

MOVING AUDIT TEAMS FORWARD:

Designing firm environments for sustainable learning from errors

Final Project Report for 2016-B03-Gijselaers

Anonymous Version

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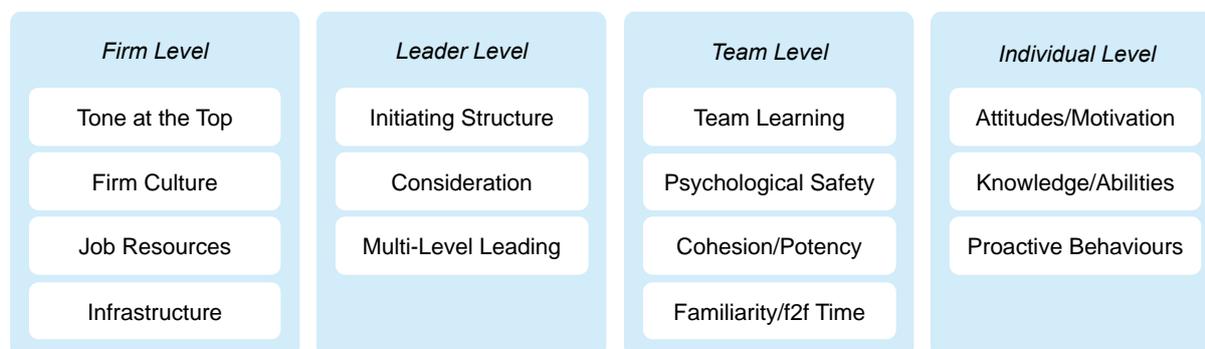


EXECUTIVE SUMMARY

How can audit firms foster team learning and adaptation to manage the challenges of a complex and changing environment?

Over the past ten years, oversight bodies, regulators, governments, and clients have been demanding audit firms deliver higher *audit quality*, closing the expectations gap. As a response, audit firms have been working on developing and implementing new procedures, structures and audit programs. However, this 'hard' approach has not yielded the desired improvements.

The *present project* examines the 'soft' side of this challenge: the human factor within audit firms that allows teams to respond to a challenging, complex and changing environment. We examined why some teams have the capacity to learn while doing their work, and others don't. Through a meta-analysis, a series of interviews, a survey and a case, we derived the following list of drivers that form an environment for sustainable learning:



This multi-level approach to enabling the continuous learning and adapting to changing circumstances provide four levels to intervene at, resulting in a range of specific *recommendations for practice*.

First, at the *firm level*, we emphasize the alignment between purpose, activities, and culture, with the values of quality, professionalism, and learning at its core. This alignment derives from a range of sources, including hiring, career development, training, continuous professional development, quality assessment and assurance, internal communication, but most importantly, consistent observable behaviour by leaders at all levels within the firm.

Second, *leadership* is a multi-level concept: auditors at all ranks should initiate structure and show consideration, in order to create a *team* climate of psychological safety, cohesion and potency, and a sense of familiarity through face-to-face time. Under these conditions, teams can demonstrate learning through the behaviours of information sharing, co-constructing new knowledge, engaging in constructive conflict and team reflexivity, the monitoring and intervening in the team process for greater effectiveness, adaptation, and learning.

Third, *individual* auditors are the smallest unit of learning within the teams. When team members have productive attitudes, are motivated to deliver audit quality (rather than being overly client- or profit-focused), possess relevant knowledge and abilities, and show proactive behaviours, then the drivers listed above can effectively leverage these individual qualities into team and firm-level learning. Without these drivers, however, learning will not take place automatically, regardless of individuals' qualities.

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PROJECT OUTLINE

Purpose

The present report contains the findings of the FAR-funded report “Moving Audit Teams Forward”. This project aimed to develop a better understanding of how the work of audit teams can be improved. In this report we will describe our final findings, discuss recommendations for future research, for the FAR community, and for audit practice. Our project started January 1st 2017, and was conducted by a multi-disciplinary research team. We truly appreciate the opportunities provided in this project to work in close collaboration with audit firms, and audit researchers.

Our project started with the observation that reports by inspection bodies (AFM, IFIAR, MCA) consistently emphasize that audit firms need to do more to understand and address shortfalls in audit quality. These reports identified the error climate as one of the root-causes for insufficient audit quality: “The Dutch Authority for the Financial Markets expects effectiveness of any other measure depends on the degree to which audit firms are able to develop a quality-oriented culture” (AFM, 2015). Our study wanted to specifically address the factor learning as a missing link in current audit research between the well-researched relationship between human capital (abilities, and experience) as inputs and judgment quality as output. We wanted to use essential insights from learning science research as acquired in the fields of health care, aviation, and engineering, to improve auditor’s learning from errors embedded in audit engagements.

Our prior work¹ on the relationship between judgment quality within different hierarchical levels showed that audit firms can significantly improve performance when auditors are able to actively learn from errors in audit experience. In one of our studies we found that level of judgment accuracy differed significantly (more than 40%) when taking into account whether individual auditors had learned from prior experience or not. Given that most of the audit work is conducted in hierarchical audit teams or groups, we felt it is essential to extend this research to the level of audit teams, and their learning behaviour.

Research Questions

The project addressed the following research questions:

- Which firm-level drivers effectively enable learning behaviour at the team level as a response to challenges and errors?
- Which team-level behaviours and processes effectively enable learning behaviour as a response to challenges and errors?
- Which individual leadership behaviours and beliefs effectively enable learning behaviour at the team level as a response to challenges and errors?

Research Approach

We planned to collect data in three ways: experimental, survey, and archival data. Regarding experimental and survey data, for each participating firm, we intended to include 15-20 teams (depending on firm size). Ideally all teams would be connected to a set of core partners and directors, to account for the fluid and overlapping nature of audit teams, as well as for potential turnover during the research period. See the original plan for further details on the intended research methods.

¹ Grohnert, T. (2017). *Judge|Fail|Learn —Enabling auditors to make high-quality judgments by designing effective learning environments*. PhD manuscript, Maastricht University. Grohnert, T., Meuwissen, R. & Gijsselaers, W. (2017). Vol Vertrouwen [Full of Confidence]. In Kloppenburg, M., & Jansen, T. (Eds.), *Artikel 5 De Beroepseer Van De Accountant* [Article 5 Professional Honors of the Accountant] (pp. 145-153). Utrecht: Stichting Beroepseer.

APPROACH & METHODOLOGY

Starting with the intended method of combining experimental, survey, and archival data, it became apparent that this original plan was not feasible for reasons beyond our control. We informed the FAR board accordingly (see correspondence starting Spring 2017). Consequently, we adapted and modified methods and data collection of this project. In line with the original proposal, we collected survey data, replaced our experimental longitudinal approach with a case-based approach, and instead of using archival data, we chose to conduct newly designed meta-analysis and interview studies. The table below illustrates the link between our formulated research questions and the approaches taken to address each question in turn:

Team Learning Behaviour: “involves the activities through which individuals acquire, share, and combine knowledge through experience with one another” (Argote et al., 2001, p. 370), representing “an ongoing process of reflection and action, characterized by asking questions, seeking feedback, experimenting, reflecting on results, and discussing errors or unexpected outcomes of actions” (Edmondson, 1999, p. 353)

<i>Research Question</i>	<i>Approach</i>
Which firm-level drivers effectively enable learning behaviour at the team level as a response to challenges and errors?	<i>Meta-analysis</i> of existing findings across relevant fields and professions
Which team-level behaviours and processes effectively enable learning behaviour as a response to challenges and errors?	Combination of <i>survey</i> insights and observed <i>case-based</i> with practitioner insights in interviews
Which individual leadership behaviours and beliefs effectively enable learning behaviour at the team level as a response to challenges and errors?	Combination of survey insights and observed <i>case-based</i> with practitioner insights in <i>interviews</i>

The Meta-Analysis

Due to the lack of evidence on team learning and learning from errors in auditing research to date, we addressed the first research question through a meta-analysis of extant findings across research domains that have explored this topic so far, such as management, psychology, organizational behaviour, and learning sciences.²

We selected existing quantitative studies of teams in professions whose characteristics at least partially relate to auditing. First, we focused on professionalized working contexts such as healthcare, the law, higher education, and aviation. Second, we selected contexts that are imperfectly predictable and subject to constant change, such as product development, high-tech production, pharmaceutical R&D, firefighting, financial services, and IT development. Third, we included studies that focused on actual professionals in work-based team settings to match the context of our research project. This systematic search led to the initial identification of 3,151 studies and the eventual selection of 50 studies including 4,778 teams. The meta-analytic approach combines effect sizes found across studies to explore overall strength of relationships as well as robustness of findings to date. This analysis allows to (a) draw specific conclusions on where firms should invest resources to foster team learning, and (b) highlight where specifically future research is needed to further understand the research question.

² Nellen, L., Gijssels, W.H., & Grohnert, T. (online first). A meta-analytic literature review on organization-level drivers of team learning, *Human Resource Development Review*. doi.org/10.1177/1534484319894756

Learning Climate: “learning is designed into work so that people can learn on the job; opportunities are provided for ongoing education and growth” [...] “people gain productive reasoning skills to express their views and the capacity to listen and inquire into the views of others; the culture is changed to support questioning, feedback, and experimentation” (Marsick & Watkins, 2003, p.139)

The Survey and Case Set-Up

Following established methodology in existing studies on team learning and team effectiveness in organizational behaviour and learning research, we developed two instruments. First, a survey was assembled to capture the following concepts through previously validated and widely used scales:

- Team learning behaviour, measured through Van den Bossche et al.’s scale (2006)
- Team reflexivity, measures through De Jong and Elfring’s scale (2010)
- Team psychological safety, measured through Edmondson’s scale (1999)
- Learning climate at firm level, measured through Marsick and Watkin’s scale of inquiry and dialogue (2003)
- Leader behaviours of initiating structure and consideration, measured through the audit-specific scales by Pratt and Jiambalvo (1982)
- Individual error orientation, measured through Rybowskiak’s scales of learning from errors, error-related risk-taking, and covering up errors (1999)

Team Reflexivity: “the extent to which group members overtly reflect upon, and communicate about the group’s objectives, strategies and processes, and adapt them to current or anticipated circumstances” (Schipper et al. 2003, p.14)

Taking into account the different hierarchical ranks of audit teams, we set up three different versions of the survey, for auditors who do not provide leadership (e.g. trainees/associates), for those who do provide leadership but also receive it within the team (e.g. seniors/supervisors managers, senior managers), and for those in a pure leadership role concerning the team (e.g. partners and directors). For each participant, we included demographic questions on rank, team tenure, time spent face-to-face with different team members, and years of audit experience.

Psychological Safety: “a shared belief that the team is safe for interpersonal risk taking” (Edmondson 1999, p. 354)

Second, we developed a case designed to capture auditors’ interaction with information in the judgment process, allowing us to measure judgment quality (accuracy of judgment based on accessing sufficient relevant evidence, in line with the AFM’s rationale for audit deficiencies). Based on an existing engagement from one of the participating Big 4 firms, we designed a multilevel case in which all ranks from associates to partners perform an analysis of a loan loss provision at different levels. The lowest ranks of trainees/associates/seniors were given a set of information items that varied in relevance and reliability to explore before forming a judgment. Managers and senior managers would have access to the assessment the same information by lower ranks, allowing them to adjust the judgment if they felt it necessary. Finally, partners and directors were given assessments by all ranks along with the original information items to perform a final evaluation of the case and to finalize the judgment for the team.

This case allowed us to record the following behaviours and judgments at all hierarchical ranks:

- Relevant vs. irrelevant information accessed/spent time on
- Reliable vs. unreliable information accessed/spent time on
- Perceptions of information relevance and reliability
- Deliberate vs. automatic processing of information
- Engagement with others' assessment vs. building own judgment
- Accuracy and confidence of judgment, including overconfidence
- Likelihood to challenge the client's provision

The case and survey were combined into one measurement moment, and auditors across four firms, two Big 4 and two mid-tier firms were invited to complete both instruments via an online link, following communication by their firm explaining the purpose and relevance of the research, and providing codes to register time spent on the instrument. Participating firms selected a number of partners who head teams of 4-8 auditors; per partner, two teams were selected for participation to account for the fluid and overlapping nature of audit teams. Data collection took place between the summer of 2017 and the fall of 2019. In total, 246 individual auditors completed the survey, and 159 auditors completed the case.³

The Interviews

Between October 2017 and February 2018, the research team conducted interviews with 29⁴ auditors from two Big-4 and one mid-tier firm. This sample included 6 associates, 8 seniors, 9 managers, as well as 6 partners. We designed an interview script based on Flanagan's Critical Incidents Technique, in which participants provided information on two specific experiences: working in an effective team and working in an ineffective team. This technique was chosen to elicit auditors' mental models of what enables team effectiveness for audit quality. Following the uncued description of both teams, the wider context, and the staffing situation, questions were asked to explore team learning behaviours, the role of leadership and team beliefs, along with environmental/team/individual characteristics. We also specifically explored the role of hierarchy in these behaviours, beliefs, and dynamics. Interviews were conducted anonymously via the CenterData server environment and took around 45 minutes (ranging from 25 to 50 minutes).

Directive Leadership/Initiating Structure: "leadership that primarily relies on position power [which] emphasizes the need to provide direction to subordinates" (Pearce & Sims 2002, p.173f)
Empowering Leadership/Consideration: "emphasizes the development of follower self-management or self-leadership skills" (Pearce & Sims 2002, p.175)
Destructive Leadership: "leadership that primarily relies on coercive power" (Pearce & Sims 2002, p.173)

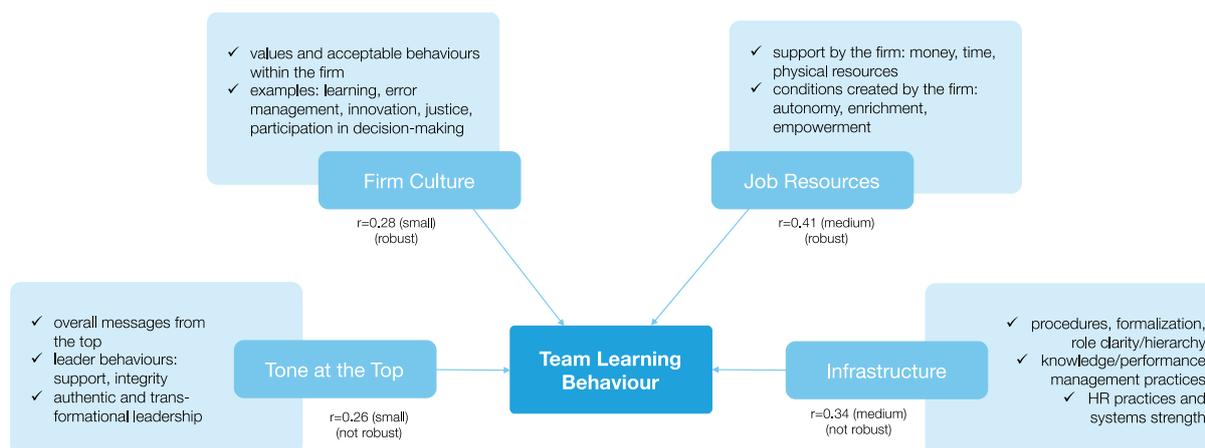
³ We are waiting for information from CenterData to calculate response rates and to determine for how many teams we have sufficient information on to conduct multi-level analysis.

⁴ From the 29 interviews conducted, the recordings of three interviews were lost due to circumstances out of our control. This resulted in a final sample of 26 interviews to be transcribed and analysed.

MAIN FINDINGS

Which firm-level drivers effectively enable learning behaviour at the team level as a response to challenges and errors?

Through the meta-analysis, we identified four main conditions through which firms can foster team learning: tone at the top, firm culture, job resources, and infrastructure:

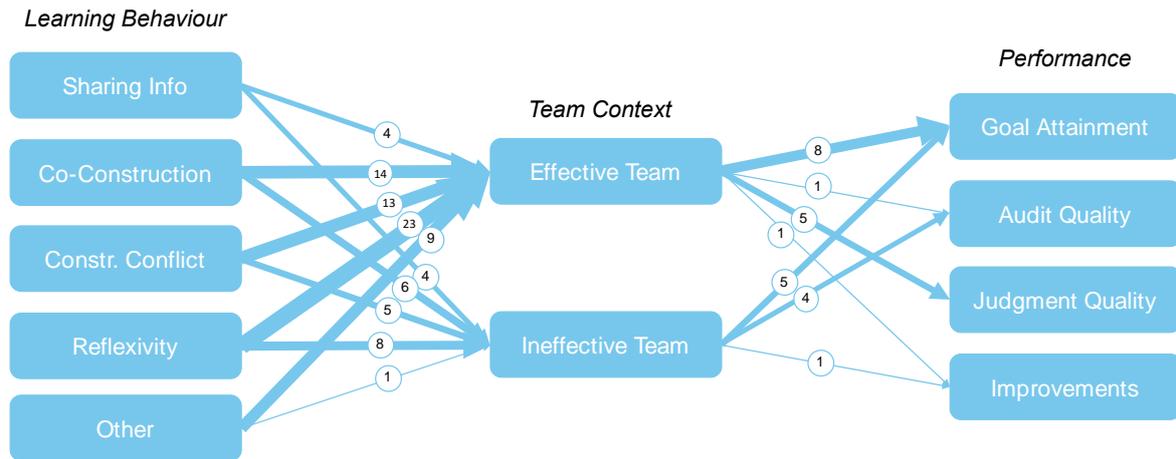


The results show that all four drivers relate positively to team learning. However, only two of these findings are robust: firm culture and job resources consistently fostered team learning behaviours. Robust means that all included studies found similar results. The findings for tone at the top and infrastructure were less robust: based on existing research, it is not yet sure how much they contribute to team learning. The meta-analytic effect sizes were moderate, showing definite value of designing a firm environment for enhanced team learning. Applying these findings to the auditing context, each of the four drivers identified (tone at the top, firm culture, job resources, and Infrastructure) are under direct control of firm management and they supplement the ‘hard’ side of regulations and procedures. Affording a supportive firm culture and sufficient resources to audit teams enables them to flexibly and effectively adapt to challenges, changes, and errors.

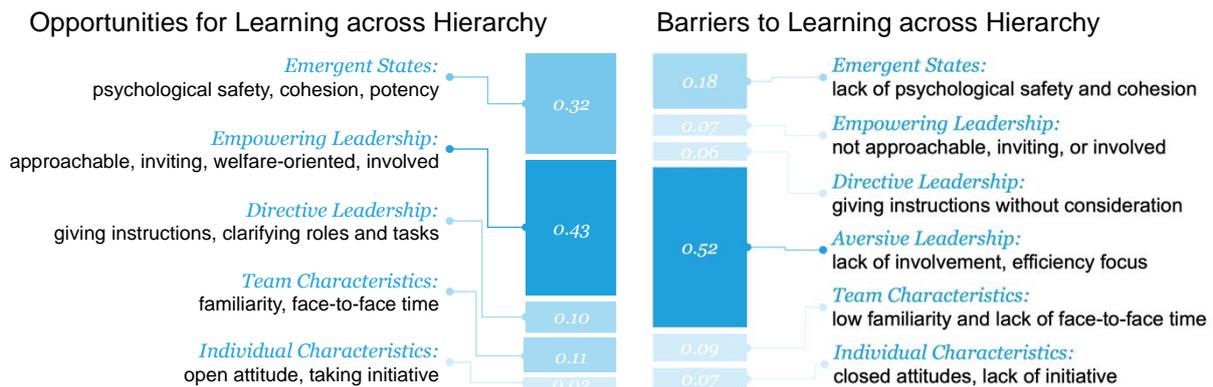
Which team-level behaviours and processes effectively enable learning behaviour as a response to challenges and errors?

Based on the survey data and the interviews we conducted⁵, we derived three main conclusions for research question 2. First, we found that auditors mentioned team learning behaviours more when describing their effective team experience than when describing their ineffective team experience in the interviews. Particularly, auditors described that effective teams engaged in team reflexivity, the monitoring of processes and the adjustment to unforeseen circumstances, the sharing of information, and by co-constructing knowledge by combining information and insights. Ineffective team experiences were characterized by the absence of these behaviours in the interviews, implicitly or explicitly. This finding supports the notion that team learning contributes to audit team performance from the practitioners’ perspective. The illustration below labels how often the concepts included were mentioned together (frequencies). For example, in an effective team, interviewees referred to the co-construction of knowledge 14 times, and to goal attainment 8 times.

⁵ As of March 2020, we have not yet had access to the case-derived data, and therefore only report findings based on survey and interview data.



Second, we identified opportunities and barriers to team learning within the hierarchical context of audit teams. These opportunities and barriers are illustrated below (numbers indicate percentage of time descriptions of team learning behaviours overlapped with descriptions of opportunities and barriers). For example, when describing learning across hierarchical ranks in a positive way in 43% of the cases empowering leadership was mentioned, illustrating an opportunity for learning. In only 7% of the cases, the lack of empowering leadership was described along a negative hierarchical interaction for learning, illustrating a barrier for learning.

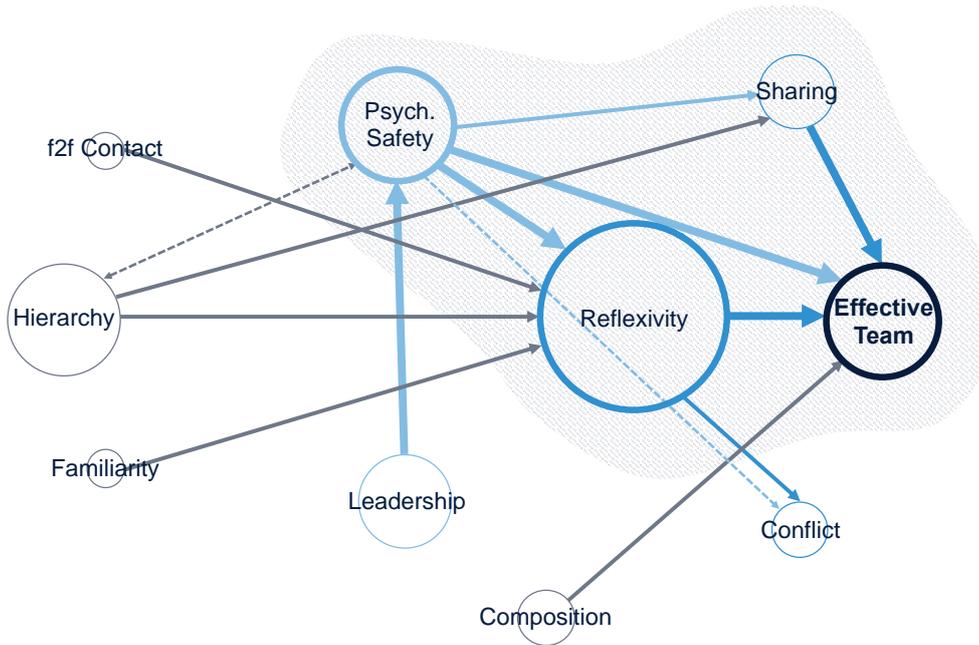


Through the interviews, we identified that opportunities and barriers are, to a degree, mirrors of each other: individual and team characteristics played only a minor role, including team staffing and composition. The main drivers were behaviours of leaders at all levels (see Research Question 3 for more details), and emergent states of what the team believes about their collaboration, including feeling safe, feeling a sense of belonging in the team, and believing the team is able to perform well. The survey findings further support this view: we found significant correlations between team learning behaviour and engaging in reflexivity ($r=0.535$, $p=0.000$), a safe team climate ($r=0.265$, $p=0.000$), and a supportive firm culture for learning ($r=0.356$, $p=0.000$). These variables explain 20.7% of variance in team learning behaviour. Neither of these variables correlate significantly with rank: this means that the behaviour of team reflexivity, the belief of psychological safety and the condition of a supportive learning climate are reliable drivers of team learning behaviours.

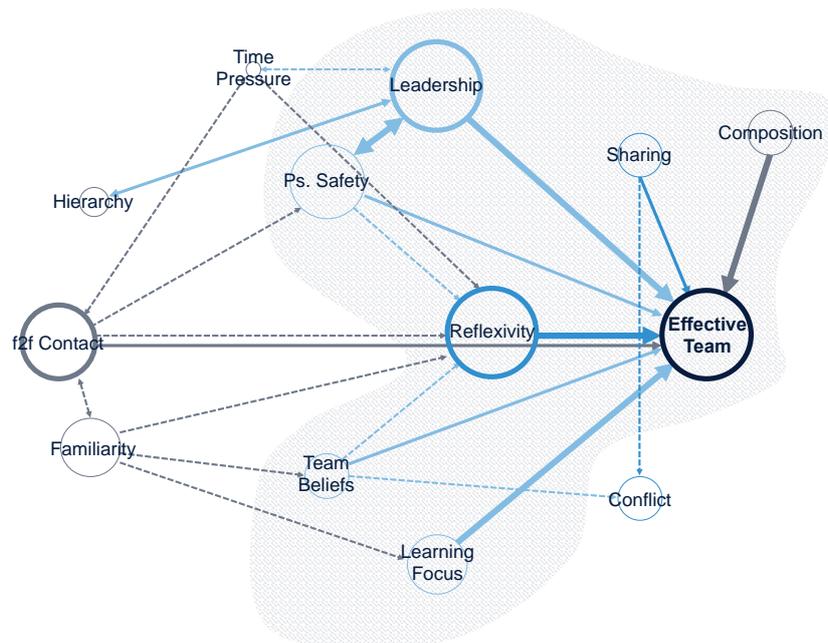
Third, we found that across ranks, the mental model of what makes an effective team becomes increasingly complex. This means that when asked what determines whether a team works effectively or not, lower ranking auditors refer to fewer factors with more straightforward relationships between these factors. Higher-ranking auditors, however, hold very complex representations of team processes and effectiveness, including environmental characteristics and interacting relationships.

The figures below provide illustrations of mental models extracted from trainees/associates (top) vs. partners/ directors (bottom). We distinguish three factor categories: team learning (bright blue), leadership and team beliefs (light blue), individual/team/environmental characteristics (grey). The larger the circles, the more frequently a concept was mentioned by participants, the wider the arrows, the more frequently this relationship was mentioned during the interviews, for example the relation between psychological safety effective teams. The shaded area encircles the relationships that were mentioned by at least half of all interviewees, for example this area is larger for partners and directors compared to trainees and associates.

Mental Model of Trainee/Associate Auditors



Mental Model of Partners/Directors

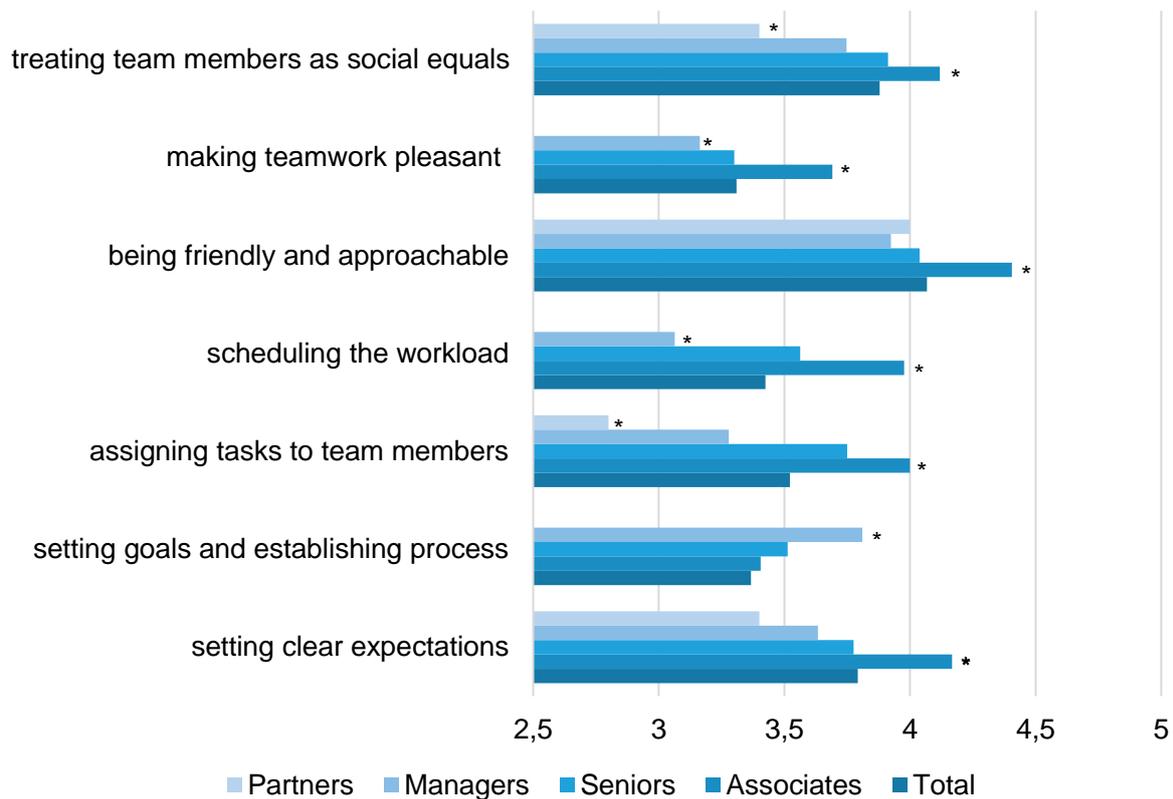


Which individual leadership behaviours and beliefs effectively enable learning behaviour at the team level as a response to challenges and errors?

The final research question explores the role of leaders at all levels within an audit team in team learning and team effectiveness. We included seniors/supervisors, (senior) managers, and partners in our analysis of interviews and surveys. The table below details (1) which leader behaviours have been discussed in the interviews, and (2) how many times each behaviour has been discussed in the context of an effective team, an ineffective team, and together with team learning. For example, in an effective team context, clarifying roles/tasks was discussed 9 times, and being approachable was discussed 10 times. Destructive leadership has been discussed mostly in the context of an ineffective team, such as a client/efficiency focus (9 times).

	Effective Team	Ineffective Team	Team Learning
Initiating Structure			
- issue instructions	4	3	2
- assign goals	7	1	4
- use of procedures	1	0	1
- clarify roles/tasks	9	1	5
- establish standards of performance	0	0	0
- mitigate circumstances	2	2	1
Consideration			
- encourage independent action	6	0	4
- encourage teamwork	6	0	1
- encourage self-development	2	0	0
- approachable/treating others as equal	10	0	4
- prepare team for and implement change	0	0	0
- consider welfare of team members	11	1	5
- involvement in team process	13	0	4
- coaching team members	7	3	2
- open communication with team members	0	0	0
- face-to-face engagement	10	6	2
- inviting participation	17	1	12
- showing vulnerability	4	1	2
- showing appreciation	1	0	0
Destructive Leadership			
- inadequate decisions	0	1	0
- over-controlling	0	1	0
- unclear expectations	0	7	2
- client/efficiency focus	0	9	0
- lack of involvement	0	8	2
- lack of action	0	4	0
- inconsistencies in behaviour	0	4	1
- taking over work from others	1	2	0

The survey data reveal that both initiating structure ($r=0.378$, $p=0.000$) and consideration ($r=0.388$, $p=0.000$) correlate positively and significantly with team learning behaviour, and both correlate negatively and significantly with rank ($r=-0.326$, $p=0.000$; $r=-0.167$, $p=0.000$, respectively). We found several significant differences between hierarchical ranks and how they perceive leader behaviours. The chart below illustrates the leader behaviours for which we found significant differences between ranks. Scores are on a scale from one to five, and the ranks that differ from the others are marked with a star. Overall, we find that associates outscore other ranks, and that partners tended to score the lowest on how their direct supervisor provided leadership – with one exception: the degree of goal setting and establishment of procedures.



RECOMMENDATIONS FOR PRACTICE

Firm-Level Drivers

Our meta-analysis consistently demonstrated the importance of organizational alignment and organizational enactment. *Alignment* refers to whether all organizational processes are connected and related to the organizational purposes. For example, when leaders emphasize the importance of key values then it is not enough to communicate these key values but also that also internal processes are in alignment with those values. This ranges from recruitment to career development policies, from training to professional development and assessment of this development, from quality assurance to quality assessment, and from communication of values to demonstrating and establishing values. Organizational *enactment* is about living / behaving up to the standards as communicated and endorsed by the (team)leaders at different organizational levels.

We found that fostering team learning from the organizational level requires understanding two core questions: (a) which drivers are effective at fostering team learning and (b) who has influence over these drivers and can shape them to optimally support learning at the team level. Having synthesized 50 studies in our review, the following implications for practice were identified:

- Top-level leaders should determine and communicate *core shared values and behaviours*, they should demonstrate ongoing commitment to participation, people, and productivity, and they should continuously socialize and develop effective leaders internally, focusing on authentic features and leaders' orientation toward fostering learning.
- However, their influence on teams is indirect, often through the role of the team leader. Leaders act as *role models* that need to enact core shared values in a consistent way across levels
- Top-level leaders should be supported by HR professionals in their efforts to foster *leadership development*, as well as to supervise and coach internal and external talent
- The studies included in this review recommend that an organization's *culture/climate is fostered by leaders* at all levels who act as observable role-models, for example, through openly learning from errors.
- Providing general support for team learning, including physical resources, information, and rewards; organizations should provide teams with *autonomy, task enrichment, and team empowerment*, for example, through setting stretch goals, job sharing, and skills training, where needed, as well as initiating regular reflection within the team. Top-level leadership should carefully choose when to intervene at the team level so as not to limit autonomy.

These findings are not 'rocket science'. However, we noticed in our meta-analysis that studies reported the difficulty for organizations to live and behave according to the standards they adhere. It is one thing that team leaders agree, for example, with the importance to establish psychological safety in teams, it is quite another to be skilled as a team leader to do so or to understand the underlying meaning of this concept. Moreover, our meta-analysis showed that bridging the gap between what organizations endorse and what they do creates conflict or disagreement in various ways. For example, supporting team learning behaviour implies that leaders are skilled to create a safe environment. But in case team members perceive lack of safety it not only brings to question what team members should do with regard to discuss it with the team leader, but also whether an organization has developed procedures to help both team leaders and team members to prevent such situations in the future.

We noticed in audit firm practice that audit firms are very aware of this difficulty and try to take care of this in many and various ways. We also observed the many efforts being made to align – for example - learning and development initiatives with culture change to develop sufficient support for audit teams. We recommend having monitoring processes in place, embedded within institutional procedures, allowing individuals to exchange (best) practices on how to enable teams to realize their potential. Examples from other industries (aviation, health care, military) might be helpful to develop and maintain institutional procedures geared up to the specific needs of audit firms.

Team-Level Processes

In our interviews, auditors of all ranks shared their best practices for fostering team learning behaviours. First, to foster *sharing of information and co-construction of knowledge*, auditors recommend to:

- provide formal and informal opportunities for sharing and co-constructing knowledge (e.g. meetings with several team members, opportunities for asking questions, face-to-face discussion of review, etc.)
- establish what is urgent and not urgent to facilitate the choice when to contact others for help and support
- role model sharing and co-construction by higher-ranking team around new team members and lower-ranking colleagues to establish the norm of learning on a team.

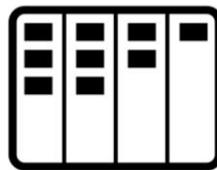
Second, the most complex team learning behaviour is *constructive conflict*, the “conflict or an elaborated discussion that stems from diversity and open communication that leads to further communication and some kind of temporary agreement (Decuyper et al. 2010, p.116). Managing conflict in a constructive way requires striking a careful balance between team members’ inputs. Our interviewees shared the following best practices to manage constructive conflict:

- take dissent, challenges or questions seriously: often brought up to improve quality, not to delay or for unnecessary difficulty
- decide who needs to participate in solving a conflict: all team members? Which ranks? Expert from national office?
- explore reasons for differences in opinion, e.g. assumptions, information used, procedures applied, rather than taking a personal approach
- decide whether final decision needs to be taken by some team members or rather by the whole team to gain traction
- share outcomes and approach to resolution with all ranks within the team to familiarize more inexperienced auditors with uncertainty and complexity

Third, participants shared their recommendations and best practices on engaging in *team reflexivity*, monitoring and adjusting team processes when faced with challenges or novel situations. In contrast to the other three learning behaviours, not all team members should be engaged in reflexivity throughout the audit; rather, it should be a role that one team member, ideally at the management rank, takes up and intervenes when needed throughout the audit:

- offer formal moments of reflexivity, e.g. at the beginning of the audit, half-way, at the end, between audit cycles
- assign reflexivity as a role to one team member (around manager rank) to continuously monitor process and progress, calling a time-out to adapt when needed, including accountability for engaging in reflexivity
- establish the purpose of reflexivity and manage expectations of how reflexivity will be integrated into the team’s processes
- include all ranks in reflexivity moments to learn and teach at the same time

Finally, auditors of one participating firm shared a practice that had been newly introduced when we conducted the interviews we recommend to be more widely used: *the KanBan method*. For larger teams, interviewees described that in the morning, team members would gather in a dedicated room where tasks are visualized on a board, listing a task backlog, to dos, tasks in progress, help needed, and tasks completed. During a brief meeting, team members first ‘check in’ with each other by sharing how they are feeling (e.g. how ready and engaged in work they are), showing consideration for team members’ welfare and allowing leaders of all ranks to role-model vulnerability. The leader of the meeting, often not the partner, will then invite all team members to share their status, their next to dos, and where they expect to need help, setting the stage for reflexivity and goal-setting. Either throughout or at the end of the day, the team will come together again, updating the visualisation of work tasks, discussing help given/lessons learned, and establishing the next relevant goals, completing the cycle of reflexivity and goal-setting. This approach thus combines many of the conditions under which team learning behaviours are likely to occur, as illustrated below:



The KanBan Method



Individual Leader Behaviours

Through our interviews, as well as the survey information, we found that *empowering/consideration leadership* was highly effective for fostering team learning behaviours. The behaviours and their relation to learning and effective teamwork can be found in the table on page 11.

In addition to these behaviours, leaders have another powerful lever: creating *psychological safety*. Interviewees in leadership positions, ranging from seniors to partners, gave the following tips for creating and maintaining a psychologically safe team climate for all members:

- establish acceptable behaviours (e.g. asking questions when needed, not punishing errors, taking time to get to know each other, being physically present with your team, etc.)
- share who can help with specific questions, and when and how to contact/ask for help
- all ranks making an effort to connect with all other ranks, e.g. partners and trainees
- leaders need to role model desirable behaviours consistently (also when under time pressure or when team members underperform)
- do not make assumptions about why team members underperform (e.g. made an error, took longer than expected), but ask questions and analyse the wider situation
- show proactive interest as leaders: ask how things are going, if help is needed, if anything is unclear to provide opportunities for and to lower barriers to sharing
- in the leadership role, share your own values: why do you value an open, safe climate?
- be vulnerable yourself and share (past) struggles and questions to legitimize others’ concerns
- building a safe team climate takes time: behaviours need to send consistent signals again and again, especially when the going gets tough
- celebrate team successes together, at the end, but also during the audit: show appreciation and the value of working together in an effective way

REFLECTION & FUTURE RESEARCH

Lessons Learned

Over the course of this project, we have derived three central lessons learned about creating an effective synthesis between research and practice, following FAR's mission.

Partnerships. Creation of new knowledge, understanding practice, and developing new insights for practice can be done in many ways. Practitioners, professionals, and researchers have always developed tools and designed research approaches to achieve new insights. As a research team we combined classic theory-driven approaches with approaches in which the audit firms were our partners. Our meta-analysis can be considered as a classic academic research approach while we engaged audit practice in our team studies as a source for synthesizing knowledge from practice. In our view partnering with practice should be one of the core research practices developing a better understanding of effective work practices. Sharing data, tools and insights from both audit practice and the academic research community enables both to develop disruptive insights and appreciate the value of contributing partners. Our research project led us to the idea that FAR may achieve its full potential when partnering between audit practice and academic research to develop new insights for continuous improvement of audit quality. In our view FAR holds the unique opportunity to move away from the classic research – development – diffusion (RDD) practice in which questions are researched through data collection, data analysis, and communication of results. Where the latter serves as the end point of the whole process. We recommend a continuous process of co-creation and building engagement for the long-term.

Co-Creation. Research driven by questions and needs from audit firms is essential to develop close and effective links between research and practice. The main difficulty lies in translating issues from practice into academic research questions such that answering these questions contributes to practice and theory development. In our view partnering with practice goes beyond solely collecting data from a firm partnering in research. It encompasses more than being a setting for data collection only. Co-creation requires both practice and research engaging in elaborating questions, developing a shared understanding of research outcomes, and translating research findings into actions.

Follow-Up & Building Long-Term Engagement. Researchers, audit firms, and societal stakeholders must weave together their knowledge and experience to examine new pathways for improving audit quality. This requires developing long-term engagement and follow-up on research to identify shared interest in audit practice and shared understanding of the different stakeholders' perspectives. We strongly recommend that audit firms initiate "clinical" research (research on audit practices) and seek for long-term connections with theory-driven research. Health care and aviation can be considered as typical examples of professions operating in a complex world defined by the interplay between practitioners, regulators, overseers, societal stakeholders, and academic research, resulting in professional performance. We learned that it takes establishing long-term connections with audit firms to make research findings more meaningful.

Obstacles

The present project encountered a variety of obstacles in the chain of research activities. We communicated about these issues through email and formal correspondence with the FAR board. We want to highlight some obstacles which deserve attention from the FAR board.

Data-Collection & Data Storage. From the very beginning, it was self-evident that data security should play a crucial role. Yet, we experienced significant delays in the data collection process for two main reasons. First, FAR initially focused on archival data collection, despite accepting proposals that required different procedures e.g. for interviews, survey and case-based research. Second, concerns about data security were taken up only after the beginning of our project, requiring us to wait for protocols to be put in place. Regarding data storage, we want to share our deepest concerns about accidents in which our data were deleted without our consent; or incidents in which essential data analysis tools were not made available; or situations in which the cure for data protection harmed the quality of data collection. All of these contributed to substantial delays in our research process.

Time and Budget Pressure. Part of the job is that audit firms and audit professionals experience budget pressure all around them. The same applies for audit researchers. This is especially true for PhD students and Post-doc researchers depending on a timely progress of the data collection process such that they can achieve their PhD on time. We strongly encourage the FAR board to pay explicit attention to this issue whenever assessing and granting research projects and evaluating the interdependencies between participating audit firms and audit researchers. We highly appreciated how the FAR dealt with these issues for our projects but encourage the FAR board to put continuous efforts in this. We recommend that future projects allocate (more) time to idle research time during the project period.

Next Steps

FAR has opened up opportunities to conduct research in fundamentally new ways. It shows that research can be guided by building a different relationship between a research team and audit professionals. We focused on co-creation as a driver of developing and implementing new knowledge in audit practice. We recommend that FAR continues and expands its efforts to fund research being developed in co-creation with practice. This allows both audit firms and academic researchers to create a win-win situation serving both the further development of academic research on the theory and practice of auditing. Such approach could be institutionalized by creating platforms in which both audit firms and academic research prepare research plans in close collaboration as if they are preparing “clinical” research. FAR could allocate part of its research funding for this type of research projects.

We recommend paying explicit attention to knowledge utilization with audit firms. In our view, FAR is not a complement of NWO or other scientific foundations. We propose that FAR should not be a gatekeeper in funding research, but it should serve as a broad platform which, amongst others, funds research plans developed in close collaboration between audit firms and audit researchers. In our view one of the drivers for the (widening) gap between theory and practice consists of the incentives for doing monodisciplinary research. If indeed FAR wants to further audit practice, FAR may seek new ways encouraging the development of multidisciplinary research on (and together with) audit practice. We recommend that FAR opens up new opportunities for data collection, data management, and data analysis. The current procedures did not yet help in being flexible and efficient. The balance between data safety and flexibility/efficiency was secondary to data safety. It is our experience – when comparing it with other audit research projects we conducted - that the classic dilemma between control versus trust cannot be solved by imposing strong legal regulations. Finally, we recommend to develop a grant program for scaling-up research outcomes with explicit attention for implementing research findings (and experimenting with findings) in audit firms.

DELIVERABLES

This section outlines the deliverables of the research project, including valorisation activities, data collected, conference presentations, and research papers.

Data Collections

2017-2018	Interviews at *** (9), *** (10), and *** (10); all ranks
2017-2019	2017-2018: 159 individual participants in a survey and a case (XXX complete teams) across ***, ***, ***; 2019: 87 individual participants in a survey (XXX complete teams) at ***
2018-2019	Meta-Analysis with 50 papers studying 4,778 teams

Valorisation Activities and Research Presentations

2016	Presentation of project proposal at the first FAR conference
	Consultancy meeting with Learning & Development @***; focus on cultural change within firm
	FAR Masterclass 'Designing audit firm environments for sustainable learning from errors'
2017	Masterclass 'Jong Geleerd is Oud Gedaan' learning as a driver for audit judgment quality at the Dutch Authority for Financial Markets (AFM).
	Consultancy meeting with Learning & Development @***; focus on cultural change within firm
	Consultancy meeting at AFM on Learning and Culture Change
2018	Presentation of interview findings at the third FAR conference
2019	Presentation of interview results research question 2 and 3 at the bi-annual European Association for Research on Learning and Instructions Conference, August 12-16, 2018, Aachen, Germany.
2020	FAR Podcast & Sharing of results meta-analysis
	Presentation of mixed-method findings of research question 2 at the Annual Meeting of the American Educational Research Association, April 17-21, 2020, San Francisco, USA. (cancelled due to COVID-19)
	Presentation of final project results at the fifth FAR conference (postponed to 2021 due to COVID-19)

Publications

- Grohnert, T., Meuwissen, R. H., G. Gijsselaers, W.H. (2017). Vol Vertrouwen, in Jansen, T., Duits, H. & M. Kloppenburg (eds.). *Beroepseer van de Accountant*. Culemborg, The Netherlands: Stichting Beroepseer.
- Nellen, L., Gijsselaers, W., Grohnert, T. (online first). A meta-analytic literature review on organization-level drivers of team learning. *Human Resource Development Review*. <https://doi.org/10.1177%2F1534484319894756>
- Grohnert, T., Simons, P., Meuwissen, R. H. G., Gijsselaers, W. H. (working paper). *Conditions for Learning in Hierarchical Teams: A Mixed-Method Bounded Account of Acyclical Hierarchy in Professional Service Teams*.
- Grohnert, T., Meuwissen, R. H. G., Gijsselaers, W. H. (working paper). *On-the-Job Learning in the Audit Team - Quantitative and Qualitative Evidence from Practice*.

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