

What team communication can tell us about team effectiveness

Meetings. Love them or hate them, they're a regular feature of working life and there are countless studies on how to plan, run and make the most of them. Few studies, however, take a detailed view of the nature of the communication, interaction and collaboration that take place within meetings, especially team meetings. The research of Marcella Hoogeboom and Celeste Wilderom of the University of Twente in the Netherlands is therefore timely. Based on complex adaptive systems theory, they analysed how team dynamics and information sharing in meetings can be a measure of team effectiveness.



Marcella Hoogeboom, assistant professor at the University of Twente, explores how team dynamics affect team performance and seeks to answer the question: why is that some teams show high levels of learning and are very effective, while other seemingly similar teams are less effective? Her work has been inspired by complex adaptive systems (CAS) theory, which investigates how teams interact with each other in the context of various types of tasks. It finds that the nature of team interactions changes as the types of tasks vary.

Dr Hoogeboom's research is based on the belief that the way in which teams function is more complicated than simply aggregating their parts. Teams are adaptive systems and entities that change how they operate based on the context they are operating in. Using video recordings she examines team dynamics and real-time behaviour in team meetings. The team interaction patterns, that consist of minute behaviours, observed on film, are subsequently coded and analysed to delve deeper into team behaviour, deriving insights into team effectiveness and performance.

A COMPLEX ADAPTIVE SYSTEMS APPROACH

While a substantial amount of business management research has focused on leadership attributes, Dr Hoogeboom believes that there is a lack of analysis into behavioural interactions of leaders

and their teams in the meetings which are such a regular feature of working life. She argues that the task context is an important and neglected parameter of teams' analysis and that team interaction patterns (the behaviours that evolve and occur periodically so they can be considered a recurring pattern of behaviour) and team information sharing differ depending upon the type of task a team is working on. Different patterns are seen when teams are dealing with routine tasks (e.g. regular administrative activity), versus nonroutine tasks (e.g. a new strategic problem that the team must address).

Dr Hoogeboom wanted to expand the literature on CAS theory by going deeper into the impacts of team interaction patterns, how they affect team effectiveness and what impact the routine or nonroutine nature of the task at hand has on this. Taking a CAS approach provides an effective system for analysing recurring behaviour patterns.

EXPLORING TEAM MEETINGS AND MICRO-BEHAVIOURS

In Dr Hoogeboom's latest study, 96 individual teams in a large public sector organisation in the Netherlands were analysed. The teams comprised 1,395 members involved in financial administration data processing. The sample included meetings of teams working in both a routine task contexts and nonroutine task context. The researchers looked for 18 pre-

defined micro-behaviours. These included defending one's position, for example saying "I can't help it, my boss wants it like that", and providing negative feedback, for example, "I'm not happy with the way you did this". Other micro-behaviours included task monitoring, for example, "Are we going to meet the deadline?", and showing personal interest, for example, "You must be happy about that". Micro-behaviours also included body language, for example whether team members looked bored, nodded, or talked to others during the meeting.

Micro-behaviours were grouped into four meta-categories, or bigger conglomerates of behaviours that include similar type of specific behaviours, based on current leadership theory literature; whether the communication was transactional, entailing communication that is focused on setting performance expectations and goals and correcting deviations when performance levels are not being met, whether it was transformational, meaning communication which involves encouragement, inspiration and motivation to innovate or create change, or an initiating structure type behaviour, meaning task-based communication, or whether it represented counterproductive behaviour.

Using theme pattern recognition software to analyse the results, team interaction patterns were identified. In total, 110,635 behavioural events were coded, and 7,879 behavioural patterns noted. As Dr Hoogeboom suggests, "this indicates that teams tend to engage in much patterned behaviour, that is patterns of team behaviours that are constantly recurring while interacting with others, although they are often not aware of it. Creating more awareness of the patterns of behaviour can enhance the teams' understanding of how to become more effective."

HOW DO TEAMS INTERACT?

Dr Hoogeboom set out to test six hypotheses about the way teams interact in meetings. Four hypotheses were confirmed. Results confirmed that information sharing explains the relationship between recurring patterns of team interaction and team effectiveness. It also explains the relationship between

Table 1. Examples of the Video-Coded Behaviours.

Coded behaviour		Definition	Examples
1. Providing negative feedback	(TA)	Criticising the behaviour or actions of other team members	"I do not think that this is a good solution" "In August I sent an e-mail with amendments, and I find it regrettable that at least half of the attendees does not know the content of this e-mail"
2. Task monitoring	(TA)	Asking team members for clarification and confirmation about (the progress on) their tasks	"How is the project progressing?" "Do you also have a specific role in that process, since there might be possibilities for a follow-up project?"
3. Correcting	(TA)	Imposing of disciplinary actions. Presenting team members with a "fait accompli"	"Yes, but that is the wrong decision" "Now you are talking about a failure fine, however this is a different type of fine"
4. Individualised consideration	(TF)	Paying attention to each individual's need for achievement and growth by acting as a coach or mentor and creating a supportive climate	"We offer a training course in August, which might be helpful for your career planning" "You can make a note of that request, I am willing to help you with it"
5. Intellectual stimulation	(TF)	Asking for ideas, stimulating team members to critically think about team tasks, opportunities, and so on, including the questioning of assumptions thinking about old situations in new ways	"Yes, if you have any ideas put them together and discuss it with me or Jan"
6. Idealised influence behaviour/inspirational motivation	(TF)	Talking about an important collective sense of vision; Talking about important values and beliefs	"I find it important that we all work in unison towards this shared objective" "Until Vision 2020 is more clearly specified we will be operating under these standards, it is important to follow this agreed line"
7. Showing disinterest	(CP)	Not taking any action (when expected)	Not listening actively
8. Defending one's own position	(CP)	Emphasising one's leadership position; Emphasising self-importance	"I am the manager within this organisation" "We do it my way, because I am the manager"
9. Interrupting	(CP)	Interfering or disturbing when other team members are talking	Disrupting other team members when they did not finish their sentence
10. Directing	(IS)	Dividing tasks among team members (without enforcing them); Determining the current direction	"John, I'd like you to take care of that" "Jack, I want you to..."
11. Informing	(IS)	Giving factual information	"The budget for this project is..." "The sick-leave figure is relatively low"
12. Structuring	(IS)	Structuring the meetings; Changing the topic; Shifting toward the next agenda point	"We will wind up this meeting at 2pm" "Maybe, we need to discuss this point after you are finished"
13. Providing positive feedback	(O)	Positively evaluating and rewarding the behaviour and actions of team members	"How you approach the project is much better than 5 months ago" "I am delighted to see that you did not passively wait, but rather pro-actively came with a proposal"
14. Giving own opinion	(O)	Giving one's own opinion about what course of action needs to be followed for the organisation, department, or the team	"We already discussed this, let's talk especially about how we can avoid these things in the future" "In my opinion, we should..."
15. Agreeing	(O)	Agreeing with something, consenting with something	"This also reflects how I personally think about the matter" "Yes, I agree with you"
16. Disagreeing	(O)	Contradicting with team members	"That is not correct" "I have to disagree with you on this point"
17. Humour	(O)	Making jokes or funny statements	Often jokes are made within the context of the interaction. When three or more members laugh, the code "humour" is assigned.
18. Giving personal information	(O)	Sharing personal information (e.g. about the family situation)	"We had a lovely holiday" "My mother is doing better now, thank you"

Note: TA = transaction behaviour; TF = transformation behaviour; CP = counterproductive behaviour; IS = initiating structure behaviour; O = other behaviour which is not placed in one of these four meta-categories of coded micro-behaviours.

A total of 18 micro-behaviours were grouped into four behavioural meta-categories on the basis of current leadership theory.

The dynamics of team interaction heavily influence the performance of a team.

participative team interaction patterns and team effectiveness. Thus, when a team interacts in a certain way, this influences the degree of information sharing in the team, impacting their performance. Recurring patterns of team interaction were negatively related with team information sharing and performance, while engaging in participative interaction patterns was positive for higher levels of information sharing and performance. The context of the task dictated the strength of the relationship between recurring and participative team interaction patterns and team information sharing.

Notably, the study highlights how critical it is for teams working in highly nonroutine or knowledge-intensive

type tasks should avoid engaging in recurring patterns of behaviour; this will reduce the effectiveness of information sharing, and therefore performance, over time. The results showed that in these teams of knowledge workers, a high participation level from all members when they are interacting (e.g. more frequent shifts in who is speaking) supports greater information sharing and higher performance.

The results did not confirm the hypothesis that heterogeneous team interaction patterns (i.e. interaction patterns with high levels of behavioural variation) are positively related to team effectiveness through information sharing. The idea that task context influences the relationship between



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diverse team interaction patterns and team information sharing was also not confirmed.

Other findings, where the behavioural content of the team interaction patterns were examined, included that task-orientated "transactional" and "initiating structure" behaviours were the most dominant types of behaviour in team interaction patterns, whereas "transformational" behaviour was rarely part of the interaction patterns. Additionally, least effective teams demonstrated much more counterproductive behaviour within their interaction patterns (38%), compared with highly effective teams (7%). This implies that some of the patterned interactions

members tend to tailor their interactions to the nature of the work at hand. In a nonroutine or knowledge-intensive task context the effects of routinised or more rigid and recurring forms of interaction are even more detrimental for the amount of information sharing and performance. High levels of participation or team member switches during team meetings are even more important in a nonroutine team task context."

This study also finds different interaction patterns in the most and least effective teams. Dr Hooigeboom asserts: "The most effective teams primarily have interaction patterns that are characterised by task-directed behaviours, such as information sharing and monitoring."

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are indeed functional. Using content analysis, the researchers shed more light on which interaction patterns are functional and dysfunctional.

IMPORTANCE OF TEAM INFORMATION SHARING AND INTERACTION

Notably, this research highlights the importance of team information sharing and team interaction as key indicators for overall team performance and effectiveness, suggesting why some teams perform better than others. Dr Hooigeboom proposes that behavioural coding through a "meaningful taxonomy" contributes to our understanding of what behaviours occur when team members interact with one another. She says: "Team

Regarding counterproductive behaviours she writes: "Even though the most effective teams show fewer routinised or recurring forms of team interaction, when they engage in it, their interactions are highly functional and they engage much less in cycles of counterproductive type interactions."

Dr Hooigeboom's video-based examination of real-time behavioural data on team interaction in the light of complex adaptive systems theory provides significant insight into what makes a team more than just a group of employees. It shows the importance of team interaction for overall team effectiveness. She comments: "We show evidence in this study that

participative team interaction patterns are associated with a team's extensive sharing of information and, in turn, with team effectiveness in both routine and nonroutine task contexts."

PRACTICAL APPLICATION OF THE FINDINGS

Dr Hooigeboom's findings provide vital insights for enhancing team training and development programmes; they provide a system for how to build and sustain a high-performance team depending upon the specific task context. Developmental programmes can be targeted at employees based on the roles that they perform, and what interaction patterns will best support high performance in that environment. For example, specific training can be offered on the task-directed patterns of interaction that we know lead to higher performance levels.

Her findings provide critical insights for the leaders of teams, who need to understand the significance of team information sharing and their recurring patterns of interaction, if they wish to reach high performance standards. Leaders of teams who perform nonroutine work need to be creative in keeping their information sharing mechanisms feeling fresh, new and therefore more effective. Leaders can also be coached on how best to encourage high participation levels from their team members based on the study's findings, so that no team member feels 'out of the loop'. Leadership training interventions can support leaders to be more agile and adaptive so that they can role model and facilitate effective ways of interacting for their teams.

Leaders and team members as well as coaches can use Dr Hooigeboom's system of behaviour coding to assess their individual interactions and how these are supporting or detracting from the team's performance. This is because the codebook specifically includes behaviours that can be actually observed in a workplace environment.

She concludes: "The study shows that teams who can adapt quickly and who are more flexible or open toward each member's input, especially when working in a nonroutine or knowledge intensive task context, exhibit higher levels of performance."



Behind the Research

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Research Objectives

Marcella Hooigeboom's main research interests include: Leader-follower dynamics; Team routine behavioural patterns and dynamics; Team learning; Facilitation of learning at the workplace.

Detail

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Bio

Marcella Hooigeboom currently works as an Assistant Professor at the University of Twente, department Educational Science & Technology, faculty Behavioral Management and Social Sciences. In December 2019, she obtained a Cum Laude Ph.D. degree from the University of Twente (promotor Prof Dr Wilderom), Enschede, The Netherlands.

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Personal Response

Your study provides significant insight into the micro-behaviours of team members in meetings and how this is linked to team effectiveness. How do you define "team effectiveness" and can it also vary according to routine or nonroutine tasks?

/// In the study we asked whether the team members thought that the team accomplished its assigned tasks very satisfactorily (Gibson et al., 2009). Four indicators were used to assess the teams' effectiveness: whether the team was consistently a high performing team; whether the team makes few mistakes; whether the team does high quality work; and whether the team is effective overall.

Thus, we captured the overall idea or perception of team members about how the team performed (rather than using objective indicators of whether the team accomplished specific goals). The perceptual measure can be used in both a routine and nonroutine task context as the teams' specific goals and key performance indicators were not comparable across the different task contexts within this organisation. ///