to forego the potential gains from FWAs and instead insist that all team members work together full-time at a common workplace, much as Melissa Mayer, then CEO of Yahoo, did amid much controversy a few years ago and several other organizations – Honeywell, Aetna, Bank of America, and others – have done more recently.

But is this necessary? Another, less radical approach is to shoot for the best of both worlds. For example, employers could set certain fixed times when all team members are expected to gather at the same work location and then allow flexibility otherwise. Of course, it would be necessary for these firms to take specific actions designed to maximize opportunities for informal face-to-face communication during the limited times team members are together. Special efforts would have to be made to assure that team members are kept abreast of each other's work-related activities to minimize catch-up time (see below). Work spaces would have to be designed to include common work areas (as well as private offices) and to incorporate numerous locations where employees would be likely to congregate on their own (e.g., coffee bars, lunch rooms, lounges, and the like). It might also be wise to schedule occasional informal activities (lunches, etc.) during common working times to further encourage ad hoc interactions.

A hybrid approach would also require firms to make the best possible use of technology to approximate the power of informal face-to-face communication when all team members are not at the same work site. The results of the present study suggest that while these efforts are unlikely to fully compensate for the absence of a personal touch, the best substitutes seem to be systems that combine readily accessible audio and visual communication in an easy-to-use way, such as Skype for Business and Zoom. A particularly promising approach has been developed by Microsoft to tackle this issue. Here, “embedded social proxies” and related technologies are used during meetings to physically represent remote team members to co-located team members and vice versa, allowing them to easily pick up and respond to visual cues. The system also has a feature called awareness screens that display the calendars, busy/free status, and current activities of team members who are working remotely. This information lets others know when it is okay, as well as potentially useful, to initiate spontaneous “face-to-face” work-related conversations with these team members, much as would happen if they were just down the hall.

Obviously, taking this approach to FWAs requires some careful planning and painstaking implementation. Overall, though, the stream of research of which the present study is a part strongly suggests that these short-term costs are likely to be outweighed by the ongoing benefits not only for the companies involved but also for their employees.

Specifics of the Study

Here’s how the study was conducted:

The Setting and the Sample: The study took place in a Fortune 500 company that has a reputation for being one of the, if not the, most innovative firms in its industry. The company was selected for study in part because of the importance of creativity and innovation to its long-term success, but also because so much of its work is done in teams whose members have flexibility in deciding when and where to perform their work.

Data were collected via an electronically-delivered survey that provided unique links to the members of 155 co-located teams that had been identified by the organization as relevant to the study. Surveys were also sent to the managers of these teams, who reported on the team’s level of innovation. The original 155 teams were reduced by roughly a third because some surveys were not returned. Thus, the analysis reported below is based on employee data from 99 teams (64% of the original team sample), involving 510 employees (~5 employees per team) and manager data from 54 teams.

The Hypotheses and Results: Based on the model shown in Figure 1, these data were used to test the following hypotheses.

The effect of location flexibility on face-to-face informal communication

ØHypothesis 1: Team location flexibility is negatively associated with the frequency of (H1a) face-to-face spontaneous work-related communication and (H1b) face-to-face non-work-related communication.

oHypothesis 1a was supported. The results show that team location flexibility had a significant negative effect on the frequency of face-to-face spontaneous work-related communication that occurred among team members.

oHypothesis 1b was somewhat supported. Team location flexibility had a marginally significant effect on the frequency with which team members chatted face-to-face about non-work-related matters.

The effect of face-to-face formal communication on idea generation

ØHypothesis 2: Frequency of face-to-face formal communication is positively associated with team idea generation.

oHypothesis 2 was supported. The results show that teams that engaged in more formal face-to-face work-related communication, such as team meetings, reported significantly greater idea generation.

The unique effect of face-to-face informal communication on idea generation

ØHypothesis 3: The frequency of face-to-face informal communication—(H3a) face-to-face spontaneous work-related communication and (H3b) face-to-face non-work-related communication—is positively associated with team idea generation, with each type of face-to-face informal communication accounting for unique variance apart from the effect of face-to-face formal communication on team idea generation.

oHypothesis 3a was supported, but hypothesis 3b was not. When examining the relative importance of formal, and the two types of informal, communication for team idea generation, the results clearly indicate that face-to-face spontaneous work-related communication is not only the most important of the three types of communication, but indeed the only type that has a unique effect on team idea generation.

Comparing communication media: The effects of face-to-face and electronic informal communication on idea generation

ØHypothesis 4: For both (H4a) spontaneous, work-related communication and (H4b) non-work-related communication, face-to-face communication is the strongest positive predictor of team idea generation, followed by audio/video, instant message, and emailcommunication.

oHypothesis 4a was supported. When all four types of spontaneous, work-related communication were considered simultaneously, only face-to-face spontaneous, work-related communication was significantly related to team idea generation. Among the three types of electronic communication studied, audio/video had a stronger effect on team idea generation than either instant messaging or email.

oHypothesis 4b, however, was not supported. When all four types of non-work-related communication were considered simultaneously, the results showed that none of the four was a significant predictor of team idea generation.

The effect of idea generation on innovation

ØHypothesis 5: Team idea generation is positively associated with team innovation.

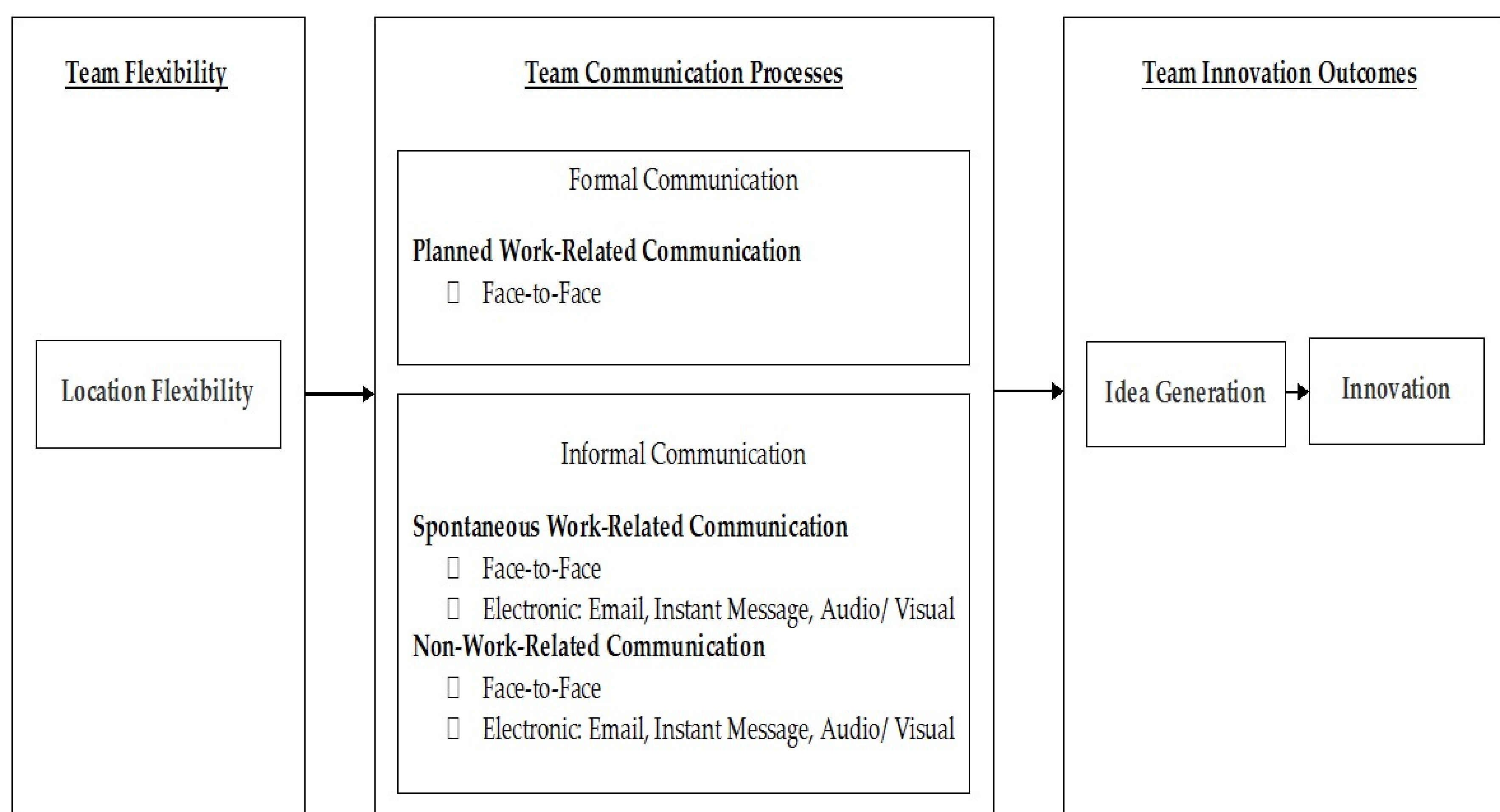
oIn line with prior studies, this hypothesis was strongly supported. More frequent generation of ideas is critical for team innovation.

Conclusion: In the organization studied, the extent to which team members work remotely reduces the frequency of their informal face-to-face work-related communication which, it turns out, is the most important form of communication for driving team idea generation. Interestingly, this pattern of results was observed despite team members making only limited use of location flexibility (with teams working, on average, about 4.5 hours a week off site). Comparable organizations, then, are advised to exercise caution when it comes to employee work arrangements that involve flexibility in location, taking care to do as much as possible to be sure that team members are engaging in spontaneous face-to-face work-related discussions. As noted earlier, this might involve setting certain times when all team members are required to be together in a common workplace, as well as taking proactive steps to enhance spontaneous face-to-face work-related communication within teams when their members are together – and especially when they aren't. Again, in the organization studied, the use of electronic communication tools was less effective in driving team idea generation. However, the available technologies were limited and infrequently used (means ranging from 1.19 to 1.89 on five-point scales). Other research suggests that the situation might be different with the adoption of newer, richer technologies combined with extensive training in their use.

Virtually all research leaves us with unanswered questions, and this study is no exception. For example, it was conducted in a single organization and, thus, may or may not generalize to other, similarly-situated firms, or to teams not engaging in creative work. In addition, it is a cross-sectional study (i.e., all the data were collected at a single point in time) and so the causal relationships posited in Figure 1 may or may not hold up. The solutions to these issues is to conduct further research in other companies while collecting data over time or, even better, doing field experiments where the added value of various options can be systematically tested. Studies such as these would provide opportunities to look into the internal dynamics of teams to examine relationships between patterns of flexibility use and various forms of communication. They would also enable tests regarding the feasibility and utility of FWAs and of the increasingly sophisticated technologies being developed to aid on-site and off-site communication among team members.

Clarity on these issues becomes increasingly critical in an economy where team-based knowledge work is the wave of the future. Accordingly, as is our custom, we encourage CAHRS companies (and others) that are using or contemplating the use of FWAs to partner with skilled researchers from Cornell (or elsewhere) to determine which approaches to flexibility yield the best results for all stakeholders.

Figure 1





Researcher



Kristie McAlpine, Assistant Professor, Management, Rutgers School of Business (this ResearchLink is derived from Kristie's PhD dissertation by the same title, which was completed at the Cornell ILR School in May 2017 under the direction of Lisa Nishii, Associate Professor and Chair of ILR International Programs).