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Middle leaders' facilitation of teacher learning in collaborative teams

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ABSTRACT

There is an increased focus on schools and school systems to develop teaching teams to improve school teaching and learning practices. As such, effectual school leadership has become synonymous with creating the conditions for teachers to work collaboratively to improve school teaching and learning. Middle leaders, teachers who are formally appointed to a leadership role, operate between senior leaders and teachers, are often responsible for leading teacher teams and facilitating the communicative space so that collaboration leads to positive outcomes for teacher practice and student learning. However, there is a lack of conceptual understanding of the micro-processes middle leaders enact when facilitating teacher teams and how facilitation impacts new or different teaching and collaborative practices. Drawing on the theory of practice architecture, we interrogate data from interviews, observations, and artefacts in three case study schools in Australia, to understand facilitation through the modes of action (doings), forms of understandings (sayings), and ways in which participants relate to one another and the world (relatings). Analysis of data revealed middle leader facilitation is consequential to how teacher team operate and that six ecologies of facilitation practices are typically enacted by middle leaders: procedural management, regulating interactions, expert guidance, purposeful dialogue, decision-making, and social-emotional support.

KEYWORDS

Middle leadership; teacher collaboration; teacher teams; facilitation; theory of practice architecture

Introduction

Teacher collaboration is a high-leverage approach for teacher professional learning (Vangrieken et al. 2016). It is based on the premise that teaching should not be an isolated and fixed practice but instead should be open and dynamic to ways of sharing, reflecting, challenging, and developing on-going improvements in teaching and learning (Harris, Jones, and Huffman 2018). Numerous approaches to teacher collaboration exist relating to areas such as

leading change (Nguyen and Ng 2020), curriculum design (Voogt, Pieters, and Handelzalts 2016), teacher relationships (Lockton 2019), and collective efficacy (Meyer, Richter, and Hartung-Beck 2022). Across such studies, teacher collaboration is grounded in three assumptions. First, it assumes that teachers are professionals with the knowledge and understanding to make the best decisions for the students they teach. Secondly, knowledge is a social construct that is best developed in context with others, and as such teachers, through their day-to-day experiences, know how to collaborate and can collectively build their capacity by working with, talking to, and learning from colleagues. Thirdly, the outcome of teachers working together in teams is that new understandings and practices emerge that are not possible when working in isolation. Studies on teacher collaboration indicate that when teachers meet regularly to discuss ideas, make decisions, and initiate change (Kauffeld 2006), new patterns of action, shared understanding, increased knowledge, and professional growth are apparent (Mccotter 2001; Van den Bossche, Segers, and Kirschner 2006). As such, teacher collaboration constitutes an important catalyst for school improvement.

There is no shortage of collaborative models for schools to adopt and adapt to their sites. Some of the more popular research-based models include Collaborative Inquiry (Bell et al. 2010), Professional Learning Communities (Owen 2015), Lesson Study (Dudley et al. 2019), Learning Walks (Allen and Topolka-Jorissen 2014), and Instructional Rounds (Teitel 2014). While each approach differs in terms of process and focus, all share common structures including dedicated time for teachers to meet, a focus on improving teaching and learning, and the use of data to monitor performance and improvement.

Several studies report on the conditions necessary to enable effective teacher collaboration such as mutual accountability for student growth (Talbert 2010) and deep conversations about teaching and learning (Lipscombe, Buckley-Walker, and McNamara 2020). Another condition prominent in the literature is the significant role leaders play in the development of positive teacher-collaborative meetings in schools. Researchers have found that principals work best to create conditions for teachers to collaborate effectively (Duffy and Gallagher 2017) and team leaders, often middle leaders, have a positive impact on the way teams operate (Lipscombe, Tindall-Ford, and Grootenboer 2020). Middle leaders, as facilitators of collaboration, create relational spaces for teachers to connect with one another and engage in dialogue and develop shared understandings of educational practices (Grootenboer, Rönnerman, and Edwards-Groves 2017). However, facilitation appears to be almost a hidden practice with sparse literature that interrogates and describes the act of facilitation or how it contributes to teams of teachers developing educational practices. Put bluntly, there is a lack of conceptual understanding of the collaborative and dialogical processes enacted when facilitating teacher team meetings and how these facilitating practices impact new or different teaching and collaborative practices for teacher teams. This study is situated in three schools in Australia

and examines how middle leaders in these schools facilitate teacher learning in collaborative teams. Importantly the paper advances an understanding of how middle leaders' facilitation of teacher teams is socially contingent and consequential to how teacher teams operate.

Middle leadership

Middle leaders play a significant role in leading the teaching and learning in schools. While ambiguous to define, due mainly to the contextual nature of their role in schools (Gurr and Drysdale 2013), middle leaders are typically trained teachers who hold formal leadership responsibilities in schools (Gurr 2019) and act as brokers between senior leaders and teachers (Lipscombe, Tindall-Ford, and Lamanna 2021).

Middle leaders typically hold roles such as Head of Department or Faculty, Subject or Grade Coordinator and as such are often responsible for leading teaching and learning. Like all leadership roles, the impact of middle leadership in schools is of great interest, while scholars suggest middle leaders have great potential to impact school improvement (Bryant and Walker 2022), research is still scarce in determining the level of impact. For example, in a systematic review of 35 articles on middle leadership, Lipscombe, Tindall-Ford, and Lamanna (2021) determined that only seven articles investigated middle leader impact. Six of the articles reported on the indirect impact of middle leaders in areas such as teacher team development (Bryant, Yiu Lun, and Adames 2020), professional learning (Koh et al. 2011), and school reform (Bryant and Rao 2019). Only one article, by Li et al. (2018), claimed a direct impact in areas such as teacher pedagogy and student learning. All seven studies reviewed were based on perception data; no reviewed studies provided evidence of causal relationships between middle leadership, teacher practice, and student learning.

While research is limited in terms of middle leadership impact, researchers suggest middle leaders are important for leading school improvement, including improving teacher practice (Gurr 2019), developing collaborative teams (Lipscombe, Buckley-Walker, and McNamara 2020), and contributing to school reform (Bryant and Rao 2019). Grootenboer, Rönnerman, and Edwards-Groves (2017) posit middle leader facilitation is an important practice in the development of teachers primarily via collaboration and communicative spaces.

Dialogue and facilitation

Teacher collaboration, teachers coming together to talk about their practice, has been shown to advance teacher's social-emotional intelligence and reflective practices (Ohlsson 2013), development of knowledge (Zellermayer and Tabak 2006), and creation of classroom teaching and learning products (Lipscombe, Buckley-Walker, and McNamara 2020). However, scholars have also recognised

that teacher dialogue may not necessarily lead to teacher improvement, with teachers tending to avoid critical reflection, resulting in dialogue focussed on sharing of ideas or confirmation of beliefs, instead of development and improvement (Scardamalia and Bereiter 2006; Supovitz 2002). Unmanaged interactions in team meetings have been shown to lead to poor decision-making, social loafing, and ineffective development (Lehmann-Willenbrock, Allen, and Kauffeld 2013; Sunwolf and Frey 2005).

Facilitating teacher teams is an important aspect of teacher collaboration. The facilitation of teams is focussed on managing team processes that enable team members to contribute to share knowledge development, shared decision-making, and to work towards an interdependent relationship with shared values and goals (Mac and Albertson 2020; Salas, Fiore, and Letsky 2012). Facilitation can lead to school improvement when facilitators promote agency with team members, work systematically, focus on developing deep knowledge and use data and evidence (Le Fevre et al. 2014). As such, effective facilitation can support team members to connect ideas and encourage questioning and coherence between ideas and people. Some researchers, however, have cautioned that facilitation is complex, demanding, and requires facilitators who can challenge the status quo with an improvement mindset, whilst also possessing a deep knowledge of curriculum and pedagogy (Highfield and Robertson 2016). Interpersonal aspects such as building relational trust amongst team members (Edwards-Groves, Grootenboer, and Ronnerman 2016), procedural aspects such as time (Tam 2015), and dialogical aspects such as questioning (Lipscombe, Buckley-Walker, and McNamara 2020) have been identified in research as important to successful facilitating. However, there is limited research in the field of education that provides insights into the micro-process, or minute and discrete interactions, of effective teacher-team facilitation. For example, while dedicated and managed time to collaborate is identified as an important aspect of teacher collaboration (Tam 2015), research into how time management is facilitated to ensure tasks are prioritised and accomplished in the designated team meeting time is limited. This makes it particularly difficult for middle leaders, who according to research, exercise their leading practice by facilitating the development and capacity of teachers (Edwards-Groves, Grootenboer, and Ronnerman 2016).

Theoretical frame

In this study, the facilitation of collaborative teacher teams is viewed as a practice that middle leaders exercise as part of their leadership (Grootenboer, Rönnerman, and Edwards-Groves 2017) in order to create communicate spaces for teachers to work together in school improvement. Positioning facilitation as a practice means that facilitation is not analysed or understood as a set of traits or characteristics of a leader, even though this is pervasive in leadership and

team literature (Raelin 2021). Instead, facilitation is examined and understood in the context in which it is situated, and in consideration of the conditions that enable and constrain the practice.

The practice-based approach is informed by a range of practice theories (Kemmis et al. 2014; Nicolini 2013) that focus on the 'form of socially established cooperative human activity' (Kemmis et al. 2014, 155) to make sense of a phenomenon. In practice theory, relationships and interactions are deeply embedded within sites or places. Rather than describe a treatise of these theories, the following three points are raised to explain why a practice-based approach is useful in understanding middle leaders' facilitation of teacher teams. Firstly, considering facilitation as a practice means that both the human activities of facilitation and the non-human materials (Schatzki 2002) or arrangements (Kemmis et al. 2014) are bundled together as a form of meaning. This results in arrangements of facilitation being understood as important aspects of interpreting what and why things are happening. Secondly, facilitation as a practice means the context in which facilitation takes place is not fixed but instead is viewed as a dynamic site that is constantly constructed and reconstructed (Geiger 2009) according to social, political, and community influences. As such, facilitation is not a set of characteristics that can be applied to a one-size-fits-all model but instead are shaped and reshaped by context. Thirdly, practices are deeply ethical and moral and are orientated towards society rather than an individual (Kemmis et al. 2014). This view posits that facilitation is not a knowledge or skill technique but instead is situated within human and social endeavours with moral and ethical consequences.

Kemmis et al. (2014) explain that practices are best understood by exploring the cultural-discursive, material-economic, and social-political dimensions of arrangements as they unfold in times and spaces. The cultural-discursive arrangements relate to practices as 'sayings' with the medium of language; material-economic arrangements are the 'doings' in the medium of physical space and time; and finally, the social-political arrangements are the 'relatings' in the medium of power and agency. Although separated for analytical purposes, the arrangements 'hang together' (Kemmis et al. 2014) to form an ecology of practices recognising that practices are interrelated and, therefore, one practice shapes another practice. In this study, the theory of practice architecture (TPA), and the saying, doing, and relating practices, as described in the data analysis section, enabled an exploration of how facilitating practices by middle leaders contribute to team learning and teaching.

Methodology

The research reported was undertaken at three primary school sites in Australia as part of a broader study into teacher collaboration. Each school was purposefully selected (Harsh 2011) as they had invested in teacher collaboration as a

school improvement strategy, had a middle leader leading a teacher team, and were trying to better understand the impact of collaboration on teaching and learning.

Table 1 provides information on each school site, the middle leader, and teacher team members who participated in the study. Teacher team A consisted of Kimberley as the middle leader and three Year 2 teachers. Team B, led by Josh as the middle leader consisted of five teachers who taught students from Years 3-6. Team C included Emma as a middle leader and five teachers who taught across Kindergarten (the first year of school) to Year 2.

Reflecting the qualitative nature of practice-based research, data were collected in situ and generated through interviews, recorded team meetings, and artefacts. Table 2 summarises the data collected.

Middle leader 30-minute interviews were audio-recorded, occurred pre- and post-recorded teacher team meetings and focussed on the middle leader's practices and experiences when facilitating teacher team meetings. Interview questions included: What were your contributions to the task? What were your team members' contributions to the tasks? What elements would you consider obstacles or challenges in facilitating the team meeting? Team meetings were audio-recorded to capture the normalised process of the team meetings. Artefacts from each teacher team aimed to advance an understanding of the products used and designed as part of the team meetings.

Data analysis involved a three-phase process. To first examine and understand a large amount of qualitative data, the initial analysis involved inductive reasoning; two researchers read carefully through the data multiple times to identify important sections of text relating to middle leaders' facilitation of teacher teams and through this process determined 24 codes representing boundaries of meaning aligned to facilitation (Nowell et al. 2017).

Table 1. School demographics and teacher team membership.

	Number of students in the school	Number of teaching staff in the school	Team membership of each team	Middle Leader
Team A	232	16	3 teachers	Kimberley
			All Year 2 teachers	5 years in a formal middle leadership role 20 + years teaching
Team B	165	12	5 teachers	Josh
			One teacher in each Year 3–6 plus one relieving teacher	4 years in a formal middle leadership role 20 + years of teaching
Team C	369	23	5 teachers	Emily
			Two teachers each in kindergarten and Year 1, and one teacher in year 2	First year in a leadership role 5 years of teaching

Table 2. Data collected.

	Middle leader Interview	Recorded team meetings	Artefacts collected
Team A	2	2	Meeting minutes, Team developed documents including curriculum plans, school guidelines, and timetables.
Team B	2	1	
Team C	2	2	

Utilising TPA theoretical framework, a deductive analysis was then undertaken to categorise the 24 codes and their accompanying data into practices of sayings, doings, and relatings (Kemmis et al. 2014). 'Sayings' related to the thinking and talk of facilitating, the 'doings' involved the actions of facilitation including consequent actions by participants, and the 'relatings' were associated with the relationship, power, and agency between participants as a result of facilitation. Fourteen practices associated with facilitation were identified from this second analysis of data.

In the third phase of analysis, thematic networking (Attride-Stirling 2001) was applied to explore themes that emerged across the 14 practices from the second phase to identify the patterns that underlie them. Specifically, a focus on how, when multiple practices are connected in a site, may form, what Kemmis (2022) defines as an ecology of practices, different practices with partially overlapping functions. From this process, six ecologies of facilitation practice were identified to explain how the actions, discourse, and relationships recorded in the data coalesced and how facilitation influenced teaching and learning. Table 3 outlines the codes, categories, and themes determined through the data analysis process.

Findings

In this section, the analysis of participant interviews, team meeting observations, and artefacts are organised in six key ecologies of facilitation practices: (1) managing procedures; (2) regulating interactions; (3) expert guidance; (4) purposeful dialogue; (5) decision-making, and (6) social-emotional support. For each practice, the constituent practices, the arrangements, and conditions that enabled or constrained them, are discussed.

Managing procedures

One of the practices that enabled team facilitation for the middle leaders was the managerial processes. Managing procedures refers to how middle leaders planned for and organised structures to aid in the facilitation of the meeting

Table 3. Codes, Categories, and Themes determined through data analysis.

Phase 1: Codes of facilitation ($n = 24$)	Phase 2: Categories of facilitation ($n = 14$)	Phase 3: Themes of facilitation ($n = 6$)
• Curriculum discussions	Sayings	• Managing procedures
• Student learning needs' discussions	• Curriculum focussed	• Regulating interactions
• Procedural discourse	• Student learning focussed	• Expert Guidance
• Clarifying ideas	• Teacher learning	• Purposeful Dialogue
• Connecting ideas	• Procedural discussions	• Decision-Making
• Reinforcing ideas	• Problem-solving conversations	• Social-emotional support
• Expressing likes	Doings	
• Focussing meetings	• Setting focus	
• Collection and distribution of resources	• Sharing and collecting resources	
• Co problem solving	• Note-taking	
• Locating resources	• Democratic decision-making	
• Note-taking	• Organising time and space	
• Correcting misconceptions	Relatings	
• Directing focus	• Expert guidance	
• Listening	• Praise	
• Timekeeping	• Correcting misconceptions	
• Distributing tasks	• Relating to different year levels	
• Self-talk		
• Asking opinions		
• Negotiating tasks		
• Negotiating next meetings		
• Acknowledging new ideas		
• Asking for contributions		
• Co-ownership of tasks		

and included, from this data, agendas, minute taking, sharing of resources, and delegation of tasks. Procedural discourse during the observations indicated that the organisation and management of such procedures enabled a more effective and efficient team meeting.

Both Kimberley and Josh explained they determined and distributed the agenda before each meeting. The analysis of the meeting observations revealed that this managerial protocol shaped the direction of meetings and resulted in the teams beginning the work efficiently. For example, both Kimberley and Josh began the meetings quickly summing up the focus from the last meeting and within the first minute from the commencement of the meeting both teams had begun working together. At the interview, Kimberley explained the agenda was a deliberate strategy for team efficiency and productivity, 'We knew exactly how much time we had … you're staying focused and actually getting through what you need to get through'. Emily did not have a meeting agenda and instead, the first few minutes of both observed meetings began with teachers talking about what they could focus on in the meeting and how they could locate resources.

During observations both Kimberley and Josh recorded meeting minutes. Josh shared at the interview that minute-taking enabled a more focussed meeting that held team members to account for the actions they agreed on in previous meetings:

> we keep a record of our meetings, so we have that to go back to and say, 'Well, hang on, we decided … ' At each PLC, we do a review, 'Okay this is what happened'.

Another form of procedural management was observed in the organisation and distribution of resources and tasks. During the interview, Kimberley explained that she distributed resources that she identified as 'helpful' and explained the management of resources enabled a more efficient meeting:

> I think just having all the resources with us we already had everything that we needed. We never sat there and went 'Oh my God, we should have brought that'. So, everything that we needed to develop the assessment.

The above indicates the social-political arrangement of the management of resources by the middle leader and how this was perceived to enable team efficiency. Kimberley's role of sharing the resources resulted in the team adopting these resources without question or review. However, for Kimberley, the purpose of sharing the resources was to enable an efficient meeting. This example demonstrates that an intended enabler to facilitation, such as the distribution of resources may in fact lead to a constraint, in this example, the adoption of resources across classrooms without any critical discussion.

Delegating tasks amongst team members was a social-political arrangement that enabled members to take shared ownership; however; how this was enacted and for what benefit was different for each middle leader. During the interview, Josh explained that he trusted his team members to complete the assigned tasks on their own; however, Emily perceived delegation of tasks beyond team meetings as a constraint to how her team interacted. During the interview she explained doing the work together at the meeting was essential to 'true collaboration':

> I always thought that if you're collaborating, you're divvying things up, but it goes much further than that; it's designing things together … , it's changing the way you do things together rather than, 'You do that, I do this'.

These different experiences of Josh and Emily illustrate that the delegation of tasks is viewed as both an enabler and constraint to team facilitation. For Josh, the practice of delegating tasks enabled autonomy and ownership by team members. In contrast, for Emily, delegating tasks challenged her beliefs on the practice of collaboration and was viewed as a constraint to teams developing shared knowledge together.

Regulating interactions

While not perhaps as overt as other practices, regulating the interactions between team members was a facilitating practice observed by Josh and Emily and discussed by Kimberley. Regulating interactions refers to how middle leaders control or maintain the communication and involvement of all

team members, which was facilitated through sharing of work samples, the use of technology and questioning of team members.

During interviews, Josh shared that as a result of the large and diverse team of teachers who teach across four different year levels, asking each person to share work samples at the meeting enabled a more evenly distributed pattern for the sharing of ideas:

> We usually take it in turns and bring to the table a sample of work … You get the comments coming in about, 'Have you tried this? because when you think about the wealth of knowledge in a collaborative team, you've got sometimes over 100 years of teaching to draw on

For Josh, creating opportunities for all team members to share their samples of work highlights the social-political arrangement of how team members could relate to one another that enabled the development of shared practices within the team and was a way to value the internal and collective knowledge of team members.

The cultural discursive arrangement of middle leaders' questioning their team members on their ideas was both perceived as an enabler and constraint to facilitating. Josh, when discussing which assessment items would be included in an upcoming test asked probing questions from his team such as 'so what do you think', to ascertain ideas from individual team members.

For Emily, who had the least amount of experience as a teacher and middle leader in the study, regulating interactions of team members was viewed as somewhat of a challenge due to experience:

> I feel like the people with more experience tend to have more say … I feel like at times it's the same voices which is not always collaborative if it's the same people making the decisions.

On analysis of the interactions between the six team members in Emily's team, the uneven distribution of interactions was evident between the more experienced and least experienced teachers. The contributions of the two less experienced teachers were far less than those of experienced teachers. The interconnections between contribution and experience were explained by Emily when she shared 'I know for me, I'll look up to Veronica (Executive leader) and I think if she thinks that's right, well then I think that's right'. The quotation is replete with the social-political arrangements which enabled and constrained team interactions and as such regulate these interactions. On the one hand, Emily identifies that the more experienced team members have greater authority in team conversations; on the other hand, she acknowledges that as the team leader she also values the knowledge of a more experienced other. As such, regulating the interactions of team members was less evident.

Expert guidance

Facilitating expert advice refers to the guidance and confirmation of ideas provided by middle leaders to their colleagues. Each middle leader positioned themselves differently regarding their level of expertise and how they approached the facilitation of team meetings. Kimberley identified that she was viewed as an 'expert' by her team; however, she considered this as a constraint to 'true' collaboration as her 'preconceived' ideas might negatively impact her team members to raise their own ideas.

> They will definitely look to me, they'll definitely let me lead it. I'm conscious of that … if I'm going to be true collaborative … I need to let them talk and think about their own ideas.

During observation, Kimberley was often tentative with her language when offering advice, for example, 'I don't know how you feel about it, but I would..'. In his instance, Kimberley's team member responded, 'we would love you to'. Additionally, Kimberley's expertise was often legitimised by the team with Kimberley regularly offering advice which was never challenged.

Kimberley was also observed correcting and confirming team members' judgments which illustrate the social-political arrangement of expert guidance. For example, when a team member suggested a student work sample was at an above-expected level Kimberley corrected her, 'I've got a feeling that's like a standard level' Kimberley also often confirmed team members' ideas with sayings such as 'I agree', 'I'm happy to do something like that', illustrating the social-political arrangement of expert advice when making final decisions.

On the other hand, Josh reported that while he was the formal middle leader, he believed that the team 'lead each other'. The discourse of 'we' and 'the team' permeated the interview and the team meeting. During observations, Josh only provided expert advice once during the team meeting suggesting neutrality in his positioning as team facilitator.

Emily, with less experience than the other two middle leaders, referenced the expert advice of others in the team as an enabler to her team facilitation practice:

> we've got team members that are so experienced, I don't really feel like I must do all that much. You know, yes, I'm there but I don't necessarily feel like I'm doing anything more

The analysis revealed that of the three middle leaders in this study, Emily most frequently challenged the opinions of others and on three occasions where she did this her response was reinforced by the most senior member of the team:

> Caroline: But it was one of those things where we wanted to see where they're up to but I do agree with you that we need to add those other two questions do you think?

> Emily: Well, no, not necessarily because I know with us, we – in terms of assessing along the way, they're not necessarily … we don't necessarily do a sheet of 'Here you go, here's what we're doing'.
>
> Veronica: Yep, and that's what we kind of need to get away from is having all of these things …

This example illustrates the social-political arrangements of the positioning of expert guidance. For Emily, as a middle leader but as part of a team where team members had greater teaching experience as well as leadership authority, meant that her opinion was often questioned or required a more senior leader to legitimise. However, her facilitation evidenced her ability to question opinions and disagree with others, a practice that was not as evident in the observations of the other middle leaders. For Kimberley, the only middle leader who identified herself as an expert, advice was more frequently provided, and it seemed readily adopted by her team members without questions. Conversely, Josh deliberately positioned himself alongside his team members, and as such, rarely offered advice and instead took the deliberate approach of co-learning together. In summary, each middle leader positioned and provided expert guidance in different ways as a means of facilitating team collaboration.

Purposeful dialogue

Alongside the discourse of providing expert guidance, middle leaders facilitated purposeful dialogue, which refers to how middle leaders used language to help shape team members' thinking. This was in the form of clarifying and paraphrasing ideas, praising contributions, and challenging viewpoints. How these practice arrangements connect to team conversations is highlighted by Kimberley 'I think teachers need to have a shared understanding of their purpose, I think they need to be able to listen, they need to be able to take on board what other people say.'

The cultural-discursive arrangement of clarifying and questioning enabled team members to share diverse ideas of team members. Josh, who shared at the interview that 'shared voice' and 'equal contribution' to team meetings was 'strength' of the team conversation, was observed commonly reinforcing and clarifying ideas. Questions such as 'are we going to do a paper format assessment?' and 'So are we thinking of actually taking all of them or some of them?' prompted team members to engage in greater specificity in their discussion and decision-making. Josh often paraphrased ideas to recall and check in with the main ideas of team members' conversations, for example, 'It sounds to me like that's like a cluster of questions'.

Discourse from all middle leaders such as 'that is really good', and 'I'm glad' illustrate the cultural-discursive arrangements of praise of colleagues' ideas. For example, Kimberley, in response to her colleague sharing an idea responded, 'I really like the idea of having the last question open-ended'. Praise enabled

others to further contribute to the conversation. For example, when Josh praised a team member on a resource he was using in the class, the team member replied' I'm just going to show you an example … ' and after sharing the resource, it was adopted by all team members.

The cultural-discursive arrangement of challenging ideas during team meetings was identified as an enabler of the social interactions of team members. Josh and Emily both shared during the interview that challenging colleagues' ideas was a way to increase the collective knowledge of the team. On the other hand, Kimberley believed that challenging ideas was a constraint to her colleagues, stating

> it's much easier just to go into your room and just quickly design an assessment that no one's going to critique and challenge you on …

As previously stated, only Emily was observed with challenging ideas during the team meetings.

Decision-making

Teacher team meetings by their very nature are catalysts for decision-making due to their focus on teaching and learning. The practice of facilitating decision-making is defined as the approaches middle leaders utilised to assist their team to reach an outcome. Social-political arrangements of who makes decisions and whose ideas are valued, as well as the material-economic arrangement of the use of curriculum, were observed as approaches undertaken to aid decision-making by the middle leaders.

Inviting ideas from team members led to, at times, multiple viewpoints, and as such the middle leaders were observed connecting different ideas from different people. For example, Josh listened to three team members share ideas about how best to structure a test and then responded 'It sounds like it's a bit of a combination of everything. Could we combine these ideas into one test?' This example demonstrates the social-political arrangement of agency where Josh's ability to listen attentively to the ideas and offer a way for all opinions to be factored into decision-making.

Conversely, in Emily's observed meeting, it was often the most senior team member (Veronica) who, regardless of various ideas from team members, made the final decision. For example:

> Emily: What do we want them to do to show 'model a quarter of a whole object' …
>
> Veronica: We usually use pieces of paper, and they fold it.
>
> Emily: Do we have to describe … ?
>
> Veronica: They don't have to describe it, however, extension is, 'Record quarters of whole objects', so then we could ask if they can record it

This example illustrates the social-political arrangement of power and experience, while Emily asked probing questions these ideas were not considered and instead the most senior team member (Veronica) adds advice which is accepted as the final decision.

All team meetings were focussed on teaching and learning and, therefore, it is no surprise that decisions were facilitated using curriculum documents. Across all observed meetings the middle leaders often referred to curriculum and standards, for example 'the standard is', and 'it says in the syllabus we need to'. Perhaps more surprising was the lack of decision-making based on students. Across the observed meetings, Kimberly was the only middle leader who specifically referred to students' learning to aid decision-making. For example, during the construction of an assessment task, Kimberley was observed discussing student needs and abilities in order to facilitate decision-making:

> if you think of like your little lowies, would they be able to do … ? I mean I'm thinking not the lowest but I'm thinking of someone in our class like Josh – he'd be able to do that.

Social-emotional support

Middle leaders practised sayings, doing and relatings related to the social-emotional aspect of facilitation. Social-emotional support as a facilitation practice refers to how the middle leaders created opportunities for their colleagues to engage in learning conversations that enabled team members to generally work well together with minimal conflict. A key observation emerging from the accounts of the middle leaders was knowing their facilitation behaviours and how this would affect the social interaction of their team members. Agreed-upon ways of working together include, active listening, and empathy were practised which the middle leaders in this study identified as both enablers and constraints of how team members worked effectively together.

Both Josh and Kimberley deliberately used team norms to regulate social awareness of how team members work best together. For example, during observation, Josh began the meeting by drawing the team's attention to a set of agreed ways of working that the team had developed in a previous meeting:

> participate equally – everyone's opinions and ideas are valued – and the big one here is just turning our 'Yeah, buts' into 'What ifs'.

From this quotation, the discourse from the team norms implies practice arrangements that enable team members to actively engage in team meetings and share diverse ideas and opinions. Conversely, Emily explained that a lack of agreed-upon ways of working resulted in the team often 'going off on tangents' in conversations.

Active listening to other opinions was an important social-emotional dimension of facilitation practices. During an interview Josh shared his awareness that

'your way is not the only way' and the affordance of listening to others share ideas helped him build his level of expertise. For Emily, listening to her colleagues' ideas was seen as a 'strength' to her own learning and the learning of others. In her final interview Kimberley shared that the cultural-discursive arrangement of listening more than talking enabled her to learn from others:

> I was really aware of listening to how others have a take on assessing so that's been a real good thing for me because it's listening and also being able to hear others, and I am like 'I like that. I'm going to use that. I hadn't thought of that one'.

The social-political arrangement of relating to team members through understanding and empathy was observed by all middle leaders. Empathic arrangements of facilitation included an understanding of challenges, an interest in the past experiences of colleagues, and an acceptance of diverse perspectives. During an interview Kimberley explained that teacher collaboration is challenging for colleagues due to workload, 'it is really kind of seen as an extra; people are very stressed by it actually, I think because it's challenging that they do have to work with each other, and they haven't normally done that'. This empathic positioning may be the reason why Kimberley was often quick to take on the additional tasks that were a result of team meetings, for example, 'I've probably got more time than everyone else'. Josh shared an empathetic response to mistakes by sharing 'Mistakes are fine because it teaches us what we need to learn'.

Discussion and conclusion

This study brings to light the hidden work of facilitation by middle leaders when leading a complex space of collaborative teacher teams. Using the TPA, this study reveals six ecologies of facilitation practices by middle leaders: procedural management, regulating interactions, expert guidance, purposeful dialogue, decision-making, and social-emotional support. From this ecology, three important ideas associated with middle leader facilitation are apparent, middle leader facilitation is (1) a democratic process; (2) consequential to how teacher teams operate; and (3) socially contingent.

It was evident from the analysis that facilitation was situated within a democratic participation approach, in contrast to traditional hierarchical management approaches where a leader is ultimately responsible for decision-making. All middle leaders expressed a desire to be seen and contribute to team meetings alongside their team members rather than as an expert or hierarchical role. This positioning resulted in the facilitation focussed on listening, questioning, and mostly shared decision-making where leadership was non-authoritarian, expert opinions by the middle leader were minimal and instead were focussed on surfacing ideas, and conversation and decisions by others. Important to note is that a democratic participation and non-authoritarian

approach to facilitation does not mean any leadership at all. The middle leaders in this study were observed providing occasional advice, challenging ideas, guiding questions and tasks, connecting ideas, and managing procedures demonstrating the importance that facilitation can challenge the status quo and lead to improvements in teaching and learning (Highfield and Robertson 2016).

The six ecologies of facilitation highlight the significant role middle leaders' practice plays in the facilitation of teacher team meetings, suggesting like other researchers (e.g. Ohlsson 2013; Zellermayer and Tabak 2006) that facilitation is consequential to how teacher teams operate. In this study, facilitation resulted in reflective practice, engagement in social-emotional support, development of knowledge, and the creation of products. Less discussed in previous research is that facilitation can both enable and constrain teacher collaboration. Table 4 illustrates how each ecology of facilitation practices by middle leaders

Table 4. Facilitating practices of middle leaders leading teacher team meetings.

Facilitating practices by middle leaders	Influence (+/−) on teacher team meetings
Managing procedures	
Minute taking	+ Focussed meeting
	+ Increased accountability on agreed actions
Management of resources	+ Increased team efficiency
	− Adoption of resources without review
Delegating tasks	+ Developed shared ownership of work
	+ Increased teacher autonomy
	− Decreased shared knowledge development
Regulating Interactions	
Sharing of work samples	+ Evenly distributed patterns for sharing ideas
	+ Developed shared teacher practices
	− Ideas shared and implemented without interrogation
Sharing pedagogical and curriculum ideas	+ Increased knowledge creation
	− More experienced leaders dominated conversations
Expert guidance	
Giving Advice	+ Supported problem solving
	− Negatively impacted team members' ability to raise their own ideas
Correcting misconceptions	+ Encouraged new knowledge creation
Purposeful dialogue	
Clarifying and questioning	+ Diverse ideas shared
	+ Greater specificity in discussions and decision-making
Praise	+ Greater contributions to discussions
Challenging viewpoints	+ Increased the collective knowledge of the team
	+ Corrected errors in thinking and decision-making
Decision-making	
Connecting multiple ideas	+ Valued and encouraged diverse opinions
Use of curriculum and standards	+ Provided a reference to make decisions about teaching and learning
Social-emotional support	
Development of team norms	+ Regulated social awareness of teamwork
	+ Focussed meetings
Attentive Listening	+ Built middle leader's knowledge
	+ Increased contributions of ideas
	+ Surfaced different opinions
Empathy	+ Relating to team members

influenced teacher team meetings. Some of these influences were positive (+) whilst others were negative (-). For example, the management of resources was observed as both an enabler and a constraint, demonstrating that the practice of facilitation is consequential to how teacher teams operate, that each practice is unique and site specific (Kemmis et al. 2014) and requires careful and intentional attention. Important to note is that while facilitation in this study did positively influence teacher team meetings, like research by Scardamalia and Bereiter (2006) and Supovitz (2002), interactions were centred on sharing of ideas with limited examples of differing opinions, challenging assumptions or team conflict.

In this study, facilitation was not only a consequential practice to how teacher teams operate but was also socially contingent. Its enactment relied on the unique interactions between the cultural-discursive, material-economic, and social-political arrangements in which facilitation took place, reinforcing the importance of understanding site-based conditions. For example, Emily's facilitation was impacted by the offering and receiving of advice from a team member who was part of the school executive. A further example of how the social environment impacted facilitation is middle leaders' beliefs associated with the effectiveness of delegation of tasks; for Josh and Kimberley this practice was an enabler but for Emily, she believed delegation constrained team members working together to complete tasks. These examples highlight that facilitation cannot be understood as a one-size-fits-all approach but instead as interconnected and transformative practices of middle leadership.

Conclusion

This study showed that different levels of middle leader expertise, beliefs, and practice can impact facilitation and consequently how teacher teams operate. Implications of this research include the need for school leaders and systems to support middle leadership with professional learning opportunities to learn, practise and develop facilitation practices, and for middle leaders to seek and utilise feedback on their facilitation to better understand their impact on others and teaching and learning in their school. More research is required to advance understanding of middle leader facilitation across multiple sites, contexts, and communicative spaces, not only as this field of research is lacking but because the findings of this study demonstrate the critical nature of middle leaders leading as change agents in teaching and learning as they facilitate teacher teams in schools. Despite its contributions to research and practice, this study is not without certain limitations that should be addressed in future research. Broadening the scope of research to include secondary schools would advance an understanding of middle leader facilitation across school settings. Extending the number of recorded team meetings may provide greater opportunities to examine patterns across time and space.

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No potential conflict of interest was reported by the author(s).

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