FROM TALK TO ACTION:

UNCOVERING THE ROLE OF REFLECTION IN CREATING NEW OSTENSIVE ASPECTS IN ORGANISATIONAL ROUTINES

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Abstract

This exploratory qualitative study sought to offer a greater understanding of the effect of reflection on the formation of new ostensive aspects in organisational routines in secondary education in the Netherlands. Previous research has indicated that reflective talk can affect organisational routines and cause alterations, yet this phenomenon has not yet been studied in an educational context using a professional learning community (PLC) as a reflective space. Consequently, this study focused on providing insights into how participants use reflective dialogue and collective reflection on an existing routine to help create the ostensive aspect of a new routine, in three distinct secondary schools in the Netherlands. To this end, the analysis of eleven recorded PLC meetings and transcriptions, was carried out, with the codebook generated based on the concepts of collective reflection and reflective dialogue. The findings suggested the existence of a tangible collective reflection pattern within the PLC, in which participants demonstrate aspects of reflective dialogue influencing the procedure and speed of transitioning to a new ostensive aspect. Moreover, the presence of a principle and the lack of certain aspects of reflective dialogue showed a difference in the effectiveness of schools in creating a new ostensive aspect. This study furthermore offers valuable contributions to schools wishing to harness PLCs as a reflective space for the reflections on and alteration of school routines.

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Uncovering the Role of Reflection in Creating New Ostensive Aspects in Organisational Routines

Within every organization, employees play a crucial role in generating work output. The organization of this work is facilitated through the implementation of organisational routines. Consequently, each work practice contributes to a specific organisational routine, which exist of recurring, recognized patterns of action (Nelson & Winter, 1982). Feldman (2000) presented a framework for routines encompassing a cyclical structure consisting of ideals, plans, actions, and outcomes. Ideals and plans represent the ostensive aspect, which influences actions and subsequent results (performative aspect). Furthermore, their study emphasized that routines possess a significant characteristic of adaptability and can vary depending on the specific circumstances and participants who can instigate change. Dionysiou and Tsoukas (2013) contended that fostering a shared understanding of the ostensive aspect among routine participants facilitates the alignment of their actions and the creation or modification of the routine. Reflection and dialogue are the means by which this alignment can be achieved.

The growing interest in reflection has led to its widespread popularity, particularly in the field of education. However, in education, reflective practices often tend to be individualistic (Çimer et al., 2013). Dittrich et al. (2016) examined the influence of reflective talk on the transformation of routines within a pharmaceutical organization and observed organic occurrences of collective reflection. It is worth noting that such reflections can also be facilitated through the establishment of a professional learning community (PLC), where participants engage in collective reflection (Bucher & Langley, 2016). The study by Dittrich et al. (2016) concluded that reflective talk is a critical mechanism in reconfiguring organisational routines by fostering a shared understanding among participants, which aligns with and modifies the ostensive aspect of routines. Despite frequent organisational changes in schools, such as shifts in vision and natural turnover of employees (Sherer & Spillane, 2011), the specific area of collective reflection within a PLC in relation to organisational routines has yet to be explored comprehensively within the educational context. Moreover, insufficient attention has been given to examining collective reflection in settings where multiple employees engage in a dedicated reflective space.

Hence, the present study aimed to delve into the phenomenon of creating a new ostensive aspect of an organisational routine through reflection among teachers within a PLC in secondary education institutions in the Netherlands. Additionally, this study sought to

investigate collective reflection within three professional learning communities (PLC's) situated in distinct high schools within the Netherlands. The findings of this study contribute to the advancement and use of PLCs within secondary education in the Netherlands and enhance the existing literature on organisational routines within the field of education.

<center>**Theoretical Framework**</center>

The following paragraphs explore the theoretical constructs that will form the foundation of this study. Initially, the definition of organisational routines will be provided, followed by a detailed examination of the ostensive and performative aspects. Given the study's emphasis on the ostensive aspect, the theoretical framework delves into a comprehensive exploration of the shared ostensive aspect. Subsequently, the concept of reflection within a dedicated reflective space is defined, and the identification of reflective talk is drawn from existing scholarly works. Finally, the elements comprising reflection are outlined to facilitate research on the interplay between reflection and the creation of a new ostensive aspect.

Organisational Routines

Organisational routines are known as repeated patterns of behaviour of different actors within one organization (Feldman & Pentland, 2003). Within the realm of education, various routines can be detected, including the implementation of hiring policies, teacher evaluations, and planning of innovative initiatives within schools. While some routines may be assigned by external entities, such as the Education Inspectorate or the Ministry of Education, others are developed and upheld by the board, management, teachers, and staff members (Sherer & Spillane, 2011).

To comprehend the functioning of school practices, it is important to delve into the concepts of change and constancy, as highlighted by Sherer and Spillane (2011). In their study concerning constancy and change in work practices within educational institutions, the authors advocated the utilization of organisational routines as a framework to gain insights into the day-to-day operations of schools. This lens offers several advantages in understanding and managing these practices. First, the routine lens directs attention towards patterned actions and behaviours, facilitating their recognition and enabling the necessary modifications when required (Tracey, 1994). Second, employing organisational routines as an analytical tool reveals the inherent duality of routines, consisting of both structures and individuals. A routine is not solely defined by its structural aspect; it also encompasses the active role played by individuals in shaping and modifying these routines. In scholarly discourse, the capacity of individuals to effect changes referred to as agency (Giddens, 1984).

The Ostensive & Performative Aspect

Feldman and Pentland (2003) used the terms ostensive and performative aspects to show how various individuals can carry out repetitive patterns. They assert that organisational routines exist of those two different aspects. The ostensive aspect is the principle that individuals or groups of people have about what a certain organisational routine looks like. The performative aspect is how that routine is enacted in practice. For teachers or others to adapt existing routines, they need to reconceptualise them (Feldman & Pentland, 2003)

Bucher and Langley (2016) have defined this phenomenon of reconceptualization as a recursive puzzle and have identified two ways to address it. The first approach involves reconstructing the routine from within, based on the performative aspect of the organisational routine. This approach assumes that change will occur through different improvisations during performances of the organisational routine (Bucher & Langley, 2016). Given that various actors within the routine possess distinct interpretations of the underlying principle, these improvisations are inevitable and can lead to different outcomes or modes of performance (Pentland & Feldman, 2008). The second approach involves reconstructing the routine externally and assumes that variations in routines can be introduced from outside the routine itself (Bucher & Langley, 2016) as individuals communicate their perspectives on the routine and ultimately modify their performances based on these conversations (Pentland & Feldman, 2008). This study will primarily focus on the latter approach.

Reflection

Reflection is widely recognised as a change-maker regarding organisational routines, as it provides individuals with an opportunity to critically assess their routines and make necessary adaptations for improvement (Bucher & Langley, 2016). Despite varying perspectives among researchers, there is a consensus that reflection encompasses attitudes and practices that facilitate learning and personal development (Cole, 1997). A case study conducted by Dittrich et al. (2016) investigated the role of reflective talk in a start-up company, revealing its significant contribution to driving changes in routines. Their study built upon existing literature that acknowledged the variation in individual reflections among different actors, leading to diverse approaches in implementing changes (Dreyfus, 1990; Yanow & Tsoukas, 2009; Tsoukas, 2010). Expanding on this notion, Dittrich et al. (2016) illustrated how collective reflection facilitates problem-solving through multiple perspectives. However, the limited availability of time and space for reflective talk posed a challenge to this process (Dittrich et al., 2016).

Reflective and experimental space

Organisations can facilitate dedicated time and space for individuals to share their ideas and perspectives on the routine, to rebuild the routine from without (Bucher & Langley, 2016). This can be done through reflective spaces, which according to Ringer (2017) are: "regular meetings of teams that are 'hosted' by a trained reflective space practitioner.". These meetings have the purpose of creating opportunities for team members to be more effective in their work and in dealing with issues they face during work, and to share visions and ideas and support each other (Ringer, 2017). The experimental spaces are meetings where these actors could test and modify the desired change (Bucher & Langley, 2016).

In a case study by Bucher and Langley (2016), the role of reflective and experimental spaces in changing routines within a healthcare institution was examined. They found that the experimental space could be characterised mainly by the boundaries that needed social interaction to create new or adapt existing routines. By focussing on these spaces, their study shows that actors can adapt, create, and test routines. Bucher and Langley (2016) stress that there is enough potential for future research regarding the relationship between these spaces and the routine dynamics. This is also in line with a study by Thelin (2020), who examined reflective spaces in higher education in Sweden. The study showed that reflective spaces contributed to a democratic implementation of change and shared principles based on collectively constructed knowledge. Kumagai and Naidu (2015) indicated that for reflective spaces to be effective, they must be safe and free from external distraction.

A professional learning community (PLC) can be utilized as a form for a reflective space to achieve rebuilding the routine from within. Astuto (1993) emphasizes the concept of community as central to PLCs. The core focus lies not only on the individual professional learning of teachers but also on the collective learning within a community context. PLCs can thus serve as a reflective space where collective reflection place.

Collective reflection

Collective reflection on organisational routines can facilitate routine change, but lack of it can also hinder or prevent routine change and even break down routines completely (Edmonson et al., 2001). Dewey (1933) claimed that through discussing reflection in a group, people would learn more from it because it would be easier to see where the loopholes are and to which extent their train of thought is valid. Daudelin (1996) endorsed this claim by adding that people can reflect together on processes by sharing their perceptions within groups. This would create room for discussion, leading to collective breakthroughs.

In a study by Dittrich et al. (2016), the role of reflective talk was examined in relation to routine change in a start-up company in the pharmaceutical industry. They found that actors would come up with alternative routines through reflection by evaluating and questioning the existing routines. The study revealed that instances of reflective talk often occur spontaneously and without explicit planning or organization. Furthermore, these reflective conversations stimulated collective contemplation of the existing routine, resulting in a shared comprehension of the necessary modifications within the organisational framework. Dittrich et al. (2016) identified three steps that supported collective reflection. These were conceptualising the problem or opportunities concerning the performative and ostensive aspect, the collective vision of alternative ways to perform the routine and evaluating and questioning the new ways from different perspectives. These steps would result in a shared ostensive aspect, which according to Dionysiou and Tsoukas (2013), would enable the involved individuals to relate this with their lines of action and create a collective routine that would be performed similarly individually.

Reflective dialogue

Reflective dialogue has been identified as a means of stimulating the professional development of teachers and cultivating a professional culture (Ros, 2015). Doğan et al. (2018) revealed that discussing topics such as the goals of the school and the curriculum in PLCs was associated with increased reflective dialogue amongst teachers, as these topics encourage the examination of practice from a collective angle. So, the topics should be relevant for the participants in order to effectively use reflective dialogue within the PLC. Ros et al. (2018) developed an instrument for the analysis of sound recordings and observations of Professional Learning Communities (PLCs) in primary schools. This instrument existed of six aspects which they identified within reflective dialogue. These aspects include opening up to other perspectives, sharing and evaluating, asking for and offering support, analysing the problem of question, underpinning arguments, and lastly adopting external information and knowledge (Ros et al., 2018). This study will further draw upon this instrument during the analysis.

Influencing factors

During the process of collective reflection on routines, it is important to acknowledge the potential influence of various factors on the reflective practice. Boud et al. (2006) conducted case studies and identified several factors that can impede reflective practice within

organizations. Many of these factors pertain to decision-making, such as the lack of alignment between decisions made and subsequent actions. A significant factor they identified was the unilateral definition of problems and issues faced by practitioners. In addition to these factors, Ottesen (2007) argues that due to the emphasis on outcomes rather than the learning process of teachers, there is limited time and attention allocated to reflection. Thus, the value placed on reflection by managers becomes a crucial factor. Furthermore, in a study exploring the effects of group diversity on the quality of group reflection, Adelopo et al. (2017) discovered that heterogenous groups, consisting of both male and female members, exhibited better-quality group reflection compared to homogenous groups. Therefore, the composition of group members is also considered a factor that influences group reflection. Considering that the professional learning communities (PLCs) in this study vary across schools and compositions, differences in reflective outcomes can be anticipated.

Present Study

Even though previous researchers have studied the relationship between reflection and organisational routine, the setting within education is still lacking. Next to that, it is unknown how reflection on the routine influences the creation of a new ostensive. Thelin (2020) suggested that more research can be done on the use of reflective spaces in education. According to Dixon (1994), facilitating a shared understanding influences each individual's decisions as they reach for a shared goal. Based on the understanding that an ostensive part consists of a kind of script, the structure within the school and involved individuals with different perspectives (Wolthuis et al., 2021), it is interesting to investigate how reflecting on the organisational routine can lead to a shared understanding and an envisioned new ostensive aspect. Therefore, the presented theoretical framework is the basis for the following research question:

How does reflection on the organisational routine influence the process of creating a new ostensive aspect within secondary education in the Netherlands?

In order to answer the research question, the following questions will be answered initially:

- How do participants in a PLC select and reflect on a specific organisational routine through Collective Reflection in order to create a new ostensive aspect?
- How does Reflective Dialogue take place in the process of creating a new ostensive aspect of an organisational routine?

- How do the three schools differ based on their collective reflection and reflective dialogue approaches toward the creation of a new ostensive aspect?

Method

Design

This research constitutes a qualitative and exploratory case study that aims to investigate the influence of reflection within reflective spaces on organisational routines in secondary education within the Netherlands. Qualitative case studies are commonly employed to examine everyday practices and focus on the individuals involved (Erickson, 1985). They allow for capturing the behaviour of participants and the practical context in which they are situated. In this study, the exploration of the topic is informed by the data collected for a study by Hubers (n.d.). Hubers guided three professional learning communities (PLCs) in three distinct schools to initiate changes in organisational routines. The researcher's involvement in the study was unobtrusive, as there was no direct contact with any of the participants (Babbie, 2016). To document and provide a detailed description of the PLC sessions conducted at three different schools, audio, and video recordings of the initial four sessions from each school were utilized. These recordings were collected over a span of four months.

Context

The research is conducted within the context of Professional Learning Communities (PLCs) implemented in three distinct high schools in the Netherlands. These PLCs serve as reflective spaces for collective reflection and the facilitation of organisational routine changes. Each school exhibits a unique educational culture, varying group dynamics within the PLC, and focuses on addressing specific problems or challenges.

Participants

Each PLC consisted of a group of 8 to 10 individuals, excluding the facilitator responsible for guiding the sessions. Table 1 provides an overview of the participants' characteristics, including their respective occupations. It is worth noting that some participants hold multiple roles within the school setting and therefore the number of roles does not align with the number of members. Participation in the PLCs was either voluntary or assigned, and since the PLC participants constituted the target population, no sampling method was employed. To maintain anonymity and confidentiality, all names of schools and participants mentioned in this study have been replaced with fictitious names.

Table 1

An overview of the participants per school

School			Number of participants
School 1			7
	Gender	M	2
		F	6
	Occupation	Biology teacher	1
		Physics teacher	1
		French Teacher	1
		Music teacher	1
		CKV (Cultural and artistic education) teacher	2
		Art History teacher	1
		Economy teacher	1
		English teacher	1
		Visual arts teacher	1
School 2			8
	Gender	M	4
		F	3
	Occupation	Philosophy teacher	1
		Music teacher	1
		Coordinator	2
		Visual arts teacher	1
		Handicrafts teacher	1
		Arts teacher	1
		Chemistry teacher	1
		English teacher	1
		Theatre teacher	1
School 3			7
	Gender	M	4
		F	4
	Occupation	Principal	1
		Main support	1
		History teacher	2
		Social Sciences teacher	2
		Student coordinator	2

Instruments

To gain an understanding of how collective reflection can impact an organisational routine, observations were conducted during group sessions of a Professional Learning Community (PLC) that served as a reflective space. These sessions occurred at three distinct high schools. A total of 11 recorded PLC meetings were transcribed, observed, and subjected to focus group analysis. The analytical framework focused on three key components: the

routine aspect, the elements of collective reflection, and the characteristics of reflective dialogue. These components were incorporated into a comprehensive codebook, which can be found in Appendix A.

Aspects of the Routine

During the sessions, participants engaged in discussions covering various topics related to routine change. To collectively select a specific routine to concentrate on, they deliberated and reflected upon their previous performance-based routines. Whenever such discussions occurred, the code "Per" was assigned to the corresponding sections of the transcript. Conversely, when the discussions revolved around future plans and the desired changes to be implemented, those segments of the transcript were coded as "Ost."

Aspects of Collective Reflection

In order to capture the relationship between collective reflection and organisational routines, additional codes were incorporated into the codebook based on the study by Dittrich et al. (2016). These codes, namely Naming & Situation (C-1), Envisaging & Exploring (C-2), and Evaluating & Questioning (C-3), were used to establish connections between reflection and organisational routines. The C-1 code was applied when participants identified a problem related to the routine that they desired to change. They would describe the context and attempt to contextualize the issues and opportunities. Under the C-2 code, participants would explore multiple alternatives or solutions collaboratively. The C-3 code was used when participants shared their experiences and questioned previous ways of enacting the routine (Dittrich et al., 2016). These codes shed light on the role of reflection in relation to the routine, rather than delving into the mechanics of the reflection process itself. Therefore, the codebook also incorporated aspects of reflective dialogue by Ros et al. (2018) to further enhance the understanding of the reflective processes involved.

Aspects of Reflective Dialogue

To provide insights into the identification of reflection, codes based on the study by Ros and Van den Bergh (2018) were included in the codebook. Six distinct aspects were incorporated. The first code, Opening up to other perspectives (A-1), captured instances where participants sought insights from one another or expressed appreciation for each other's contributions. The second code, Reflect and evaluate (A-2), was subsequently changed to Sharing and evaluating to provide a more focused understanding of the coding process. Text segments were assigned this code when experiences were shared and evaluated. The third

code, asking for and offering support (A-3), was applied when participants clearly sought help or provided advice to one another. The fourth code, analysing (A-4), was assigned when participants explored a problem or question, particularly when it involved the 4 W questions (who, where, when, and why). The fifth code, underpinning arguments (A-5), was utilized when alternative solutions were presented along with supporting or opposing arguments. Lastly, the sixth code, adopting external information and knowledge (A-6), was used when participants referred to external sources such as questionnaire results from students or interviews with other teachers. These codes enriched the understanding of the reflective processes within the context of the study.

Data Analysis

The study employed a deductive thematic analysis to examine a total of eleven PLC meetings, six conducted online and five held in a physical setting. Although recordings of the meetings were available, the analysis focused primarily on verbal communication by examining the transcripts. Transcripts were initially generated using Amber Script, but due to the large number of participants and the tool's inaccuracy, all transcripts were manually checked for accuracy.

A mixed methods approach was employed to create the codebook. Initially, a deductive approach was utilized, aligning with the theoretical framework, to develop the initial set of codes. However, during the coding process, one code underwent a modification. The code A-2, originally "reflect and evaluate," was changed to "share and evaluate." This change was made because participants often described situations they wanted to share, without necessarily engaging in deeper reflection. According to Gibbs' reflective cycle (1988), sharing alone is not considered complete reflection. Thus, the term "reflection" was deemed too broad for this code. Additionally, a code labelled FA (Facilitator of PLC session) was added later in the coding process. This code aimed to capture the influence and regulation of the facilitator on the collective reflection process.

To ensure inter-coder reliability, a peer coder collaborated with the researcher to independently code one and a half meetings. The peer coder received training and instructions one day prior to coding independently. The agreement coefficient used to assess reliability was Krippendorff's c-Alpha-binary. The results indicated that the researcher and peer coder applied codes in different semantic domains, including A-1 to A-6, FA, Ost. Perf., and C-1 to C-3. In certain domains, the overall coverage of codes applied by both coders was similar, as seen in the FA domain where the reliability coefficient was 0.996. However, in other

domains, the total coverage of applied codes differed, such as in the A-1 domain where the reliability coefficient was 0.853. Overall, the reliability coefficient ranged from 0.853 to 0.996, indicating a high level of intercoder reliability (Krippendorff, 2018).

Results

In this section, the role of collective reflection and reflective dialogue within a Reflective Space, in facilitating a transition from a performative to a new ostensive aspect of an organisational routine is studied. The following research question is addressed: How does reflection on the organisational routine influence the process of creating a new ostensive aspect within secondary education in the Netherlands? Through an analysis of the data collected, the findings related to these research questions are presented.

School 1

Collective Reflection

  Session 1 During the first session, the focus was on identifying the routine in need of change, mapping out the problem, and evaluating the current routine. This emphasis is evident in the introductory statement of the facilitator: "For now, I would like to approach the problem with you. (…) Why is that a problem and for whom is it a problem?" Participants were divided into pairs and tasked with contemplating which routines they would like to see changed (Evaluating & Questioning), what problems they experience and what they would like to resolve (Naming & Situating). Subsequently, participants shared their findings and evaluations. Several themes emerged, with one of them being the reluctance to change among teachers. Despite the school's emphasis on the Montessori educational approach and student autonomy, many teachers resist change.

  One participant's quote describes this resistance: "There are also colleagues who simply don't want to change at all. They don't want to because (..) they have a method, and it works for them. And they won't invest time and energy in changing. And I mean, I think that's where management should facilitate people in making that change, not just tell them to do it." Another prominent theme is the student offering and motivation. After some discussion and evaluation, it becomes apparent that the problem lies in a lack of differentiation. As one participant puts it: "The problem is that initially, up to the third year, we sort of confine students to a, well, as Senna mentioned earlier, to a sort of straitjacket, and suddenly, in the fourth year, 'Off you go.' And then in the fourth year, they're supposed to figure it out on their own because they are independent. But that's not how it works." During the exchange of problems that they identified, the participants tended to directly offer solutions to the problem (Envisaging & Exploring), however the facilitator steered them back towards the problem statement. After gathering all the problems and sharing them, the participants decided on the

next step. They were asked to prepare input for the next meeting by asking colleagues about their experiences.

Session 2 In the second session, participants discussed the input they gathered from other teachers and students about what they believed the problem was to clarify the problem as much as possible. During this session, they work on formulating one specific problem or challenge related to the routine (Naming & Situating). As the Facilitator states, "And today we're going to try to come to a shared understanding of what the challenge is at school." The same themes from the first session resurface during interviews with colleagues, highlighting one participant's observation of a colleague's unwillingness to change: "Yes, what I found funny was that you and I thought, oh then something has to change, then there has to be a solution and the teacher we interviewed said well, then I'll just go home in the afternoon. And then it's done" (Evaluating & Questioning). Other issues raised during conversations with other teachers and students included class sizes, feeling unnoticed, insufficient time for individual students, and student autonomy. When asking to elaborate more on the problems the facilitator asked the participants: "I keep hearing two main themes, especially class size and a tightly structured curriculum. Is that what you've heard from other colleagues, or are there any additional insights?" To which one of the participants responded: "Differentiation in the word. The size is primarily the cause. You can't differentiate well. You can't help the weaker students, and you can't challenge the good ones. That's what the teachers said."

Participants delved into these themes and formulated the following problem statement: "There is insufficient reliance on student autonomy, preventing the full development of all talents and optimal student growth." Throughout this process, participants often express a desire to propose and name solutions (Envisaging & Exploring), but the facilitator guided them, emphasizing the importance of refining the problem statement. At the end of the meeting, they formulated the problem statement but needed more input from students through a questionnaire. This input would be discussed in the next session to further refine the problem.

Session 3 Participants gathered input through surveys, which would be utilized during the third session in the reflective space. The opening statement in this session clarifies that its primary goal is to envision, explore, and situate the problem within the routine (Naming & Situating and Envisaging & Exploring). "The most important goal for today is indeed to use that input to arrive at a definitive problem statement... What measures do we want to take together and how do we want to do that, et cetera." One participant noted that some students may have needed more guidance when filling out the surveys, potentially yielding more

valuable insights. The outcome of the questionnaire showed that students appreciated the freedom brought about by COVID-19 and expressed a desire for more influence over class schedules and lesson content. Motivation appeared higher among the lower grade students in comparison to the older student. After discussing the survey results, participants were eager to propose solutions, but the facilitator intervened to ensure a clear problem statement was established (Envisaging & Exploring). Participants arrived at the following statement: "The problem is that our students indicate lower motivation due to limited input on lesson content and structure" (Naming & Situating) The session concluded with participants suggesting solutions, with one participant noting that solving the problem may seem daunting, but they possess the necessary resources.

Reflective Dialogue

In the following paragraphs, a description is given on how reflection occurred among participants in each session and how these actions align with the characteristics of Reflective Dialogue.

Figure 1

Aspects of reflective dialogue in school 1
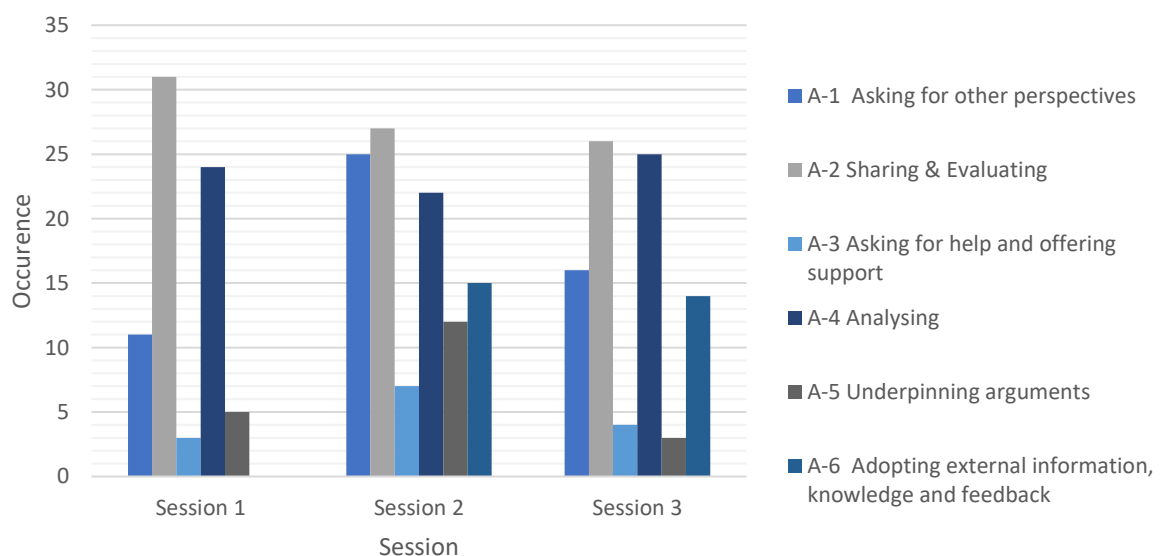
Session 1 As described in collective reflection, participants in the first session primarily focused on identifying problems to arrive at a shared problem statement. Figure 1 shows that in the first session, participants engaged in Sharing & Evaluating experiences and Analysing the current routine. The facilitator played a role in asking analytical questions,

shifting the conversation from Sharing & Evaluating to Analysing. An example of these questions includes, "Why is that a problem for you? Why are colleagues resistant to change?" An example of this can be seen in table 2. Participants also frequently showed interest in each other's perspectives and external colleagues' perspectives, asking for other perspectives. For example, one participant asked another participant: "But what you said about being more of a coach, why couldn't you do that?" In the process of answering analytical questions, participants occasionally provided arguments (Underpinning Arguments), although this was rare in the first session, along with Asking for help & Offering support. The aspect of Adopting external information, knowledge & feedback did not occur in the first session, as there was no preparation required, unlike in sessions 2 and 3.

Table 2

Discourse of Sharing & Evaluating and Analysing

Discourse	Example quote
A2	Anna: "I am teaching the visual arts here, (…) What I'm worried about, why I'm sitting here, is that I'm afraid that students won't be seen. Good. And that you don't find out at all in which way student learns well. Because it's not possible because the classes are too big, the workload is too high, you are eating during your class hours.
A-4	Facilitator: "Why is this workload so high? Anna: "Well, to have a big class takes quite, quite a lot of energy, because you are. Especially in the lower classes. Some class, you can't manage to keep it in line and then you really don't have any time and then you also must teach."

Session 2 In the second session, participants displayed more aspects of reflective dialogue. Like the first session, they alternated between sharing experiences (Sharing & Evaluating) and posing analytical questions or offering analytical insights into the problem (Analysing). For this session, participants were asked to interview colleagues about school-related issues. These issues were extensively discussed, with some participants not only mentioning external input (Adopting external information, knowledge, and feedback) but also providing arguments and benefits for the future (Underpinning arguments). For example, Angela said, "Well, you mentioned small groups, and that means more personal attention. So, that aspect, actually. And if you offer more choices, it works. Then you provide a bit more-"

Participants frequently questioned each other, often for clarification, but at times to understand each other's opinions better (Asking for other perspectives). For instance, Sara asked, "But why is the curriculum tightly structured? In what way is it tightly structured, in terms of the number of assessments?" Participants grappled with formulating a shared problem statement based on the collected input.

At one point, a participant recognized the need for more external input, especially from students, to formulate a clearer problem statement. This part involved extensive argumentation, both for the current problem statement and the need for student input. "I think we've looked at it mainly from our perspective as teachers rather than from the student's perspective. I don't think we need more from teachers. We do it for the students. We can come up with a great plan, but if it doesn't resonate with the students, we've done it all in vain." Following this proposal, plans were made to distribute surveys. The survey data would be discussed in the third session.

Session 3 In the third session, the focus shifted primarily towards determining the problem statement and exploring solutions to the problem. This shift was reflected in the aspects of reflective dialogue displayed by participants. As indicated by the opening statement, the session's primary goal was to use gathered data to arrive at a definitive problem statement and explore possible solutions. Participants had distributed surveys among various groups and grade levels to collect student input (Adopting external information, knowledge, and feedback). This input was used to further clarify the problem statement and begin discussing solutions. Similar to the previous sessions, participants primarily engaged in Sharing & Evaluating. The aspects of Asking for help & Offering support and Underpinning arguments were rarely observed because participants were mainly focused on concretizing the problem statement. Participants did, however, request each other's perspectives (Asking for other perspective) more frequently in this session than in the previous ones, as they sought better mutual understanding while concretizing the problem statement. For example, one of the participants asked another to elaborate on a given solution: "But what did you think, because you had... I found yours interesting too."

After establishing the problem, participants discussed concerns, such as teacher reluctance or resistance to change (Sharing & Evaluating). However, they soon switched to brainstorming on several solutions to support students in their learning process, with mutual reflection to understand multiple perspectives. These solutions encompassed differentiation, including providing more choices, offering additional support to struggling students, and considering available time and resources.

Reflection on the Performatives and Ostensives of the Routine

Within the three sessions of this school, participants mainly started by sharing their own experiences, as this was the assignment. In this way they reflect on the performative aspect of the routine. After the reflection on the performative part, a reflection on the ostensive part often follows as argumentation. An example of this: "No, but I think this is my biggest concern. Because there are also colleagues who absolutely do not want to change. They don't want that because they already do this, they have a method that does it this way. And they are not going to invest time and energy into it. (Performative) And then I think I mean, management also has to facilitate that people can change that. Not like just do that. And then that's it. (Ostensive)". Similar to the example presented, other participants discussed a problem and articulated why it was problematic, quickly followed by ideas regarding what the solution should look like or what preconditions were needed to make it a reality.

In the second session, input from external colleagues was also included in the reflection. For example, it is stated that one of the interviewees reflected on the input of a colleague about the way in which differentiation takes place and the weighting of the core subjects. This is an established rule, which, according to this teacher, makes the implementation of differentiation more difficult. In the following example reflection on the performance leads to vision formation regarding the ostensive aspect: "She thought that the core subject was far too heavy anyway. That they should actually be abolished. (..) But those are the core subjects that you have to do. Dutch, English, mathematics (..) And so that you choose, but so that you do not have to drop out as soon as you cannot do a subject. You can't do one subject and that is a core subject, and you have to drop out. Well, and as a result, the students' talents are not used optimally. Because a student is then at the level of his worst subject, so to speak, and in fact he should be at the good level of several subjects (Performative) So she is really talking about the fact that you should take the exam at different levels (Ostensive)."

The participants also discuss in this situation what it is like now and how it could/should be done differently even though they are not always able to influence the way in which the ostensive is arranged. Such as in this case with the national regulations. After formulating the problem in session 2 and the beginning of session 3, in the third session they are mainly concerned with coming up with solutions to the problem. By coming up with solutions they are forming a new ostensive. The only moments where the performative is still reflected on is at the beginning of the last session when focusing on the problem definition.

School 2

Collective reflection

Session 1 During the first session of this school, the facilitator stated that the goal was to reach a collective problem statement or ambition. Characteristic of this school was that all mentioned problems were agreed upon by the participants. They immediately identified the theme: the cultural identity of the school. The facilitator asked the participants to reflect in pairs on what the ambition is, and what stands out during the discussions afterwards is that participants often alternated between identifying the problem (Naming & Situating) and immediately providing examples of how this problem manifests in the current situation (Evaluating & Questioning). Thus, there is a constant interaction between these two aspects. This can be observed in the following quote: "Culture is ingrained in the DNA of the school but remains limited to those who are naturally interested or naturally talented (Naming & situating). It remains largely invisible to others, except for the Christmas concerts and through friends and acquaintances. (Evaluating & Questioning)". Within the theme of cultural identity, several problems/challenges arise. One of them is the experience of identity among a group of science-oriented students, rather than limiting it to students who have chosen the arts. As one of the participants wondered: "How do I reach children who may be more focused on science? And I believe that if we address this as a whole, it becomes less vulnerable, involving the entire school. However, as a separate subject, it is often quite difficult to incorporate such aspects into their education."

Occasionally, participants also express their vision of how they would like things to be or how they could solve the problem and what would be required for that (Envisaging & Exploring). In the latter part of the previous quote, the teacher also presents his ideal vision of how things should be. Another example of this can be seen in the opinion of another participant: "It would be beneficial if the culture is shared more broadly (Naming & situating) because it also has advantages for students outside the talented ones, and they should also be reached through culture(..)perhaps more emphasis should be placed on it in the lower grades, so that it is truly taught as a fundamental skill" (Envisaging & Exploring). This also demonstrates the interplay between the aspects. At the conclusion of this session, the participants reached the consensus that the shared ambition revolves around promoting and increasing the visibility of the school's cultural identity. For the second session, the teachers are given a preparatory task to gather input from other teachers and students.

Session 2 The second session focused on discussing the preparation. It was noted that all participants were missing a portion of their preparation. The facilitator addressed this by stating: "We were discussing how you can see on the school premises that the ambition is relevant, in terms of cultural profiling, (..) And I noticed that, from what I gather, everyone's response was still empty." The participants indicated that they had not had time to complete the preparation. However, all participants were able to interview and question a colleague, or in some cases a student, about the ambition. From conversations with other teachers, it emerged that the desire for change in terms of cultural profiling was also prevalent among colleagues outside of this PLC (evaluating & questioning). In these conversations teachers outside of the PLC have suggested ways to broaden the cultural profile: "How can we broaden the awareness that this is a cultural profile school? For example, by allowing students connected to the art classes to bring a friend to the activities, thus making these interesting activities more inclusive and enticing without compromising their educational value." This input shows the process of Naming & Situating, as the problem is introduced and discussed, while also making a proposal on how to address the issue (Envisaging & Exploring).

An example of another case where, besides sharing the opinions of other colleagues (Evaluating & Questioning), the ambition is addressed (Naming & Situating), and a precondition is set for the solution (Envisaging & Exploring), as seen here: "A recurring characteristic was that culture affects people's ability to be vulnerable. This is something that can greatly benefit adolescents, and it could potentially be a core characteristic for students at this school, particularly if we want to maintain a safe environment. This could also be an additional perspective to further justify to the board why an extra budget of one hundred thousand euros is needed in the budget."

What is striking in this session is that there is a lot of focus on potential solutions (envisaging and exploring), even though the desired focus should be on specifying the ambition. The facilitator tries to regulate the suggestions by referring back to the ambition and questioning whether there is enough input to proceed with, before discussing solutions. One of the participants responds to this by saying: "The big question is: do we now have enough data to formulate our analysis or our ambition, (..) The idea I have now is that we have a general idea of where we would like the school to go and we could formulate a goal, but at the same time, we can still delve into the specific details by analyzing the needs of the students and figuring out how to implement those ideas." Due to the multitude of opinions being formed, some participants lose track and are unsure how the mentioned ambitions align or differ. To better clarify this, the facilitator suggests creating a template that participants can fill in as a way to

map out their perspectives. The facilitator emphasizes the importance of collecting input if necessary. The session concludes with these tasks as an assignment for the next session.

Session 3 In the third session, the facilitator begins by referring back to the idea that participants were supposed to capture their vision for the ambition and meet intermittently to discuss the shared ambitions. However, the participants were unable to meet during this period and stated that various reasons prevented them from doing so. Nevertheless, they all completed the assignment by putting their ambitions into a document. Some commonalities emerged from this exercise. One participant rightly pointed out that a colleague mentioned that the school is not only a cultural school but also a science and culture school, and that the science component should also be included in the ambition. This led to a discussion among the participants, expressing concern that if the ambition became too broad, it might also lose focus and effectiveness (Naming & Situating). Naming & Situating, remains the primary focus of this session, as seen through the discussion of multiple perspectives and the exploration of what exactly is needed to formulate the ambition effectively. The facilitator goes through several responses from the participants to address them. One of the ambitions related to culture is stated as follows: "Students should be introduced to different things in order to develop an open attitude towards art and culture" (Naming & Situating).This is followed by a direct example of how this can be achieved: "Perhaps the arts subjects can further reinforce each other through collaboration (..) I believe there is more to gain from this, that you can also collaborate among different subjects, maybe subjects that are open to it" (Envisaging & Exploring).

Evaluating and questioning occurred only a few times during this meeting, as the focus primarily centered around formulating the ambition and generating solutions to achieve it. However, there is one instance where it did take place. One of the participants referred to the past to illustrate how things should be done: "I don't think we should strive for that. But I do remember that almost all subjects already had a few things in different school years that were related to culture." Here, the participant highlights the topic of promoting culture across subjects, transcending individual lessons.

Session 4 In the fourth session, the participants build upon the alternative solutions and routines discussed and mapped out in the previous session. The facilitator plays a role in this session and often emphasizes the focus on data collection and brainstorming possible solutions to achieve the ambition. This is evident in the facilitator'sc opening statement for this session: "There are still two things on the agenda for today. The first is to collect data about the ambition

we have together (..) And then we continue with the solution directions, but a number of you had already thought about it in the preparation for today, so you can continue to use that input." As this session aimed to determine the specific ambitions, four ambition elements were identified: visibility of art in schools, exchange between art disciplines, accessibility of art for students, and integration of art with 21st-century skills. Participants were inquired about their preferences regarding data collection methods and timeline for plan development (Naming & Situating). Participants were asked to prepare by reflecting on various possible approaches to achieving the ambition. The majority had completed this preparatory task. Multiple ideas were generated, and participants expressed difficulty in choosing one or a few directions for action. One participant, for instance, stated, "Well, yeah, I have a lot of ideas. I had about eight ideas, and then you have to see which one is most suitable for that theory of action." One of the solutions that emerged frequently was the collaboration between different art disciplines and working across subject boundaries. Another solution that was commonly mentioned was the visibility of cultural identity within the school.

Towards the end of the session, the focus is narrowed down to a specific solution direction, namely the collaboration between disciplines. The facilitator points out that it remains unclear how this collaboration will take place, and potential solutions are discussed by the participants. One of the proposed solutions is to organize workshops by the art department for teachers from non-art subjects. The facilitator observes that it is unclear how students will be involved in this process and to what extent it contributes to the expression of cultural identity within the school. Concrete steps are taken to specify the solutions, including examining past workshop experiences, exploring how they can be conducted now, and determining the target audience. The facilitator concludes the session with a brief summary of all the solution directions, which include decorating the school in a cultural manner, using data to measure the ambition and gauge its relevance among staff and students, creating subject-specific plans that integrate arts and culture into the curriculum, and promoting interdisciplinary collaboration through workshops. This summary marks the end of the session, with the facilitator announcing that they will expand on these topics in the next session.

Reflective Dialogue

In the following paragraphs, a description is given on how reflection occurred among participants in each session and how these actions align with the characteristics of Reflective Dialogue.

Figure 2

Aspects of reflective dialogue in school 2
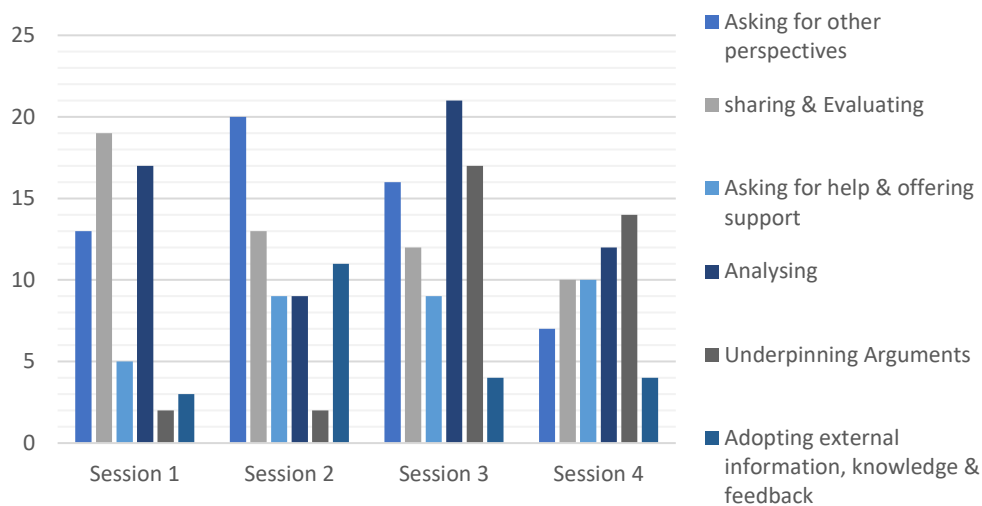
Session 1 As illustrated in the Figure 2, participants in the initial session were predominantly engaged in the exchange of experiences (Sharing & Evaluating), soliciting alternative viewpoints (Asking for Others' Perspectives), and delving into these narratives more deeply (Analysing). This is expected, given that from the perspective of collective reflection, the foremost session is dedicated to identifying the routine in question for potential change. To facilitate this process, the facilitator prompted participants to pair up and reflect upon the array of challenges and aspirations they hope to address. During the discussion of issues and perspectives, participants were often questioned by the facilitator and each other, demonstrating a search for diverse opinions (Asking for Others' Perspectives). An instance of this can be seen when one member inquired, "I am unsure of James's intention; perhaps he could summarize his point once more." Responding to this, James reflected, " Then I have to rewind the conversation, so to speak. But wasn't it about what the shared ambition is? That it is nice if culture is shared more widely, because it also has benefits for students beyond the talented students, and that these are simply achieved through culture."

The facilitator asked for feedback multiple times, particularly when discussing the problem statement. Participants wanted to use positive language and suggested using a "shared ambition" instead of a shared problem statement (Asking for Help and Offering Support). The facilitator articulated a common sentiment, "I've heard more about facing a challenge, yet I also caught terms that imply things are actually progressing well, that it is more an ambition. (..) merely changing the term could significantly aid in ensuring we're discussing the same concept. Therefore, 'problem' is eliminated from our vocabulary. Do you perceive it more as a challenge, or would you say it is truly an ambition? Perhaps there's a nuance in feeling there." One member responded: "To me, it appears more as an ambition. It is indeed something we profoundly desire to achieve." The employment of argumentation during this session (Underpinning Arguments) was infrequent. While participants narrated their stories, arguments were on occasion expressly articulated. The contribution of external information (Sharing and Adopting External Information) was exclusively referenced with an eye on a future meeting and the planning of which participant would interview particular colleagues or students.

Session 2 In the second session, participants discussed their interviews (Adopting External Information, Knowledge, and Feedback) and their findings. Topics covered a wide range, and a focus was placed on individual perceptions and insights gained from colleagues (Asking for Other Perspectives). Participants acknowledged the need for more perspectives, especially from teachers outside their cultural subject areas: "At least within the arts and culture sector, I believe that everyone somewhat shares this vision at our school. It would be interesting to hear more from other teachers about their stance on these matters."On two occasions, participant opinions were reinforced by arguments, especially when deliberating the choice of ambition, as exemplified in this statement: "That comment by Oscar about how it is terrifying to be so vulnerable when you are thrown into the deep end of the culture, I think that just like eating olives and cycling, it is a skill that you have to learn. I think that is an enormous added value for the learning process of every child to experience that vulnerability and to experience the creative opportunity to create. (..) I think we can go a long way with, for example, workshops and a place for culture more broadly in the curriculum and not just in the art classroom."

The main interaction focused on sharing and eliciting stories from others (Sharing & Evaluating), while also asking probing questions (Analysing) when clarity was needed. One participant asked the facilitator for guidance on formulating an ambition, stating, "Yes, I find it challenging. I am aware of my ambition, yet I haven't fully explored what overlaps with the

people we've interviewed, as well as those in the PLG. How do you envision it, how do we arrive at a shared ambition?" An intriguing observation is that, besides the facilitator who once again ensured depth by posing analytical queries (Analysing), the participants also displayed a tendency to inquire into their colleagues' shared findings from interviews. Such engagement is also depicted in Table 3, which shows an interchange between Analysing and Adopting External Information, Knowledge, and Feedback.

Table 3

Interchange between Analysing and Adopting External Information, Knowledge, and Feedback

Mirna: So I had this student that I interviewed who was in third grade. She indicated that the art subjects had really made her look at certain things differently. And it was a student who didn't actually take an art class, but really took lessons in drawing, crafts, that her own thought process... I don't know if we've talked about this before, about diverging and converging. But that part, putting things in a broader perspective and coming up with multiple solutions, is an attitude that she has acquired. I thought that was very nice to hear.	Adopting External Information Knowledge and Feedback
John: Nice! That is very interesting. The question is of course whether this applies to several students and where and when did they learn this? Mirna: Yes, she was very aware of that. If you talk about conscious and unconscious attitude, then she showed a very conscious attitude.	Analysing

Session 3 In the second session, findings from colleague interviews were reviewed, while the third session focused on defining the shared ambition with more analysis and frequent articulation of arguments. The session began with a discussion of findings from interviews with students and colleagues outside cultural sectors (Adopting External Information, Knowledge, and Feedback). The debate in this session revolved around whether to include perspectives from scientific disciplines or only focus on cultural aspects. One central question was whether students receive sufficient attention in scientific versus cultural projects, given the school's engagement in scientific initiatives. During these discussions, participants utilized arguments to clarify their positions (underpinning Arguments). An exemplar of this dynamic is: "So I was like, (..) if we are a science and culture school, you also come into contact with such a science project at some point, and then you can then

choose whether you want that. That means that you include it in such an 'introduction cycle'. That's actually what I had in mind. Yes, of course there are certain things that you learn in science and that you learn in culture. You can't compare them with each other, and that's why both are good." The facilitator prompted analytical examination of the shared ambition by asking questions during the session (Analysing). For instance, when discussing potential solutions, a participant mentioned twenty-first-century skills with little enthusiasm. The facilitator then probed into this sentiment, prompting an exploration of the underlying reasons, effectively obligating the participant to provide a rationale. The argument presented was as follows: "It's not necessarily the skills to which I would refer in terms of cultural interaction. The underlying idea of twenty-first-century skills suggests a shift away from subject content towards topical skills."

Apart from the facilitator Participants actively engaged in asking each other questions about their shared ambition, regarding that they work at a school that is known for its culture/arts profile, as all they would need to accomplish their goals with the students, is to start with themselves." This was in reference to being an intrinsic motivation. Another member summarized it as "teacher-involvement" And asked: "Doesn't that also have to do with visibility?" (Analysing). To which the first member responds with: "Yes, we can do something about that ourselves by being even more visible. (..) . And in the context of that visibility: it would be my great ambition and dream that there is a corridor with beautiful classrooms and that Dance is in our school. So that those girls and boys in their dance suits walk around among the science students to go to a classroom and that we have a shared props room." The facilitator announced the next session will focus on exploring potential solutions and methodologies for assessing progress in realizing the ambition.

Session 4 The focus of the fourth session on identifying viable solutions or means to achieve the stated ambition led to the observation that there was substantial argumentation (Underpinning Arguments). Participants frequently cited reasoning when expressing their opinions. There was little introduction of external information (Adopting External Information), as the bulk of the input had already been processed in the second and third sessions. A closer examination of the participant interactions reveals a consistent interplay between sharing experiences, posing analytical questions, and presenting arguments in response to those inquiries. An example that illustrates this dynamic can be seen in table 4.

This interplay of sharing, questioning, and argumentation is particularly evident when devising solutions and plans for achieving the ambition. The session ended with the concrete articulation of plans, with the aforementioned exchange occurring multiple times throughout.

Table 4

Interplay between sharing experiences, posing analytical questions, and presenting arguments.

Facilitator: "So, what would we ideally want to achieve? If we're talking about the school building, for instance. What kind of visibility does art and culture have? What are the things we're contemplating?" Exhibits were mentioned here	Analysing
Mirna: "Yes, when you enter the school, you should feel, you should sense our profile—that it's palpable. So culture, science, it ought to be vibrant, but currently, indeed, you enter and you're in a very dark hall. Aside from a statue of a lion that occasionally gets adorned with aluminium foil, there's really not much to see, no. There needs to be more colour, more items on display, things that are, how do you say, vandal-proof."	Underpinning Arguments

Reflection on the Performatives and Ostensives of the Routine

At this school, participants initially reflected on the problem or goal. This led them to focus on the performative aspect of executing the routine. While articulating their ambitions and issues, teachers showed their inclinations and interpretation of the routine (ostensive). An illustration of this emerged in a discussion concerning the engagement of non-art students with the school's cultural activities: "I was also wondering, for example, why theatre seems to be so invisible within the school, despite being a rather significant subject. While subjects like drawing, music, or handicraft are regular courses, theatre does not seem to be a regular subject as far as I'm aware. Hence, you see very little representation of it." To which another member added to this point by highlighting, "I particularly appreciate that both for the Christmas concert and the music and dance evening, children who aren't part of a music class also audition. (..) The beauty of it is that children participate—children you wouldn't even realize are engaged with music. So yes, this is indeed something we should all encourage, I believe."

In preparation for the second session, members gathered feedback from colleagues and students to identify and address issues within the school. The primary goal of the second session was to analyse the gathered input and create a problem statement, with a focus on performance aspects. During the session, the facilitator raised the question of whether enough input had been collected, prompting some teachers to suggest gathering feedback from non-participating students for a well-rounded perspective.

At the third session, participants discussed newly collected input. Of note, a teacher suggested that cultural profiling in the school may be overly emphasized, despite the school's recognition for both science and culture. This sparked a debate, highlighting the choice in defining the problem statement. The discussion revealed how the current expression of ambition in the school is performative, as seen through examples such as display cabinets and decor, while the intended approach is ostensive. One teacher also emphasized the importance of vulnerability and student development in this process. This discussion demonstrated how reflecting on the performative aspects can lead to perspectives and arguments based on participants' conceptual framework.

In the fourth session, the facilitator commenced by articulating the ambition, which encompasses four elements. The first one being the desire for the arts and culture to become a visible part of the school's identity, the second element is the aim for an exchange between arts classes and disciplines, thirdly having arts and culture accessible to all students and ensuring ever student engages with it and lastly to view the arts and cultural subjects as vehicles for engaging with twenty-first-century skills The facilitator then asked for input on devising solutions (ostensive). Participants discussed potential solutions and focused on improvement and alternative approaches (ostensive). Ideas included transforming the school into a pop podium and displaying artwork in the corridors. The session ended with a desire to gather information on cultural profiling activities in different subject areas to further embrace the school's cultural identity.

School 3

Collective reflection

Session 1 In the first session, the facilitator asked the school head to start the discussion about a customized education plan. The director focused on this problem (Naming & Situating), and other participants were encouraged to share their thoughts on joining the PLC and desired changes for the school. Some themes that emerged from the introductions were student-centred education, customization, designated work time, and sustainability (Naming & Situating and Evaluating & Questioning). Participants were then tasked to work in pairs to identify relevant issues, with a focus on the tailored education plan but also allowed to mention other challenges. During the debrief of this exercise, participants expressed concerns about students struggling in subsequent educational settings and the need for skill development in aspects such as independence, responsibility, mastery of learning objectives, and twenty-first-century skills. One participant felt limited by the current educational model,

which lacked opportunities for differentiation and physical space for tailored solutions. The idea of personalized education was frequently proposed as a solution, prompting participants to transition from describing their vision of the necessary changes (Naming & Situating) and supporting these views with examples (Evaluating & Questioning) to immediately suggesting directions for solutions (Envisaging & Exploring).

One of the participants indicates that support for students is the problem and that customization is the solution: "If students cannot remain in the system, in the current system, then, they drop out or drop out of class, they receive support. And you just have to maintain that (naming & situating) but in the form of tailor-made work. So perhaps incorporated into the flex hours (..). But it would be nice if it were integrated into the lesson again. And because of the differentiation, i.e. the customization, these students are also less likely to be left out. And also, to be able to offer support in the form of advice to teachers. That would be nice. So, it should actually become part of the educational process." (Envisaging & Exploring). The facilitator summarized the discourse, concluding that the issue is inadequate preparation of students for post-secondary education, involving factors such as motivation and support. Participants were assigned to consult with at least one colleague and one student for their perspectives and insights.

Session 2 The second session began with new participants joining the PLC, prompting brief introductions. The facilitator noted expected preparations and disclosed that only one pair had submitted their work. Participants mentioned heavy workloads and delayed submissions. Interestingly, a solution was proposed before defining the problem, as the management had circulated a document on the school's vision and flexible scheduling. The facilitator highlighted the blurred distinction between the problem (Naming & Situating) and the envisioned solution (Envisaging & Exploring), where the key challenge involved catering for student customization and the proposed remedy seemed to primarily revolve around the concept of a flexible schedule.

A debate between the school leader and facilitator ensued, with the school leader maintaining the school's direction and intent to implement the policy.
The facilitator redirected the conversation to focus on input, saying "we're veering off a bit from the starting point, let's make a slight detour and re-focus." The facilitator aimed to redirect the conversation back to the sharing of input, asserting, "we're veering off a bit from the starting point, regarding whether the problem is sufficiently clear. And um, I'm just considering what a logical sequence would be. Let's make a slight detour to re-focus on the problem. (..) You have, by now, spoken with various students and teachers. Matthew, you

already mentioned that it was quite enlightening to discuss with another teacher." Some limited external input was discussed, including topics like free periods, room changes, flexible scheduling, (LOB), and decision-making support. Participants primarily shared their experiences with colleagues and students (Evaluating & Questioning) but did not make concrete statements about the problem (Naming & Situating) or propose solutions (Envisaging & Exploring). When asked if they had enough input to formulate a problem statement, some participants shared their views and debated the framing of the problem (Evaluating & Questioning).

Suggestions for approaches began to surface (Envisaging & Exploring), even before the problem had been explicitly defined. Here's an example from one participant: "When discussing, for instance, a broadcast, you get into critical evaluation of sources, social media, and your environment. And then I thought: yes, this is a crucial role that the school plays. Whether for havo or vwo students, or other variants like mavo or vmbo, when they come to school here, they should be able to navigate this effectively. So, we're shaping critical, well-reasoned citizens (..) ensuring that teachers aren't left to independently devise something without it being consciously embraced school-wide". After several exchanges of opinions, the following problem statement emerged: "The schedule does not align with many teachers' visions of quality education." However, not everyone agreed: "Yes. But the issue isn't necessarily the schedule itself, it's that it's not flexible enough. That's why it's indeed called a flexible schedule, it does indeed become quite rigid."

From the subsequent quote, it seems the facilitator concludes that reaching a problem statement is challenging: "So, what exactly is the challenge we're facing? (..) the school has already progressed quite far in developing a solution. Hence, the flexible model has been presented as a resolution to this issue. But when we're still uncertain of the problem itself, then we don't really know what the solution should look like. So, the flexible model is more of a solution to a problem that we haven't yet defined clearly. And that leaves quite a gap." Participants were unable to reach a joint problem statement and will gather more input for the third session in a different way, asking "that kind of questions" that focus on positive solutions for implementing a flexible schedule.

Session 3 During the third session, participants were still unable to agree on a problem statement due to a lack of preparation in the second session: "Today's goal is for us to come to a commonly shared problem statement." However, participants came prepared, sharing experiences from students and colleagues (Evaluating & Questioning), discussing topics such as choice freedom, guidance, feedback, homework support, and academic skills. Teachers

expressed concerns and desires for flexibility in choices (Naming & Situating), but within the predetermined solution of an 80-minute flexible schedule. For example, "Colleagues also wanted more choice in subjects. Before, we had the option to choose subjects at eighty-minute intervals. We quickly reduced that to forty minutes because it was just too long. And that automatically led to more choices." (Envisaging & Exploring)

Student motivation (or lack thereof) in education became the focal point for debate among participants. Various opinions were shared, attributing the problem to factors such as teaching quality and style, academic levels, and the structure of subjects. Despite this, there was a discrepancy on whether this problem statement accurately reflected the issue: "I don't think all 1660 students lack motivation (..) So we might be doing them a disservice...That's what I think anyway. Some of you are nodding." Ultimately, one participant suggested that the root of the problem may not be motivation itself, but rather the desired environment that fosters it, specifically freedom and choice. The group struggled to formulate a clear problem statement, continuously bringing up related issues and different opinions. The facilitator attempted to streamline the discussion, saying, "For now, we shouldn't worry about how others will respond. It's about whether this is the statement that personalized education should address. Is this the problem we want to solve?" The session concluded with a concept problem statement that not everyone fully supported: "Students lack ownership and motivation to achieve the goals of our education." The facilitator announced that the next session would focus on developing solutions.

Session 4 The session focused on measuring the problem, with the facilitator reminding participants that the results can help gauge the success of efforts and inspire continued work towards solutions. In this session, participants needed to arrive at a concrete problem statement and from there, examine the desired situation. However, they struggled to consolidate into one concrete problem statement. Accordingly, the facilitator suggested measuring components identified in the previous session: preparation for vocational and higher education, changes in behaviour (proactiveness in class), and perceptions of education from students and parents (Naming & Situating). A team was formed to collect data or map out existing data regarding these three points (Naming & Situating) so that work could proceed on a potential solution (Envisaging & Exploring). The facilitator proposed to start considering solution directions, explaining the concept of the Theory of Action and how it could be employed as a tool. The 80-minute schedule solution was discussed (Envisaging & Exploring), and participants debated its alignment with the identified problem. Participants split into groups to generate solutions and their connection to the identified problem. Some

participants voiced their opinion that the 80-minute roster is not, in fact, the solution to the problem. It may be a means to facilitate a solution, but not the solution itself. One participant raised the concern that there was an over-reliance on the 80-minute schedule as a means of delivering personalized education, while other methods might be more effective. Various solutions were mentioned, such as teaching skills through more stringent selection processes to prevent attrition, as well as providing personalized education via the 80-minute schedule (Envisaging & Exploring). The session concluded with a brief summary from the facilitator and announcements relating to the next session.

Reflective dialogue

In the following paragraphs, a description is given on how reflection occurred among participants in each session and how these actions align with the characteristics of Reflective Dialogue.

Figure 3

Aspects of reflective dialogue in school 3
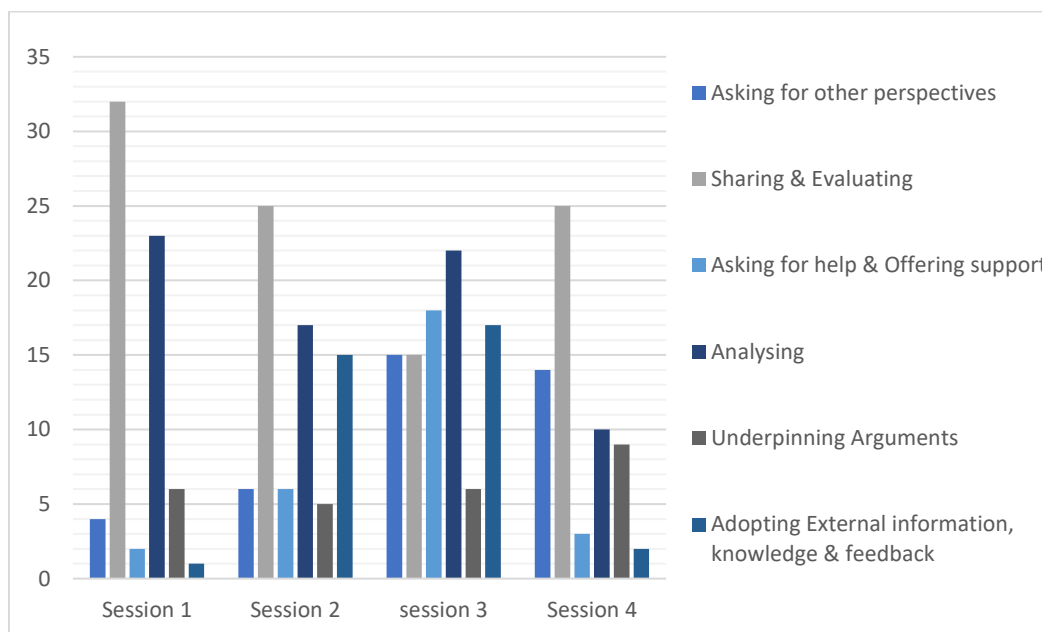
Session 1 During the first session the focus is on (Sharing & Evaluating) experiences and (Analysing) the problem. The facilitator specifically instructs participants to work in pairs and use practical examples to conceptualize the problem. Questions are mainly posed by the facilitator (Analysing), prompting deeper understanding of the underlying aspects (Underpinning Arguments) from participants. For example, when a school leader expresses a

desire to change the way students are sent to higher education, the facilitator asks, "And why not? Because that's what I want to get at. There's something underlying there." Through this question, the facilitator encourages participants to articulate their reasoning and justify their viewpoint, as shown in Table 5.

Table 5

Prompting participants to articulate their reasoning.

Anna: You now see that support is really a profession in itself. So if students cannot, er, cannot, er, yes, remain in the system, so to speak, in the current system, then, er, they drop out or drop out of class, they receive support. And you just have to maintain that. But in the form of customization. Mirna: So perhaps incorporated into the flex hours or, if necessary, outside of that. But it would be nice if it were integrated into the lesson again. And because of the differentiation, i.e. the customization, these students are also less likely to be left out. And also to be able to offer support, er, in the form of advice to, er, teachers. That would be nice. So it actually has to become part of the educational process.	Sharing & Evaluating
00:59:33 Facilitator: And why do you want it to be part of that?	Analysing
Mirna: Well, to also be able to deliver good, er, citizens to society and, the future study so that we don't coach someone here for three years in an asset and send them onto the streets at the age of 18: and now I just have to do it alone. While here they reached that finish line full of guidance.	Underpinning Arguments

On rare occasions, participants respond to each other, pose questions, or build on each other's opinions (Asking for Other Perspectives), seek assistance, or affirm each other's viewpoints, as demonstrated when one participant reacts positively to another's comment, saying: "I do think it's good that you pointed that out, indeed!" The incorporation of external knowledge was sparingly referenced during the discussions. An example arose when the school principal noted that according to research conducted by a university, the high school in

question was performing relatively poorly compared to others concerning how students fared after transitioning to higher education.

Session 2 During the second session, participants discussed feedback from colleagues and students. Some had not completed the assignment, resulting in missing input. Attendees reviewed the input (Adopting External Information, Knowledge & Feedback). One student's comment highlighted the need for guidance during questioning: "Yes, I really have to guide a student a bit. Because a student indeed comes up with things like: 'What is the problem with the school? Wi-Fi.' But I deliberately chose a 6th-year VWO student because you might get more out of them. And that eventually worked out. So, I started it myself, because I asked, 'What do you find interesting about the law program you want to do in Maastricht?' And then he said, 'Well, they really work with case studies there, see that. And that approach seemed very interesting to me.'" This shows that eliciting relevant responses from some students was more challenging.

During discussions with students and colleagues, participants reported asking analytical questions, such as one participant questioning a colleague's statement about the lack of classrooms being a problem (Adopting External Information and Feedback). The participant delved deeper to determine if this was a genuine educational issue or simply a scheduling dissatisfaction (Analysing). Reflective dialogue in this session primarily revolved around Sharing and Evaluating, often in response to external information gathered. For example, the same participant stated: "But indeed, I was surprised because I thought: yes, the schedule, I find my schedules annoying too. But I don't see that as the problem. Like, an annoying schedule, yes. It's like, well, a hurdle you take."

Session 3 In the third session, the facilitator highlighted a participant's extensive contribution regarding the implementation of personalized education in one department. The goal was to incorporate this practice in other departments alongside an 80-minute scheduling model. The session focused on developing a shared problem statement. The school leader shared feedback from student interviews (Adopting External Information, Knowledge, and Feedback) that indicated instruction was overly teacher-directed and limited students' choices: 'Because they do have a need for more choice. They acknowledge that directions are offered, but within the classroom, the influence of the student is very limited.'"

"Other themes emerged, such as lack of structured choice and a deficit of skills, prompting the facilitator to pose probing questions for discussion (Analysing). A discussion proceeded, with multiple participants attempting to formulate and refine the problem while the facilitator continuously sought clarification and specificity. Participants questioned each

other and sought help and support in approaching the problem (Asking for Other Perspectives, Help & Offering Support). Just like in this example: Jan: "But you can say a lot about the kids without that grade, right?" Willem: "So you have to ask, what do you want with those grades?" Jan: "That was my second question." Anja: "But, yeah, you could say, 'Well, we don't give any grades at all, and the teacher has to comment on your progress. If you don't show any progress or process, then well, we'll shake hands and see each other next year in the same situation.' That's another possibility." Articulating arguments (Underpinning Arguments), does not occur frequently in this session. The facilitator provided a summary at the end, noting that a consensus on the problem statement had not been reached despite specific terms being used. Participants expressed the need for further reflection to solidify their stance.

Session 4 The fourth session saw a decrease in the use of external information (Adopting External Information, Knowledge & Feedback). The facilitator began by restating the previous session's objective, addressing the issue of students lacking ownership and motivation for educational goals. This led to a discussion on the components and wording of the problem, with the facilitator regularly seeking participants' perspectives (Asking for others' perspectives) and asking insightful questions for deeper analysis (Analysing). There was no exchange of advice (Asking for help & offering Support), except for procedural feedback from the school leader. During the session, participants primarily shared and evaluated experiences, with a focus on finding solutions. Many shared experiences were applicable to potential solution strategies, particularly in relation to current implementation efforts. For instance, there was a discussion on aligning the current educational program with future educational pathways, and a suggestion to prioritize study and profile selection to address the issue. In this context, Frans, shared his observation on students' switch choices in pre-vocational secondary education: 'I have a lot of experience from class two BK, where students receive a lot of attention. However, despite this, students still tend to switch within the first eight to ten weeks. And it's not just one student - on average, ten to fifteen students still make the switch.

Towards the conclusion of the session, the implementation of an 80-minute schedule was repeatedly highlighted by the school leader as the definitive solution, from which deviation was not deemed appropriate. This approach facilitated a process whereby participants engaged in the sharing of their perspectives and experiences (Sharing & Evaluating) regarding the proposed schedule. Additionally, it prompted individuals to

articulate and underpin their arguments (Underpinning Arguments) concerning their apprehensions or outright disagreements with this proposal. For instance, one participant pointed out the origins of the 80-minute model, noting its conception by a group of managers several years prior—many of whom are no longer present within the institution. The participant remarked, "Those 80 minutes are now being introduced because that is how it is at MAVO. And, well, they came up with that then, so we have to do it now, (..) hey, there you can see very clearly that that is not the is the right basis of argument to implement something."

Reflection on the Performatives and Ostensives of the Routine

A notable observation from the initial session is the immediate focus on the ostensive aspect, characterized by the school leader announcing a pre-determined solution to the problem at hand. This approach diverged from the session's intended purpose, which was to collectively map out experiences in order to identify a shared problem (reflecting on the performative aspect). This caused confusion among participant and created ambiguity and a discrepancy between the intended problem-solving process and the pre-emptive solution announcement. The participants engaged in reflection with a partner or in small groups, identifying shared problems such as a lack of student motivation and limited course options. This highlighted the need for strategic interventions in critical areas for improvement within the institution's operational framework. Amidst deliberations on collective challenges, the 80-minute schedule repeatedly resurfaces, causing a focus shift between performative and ostensive aspects. As a member notes, "Essentially, we no longer fit within the building's capacity (..) it simply becomes unmanageable." This highlights the practical implications and strains of implementing the 80-minute model, blending performative and ostensive considerations in decision-making. Despite incomplete input, a collective problem statement was formulated through reflection on experiences and perspectives of teachers and students, emphasizing the performative dimension of analysis. The topics and problem statements aligned with previous discussions (Performative).

In the second session the school leader mentioned the topic of the 80-minute schedule (Ostensive), revealing diverging views of teachers and students, showcasing the complexities of implementing structural changes within an educational setting, merging performative and ostensive frameworks. The facilitator intervened to clarify the core challenge at hand, noting the school's advancements in devising a solution. However, a comprehensive understanding of the problem remained elusive, making it difficult to determine the efficacy of the proposed

solution. This highlighted the incongruity between problem definition and solution development, sparking a discussion on the approved vision document (implementation of flexible/80-minute schedule for tailored educational experiences). The facilitator redirected the conversation towards sharing input (performative), highlighting the need for aligning problem identification with solution development and the critical role of performative insights in informing strategic decisions and interventions in education.

The predetermined nature of the solution led to continuous alternations between performative and ostensive aspects, hindering the participants' ability to agree upon a unified problem statement. In the third session, participants reflected on feedback from students and colleagues, but still struggled to formulate a problem statement applicable to all levels and grades. This highlights the difficulty in distilling one issue from the diverse educational experiences and practices within the institution. The emphasis on performative reflection highlights the impact of direct experiences on problem-solving in education. Despite deliberations, participants remained divided on a unified problem statement, leading the fourth session to focus on defining the issue collectively. Discussions on performative aspects became more prominent due to lack of consensus. The topic of the 80-minute schedule was revisited, fuelling discussions on both performative and ostensive elements. However, a new ostensive framework remained elusive, underscoring the challenges of reconciling diverse perspectives in problem-solving. The recurrent mention of the 80-minute schedule exemplifies the complex interplay between existing institutional norms (Ostensive) and stakeholders' lived realities (Performative). The session emphasizes the struggle to define a new ostensive.

Discussion

The present study explored how reflection on the organisational routine contributes to the creation of a new ostensive aspect within secondary education in the Netherlands. In this chapter, the findings of the study in relation with the research questions will be discussed per question, sub question 3 will be addressed through the answers to the first two questions, followed by the limitations, implications, and suggested courses for further research.

Collective reflection

In examining how participants in a PLC at three different schools select a specific organisational routine and reflect on it through collective reflection to create a new ostensive aspect, the results showed varied approaches and results across the participating schools due to differences in engagement and participation and preparation by the participants.

During the first session the main focus for all three schools was on identifying the routine and problem they wanted to approach. All though all three aspects were present in the first school during the first session, the main focus of this session was on Naming & Situating. By Naming & Situating the routine and the problem they experience the approach by school 1 is effective, according to Feldman & Pentland (2003), who express the importance of naming and situating a routine in order to change it. The same can be said for the approach of school 2,. By Evaluating & Questioning experiences, school two also came to a shared understanding of the desired change, however this did not lead to a direct problem statement. School three however struggled with Naming & Situating the problem and to come to a shared understanding of a routine that desired change, due to the principal introducing an 80-minute timetable as a pre-defined solution. This introduction of the solution can be seen as a top-down approach, which according to Giddens (1984) affects the agency of the participants and leads to alienation and lack of involvement. In this case the participants were not able to view collective reflection as a means to create changes as the solution had already been decided upon.

In preparation for the second session participants of all three schools had to interview colleagues and students for input about the problem statement, to take part in Evaluating & Questioning. This input was discussed to clarify the problem within the routine. In the first school the recurring themes were discussed, which led to the formulation of a problem statement t. This session laid the foundation for gathering further input via a questionnaire, in order to concretize the problem statement. The second school discussed the preparation regarding the ambition of the PLC. Despite missing parts in the preparation by the

participants, a concept of a shared ambition was formulated, through Naming & Situating. This took the participants back to specifying their ambition before discussing solutions, again highlighting a reflection process essential for effective collective reflection in organisational routines as mentioned by Dittrich et al., (2016). In the third school new participants joined the PLC in the new school and challenges were experienced due to inadequate preparation of the session. The main focus of the session was on the proposed solution of the 80-minute timetable and therefore participants focused more on the solution and Envisaging & Exploring then on Naming & Situating, which could hinder the process according to Dittrich et al., (2016), as it can lead to a lack of direction.

In the third session the participants of school 1 utilized input gathered from surveys to Evaluating & Questioning the identified problem within the routine, aiming to arrive at a definitive problem statement by Naming & Situating and discuss potential measures through Envisaging & Exploring to address it. By concentrating on Envisaging &Exploring, a new ostensive aspect can be developed, as Dittrich et al. (2016) explained that the exploration of alternatives by participants contributes to the evolution of the routine and consequently fosters the creation of a new ostensive aspect. Participants of school two managed to complete the assignment given for this session and captured their ambition for the school's cultural identity leading to the recognition of common themes. The participants primarily focussed on Naming & Situating the ambition and Envisaging & Exploring how to achieve this ambition, highlighting goals like developing an open attitude towards art and culture. This session therefore also contributed to the creation of a new ostensive aspect. The participants of school 3 were not able to agree on a problem statement. This was partially due to inadequate preparation which leads to ineffective reflection within a PLC according to Schaap and De Bruijn (2017).

During the fourth session a difference is noticeable between school 2 and 3 in regard to using collective reflection to come to a new ostensive aspect. In school 2 the focus on Envisaging & Exploring continued in line with the theory of Dittrich et al. (2016), resulting in practical steps for the implementation of certain solutions to reach their desired ambition. Contrary to this, participants of school 3 were still struggling with the concretization of the problem statement and focused on measuring the problem, by Naming & Situating in order to track progress towards solutions and suggest new ideas. However, at the end of the session the participants still did not agree on the problem statement nor on the solution of the 80-minute timetable and were therefore not able to start creating a new ostensive aspect of the routine.

The lack of Evaluating & Questioning could be due to the set solution that steered the session towards Naming & Situating.

Reflective dialogue

In examining how reflective dialogue takes place during the creation of a new ostensive aspect differed across schools. Each school navigated the complex terrain of routine change through reflective dialogue matching their needs. In the first school the emphasis within reflective dialogue appeared to alternate between Sharing & Evaluating and Analysing the problems. The facilitator played a crucial role in steering the discussions by asking the participants to underpin their views by Underpinning Arguments in order to validate their view on the problem within the routine. Later on, in the second and third session Adopting External Information became a bigger part of the present aspects of reflective dialogue, which according to Ros et al. (2018) is pivotal in validating and underpinning others' perspectives.

School two showed a more expansive engagement with diverse perspectives right from the outset. The initial sessions indicated a strong inclination towards embracing various viewpoints across disciplinary boundaries by Sharing & Evaluating, which progressively aligned around their shared ambition. Reflective Dialogue in this case incorporated a broader spectrum of aspects such as Asking for and Offering Support and Adopting External information and Knowledge, which underscores the thematic buildup towards a collectively embraced change (Ros et al., 2018).

The third school also showed a great presence of the aspects Analysing and Sharing & Evaluating. However, though the expectation would be to get more into Adopting External Information in the latter sessions, the focus remained on Sharing & Evaluating and Analysing. This was due to the emphasis on the 80-minute schedule, a definitive solution introduced by the school leader regardless of the problem. The imposed solution is not the most effective way to come to a new ostensive aspect, as it is top-down implemented (Feldman, 2000). The aspect Asking for other opinions was lacking in comparison to the other schools, which could indicate a lack of psychological safety of the members within the PLC, which is in line with the study by Edmondson et al. (2004) who found that participants seeking help or feedback and who speak up about concerns are aspects of psychological safety. Regardless of the discussions during the sessions the participants were not able to agree on a concrete problem statement, which according to Boud et al. (2006) is a hindering factor in the process of reflection. The influence of the presence, involvement, and input of the school leader during these sessions resulted in these discussions. According to Ross et al. (2018) having a school

leader present can influence the openness of the participants in the PLC and affect the reflection process.

Implications

The implications of this study have furthered the Organisational Routine Theory in regard to reflection. This study was conducted in a Professional Learning Community (PLC) setting, which differed from Dittrich et al.'s (2016) more natural study during the enactment of routines. By finding similar results to Bucher and Langley's study (2016), which was based in healthcare, this study provides some degree of confirmation that reflective spaces can be a positive environment for changing or designing organisational routines. Additionally, it extends the findings from Thelin (2020) in the educational context, by showing that reflective spaces can serve as a setting within a PLC to create new ostensive aspects of a routine. This study also showed the crucial role of collective reflection and reflective dialogue in the identification of and approach towards problems within a routine. By using the aspects of collective reflection (Dittrich et al., 2016) during reflective spaces in PLC's, schools will be able to create a new ostensive aspect effectively. The study also showed that the participation of teachers and the role of the school leader is essential in the process of creating a new ostensive aspect. These findings point towards the importance of having well-prepared participants and an open-minded environment to ensure an effective problem-solving process.

Strengths and Limitations

This study has many strengths, which is highly attributed to the fact that the data was collected from a previous study and therefore was not intrusive. According to Van Maarseveen et al. (2022), using videos is more valid and reliable compared to live observations, because of the minimal impact on the behaviour of the subjects. In addition, using the recordings and transcripts had a great advantage, as according to Boeije (2009) the use of recordings and transcripts provides literal quotes that can be used in the study, which strengthens the quality of the research. Moreover, the codebook combined two theories, namely collective reflection and reflective dialogue which enabled a more thorough analysis and evaluation of the results, as according to Babbie (2020) who claimed that using existing concepts and models would allow researchers to attach the findings to existing knowledge. By using these frameworks for the analysis of this study, a solid basis for an understanding of the creation of a new ostensive aspect within an organisational routine was created.

Another strength of this study is the difference between the three schools and the quality of the data that was collected. Having three different cases to study contributed to the

triangulation of this study and created a basis for a comparative analysis (Bingi et al., 1995). Despite this strength, this study did not take the influence of the facilitator's behaviour into account. The prompts of the facilitator in the transcripts show that the facilitator plays an important role in steering and supporting the reflective behaviour during the sessions.

Another limitation of this study is the absence of influencing factors in the analysis of this study. Influencing factors, such as the school culture, the resources and time and others (Otessen, 2007), might be extraneous variables influencing the results. Other influencing factors could be the diversity in background and experience of the PLC- members, as it is known that the composition of a group may have an influence on the effectiveness of the reflection process within a group (Homan et al., 2007).

Lastly the data which is used for this study was gathered during the COVID-19 Pandemic. During this time some of the meetings took place in an online setting, which may have influenced the reflection process within the schools. According to Waizenegger et al. (2020) using online or virtual platforms decrease the amount of visual cue's resulting in a hindrance of conveying emotions and facilitating effective communication. Within this study the effects of the virtual meetings on the reflection process have not been considered. Although this is the case, the benefits of this study prevail over its shortfalls.

Future research

This study focused on the influence of collective reflection and reflective dialogue on the creation of a new ostensive aspect within an organisational routine in Dutch secondary education. Drawing upon the theory of collective reflection from Dittrich et al. (2016) and Boud et al. (2006) and utilizing reflective dialogue derived from Ros et al. (2018), the study explored how reflection took place in order to establish a new ostensive aspect. Significantly, emphasis was placed upon the performative and ostensive aspect of the routine and the role of reflection as a form of agency (Giddens, 1984). Although not addressed within this study, future research could investigate the influencing factors mentioned in the limitations. Specifically, the influence of the composition of the PLC, based on their backgrounds and experiences but also on their position within the school. As mentioned by Ros et al. (2018) school leaders play an important role in involving teachers when it comes to big organisational changes or innovations. The involvement of the school leader within the PLC could therefore be an interesting topic for future inquiries.

Moreover, future research should focus on the role of the facilitator within a PLC and how their relationship with PLC members affects the group's process and result. The role of the facilitator within the sessions could be further explored. In this study the prompts by the facilitator stood out, due to the regulating effect they had on the process of reflection within the PLCs. By researching characteristics of successful facilitators, it might be possible to determine which approaches are more or less effective for PLCs as the facilitator's ability to guide discussions, manage conflicts, and foster a collaborative environment is crucial to the PLC's success. Research by Margalef and Roblin (2016) on the different roles and impacts of facilitators within PLCs in higher education can provide a valuable theoretical framework for such studies, as it already offers a foundational basis. Future research can build upon it by examining the facilitator's influence on the specific reflection processes. Additionally, existing literature can be expanded by incorporating the context of secondary education.

Lastly, for this study data was taken from 4 recordings per case, making it a relatively small-scale study. Future research could benefit from examining multiple PLCs across different schools with the desire to undergo changes in organisational routines, which would provide a broader and generalizable data set. Furthermore, future inquiries should consider integrating interviews to create more in-depth reflections and insights from the participants. Including qualitative interviews can enhance the data and provide a better understanding of the role of collective reflection within a PLC. This aligns with methodologies emphasizing the value of mixed methods approaches and the integration diverse data sources as suggested by Boeije (2009).

Conclusion

This study explored how reflection on organisational routines influences the process of creating a new ostensive aspect within secondary education in the Netherlands. The findings indicate that collective reflection and reflective dialogue within Professional Learning Communities (PLCs) play critical roles in this process, but their effectiveness varies based on participant engagement, preparation, and leadership involvement. What was striking was the influence of the principal and the preparation on the quality of collective reflection, which showed a clear difference in results between schools. Schools 1 and 2 were able to make more progress in their reflective dialogues through evaluation and exploration compared to school 3, where predetermined solutions hindered the process. The results showed the crucial role of collective reflection and reflective dialogue in recognizing and approaching problems. Good

preparation and an open environment were essential for an effective problem-solving process within the chosen organisational routine.

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Appendix

Appendix A: Codebook

		Code	Definition	Example
Aspects of collective reflection	Naming & Situating	C-1	Naming and situating problems or opportunities with regard to the performative and ostensive aspect	1:77 372 in 200925 MCT M1 "And then the second problem is how do you show students the usefulness of doing assignments? Because they don't want that, and, and why is that a problem? Yes. Well. Because they just don't get to work. That is the problem and that is at the student level."
	Envisaging & exploring	C-2	Jointly envisaging and exploring alternative ways of enacting the routine	3:24 294 in 200922 OSGE M1 "And also to be able to offer support, er, in the form of advice towards, er, teachers. That would be nice. So it should actually become part of the educational process."
	Evaluating and questioning	C-3	Evaluating and questioning previous ways of enacting and newly explored ways of enacting the routine	12:65 315 in 201103 MCT M2 SK: The problem is that our students don't get enough attention to develop themselves in the right direction.
Routine aspect	Ostensive	Ost	An subjective understanding on the concept of the routine, what it entails, how it should be operated and the rules and norms that (are already) enable the actions	1:5 74 in 200925 MCT M1 I hope we can achieve something. What is, through which we actually change the education that has been given in the same way for almost a hundred years and through which we perhaps regain the Montessori identity a little more. Yes, that's actually what I hope. I am also looking forward to the fact that we can really shape education here in a different way. Than at any other school in the area. And um, well I'm looking forward to that, but of course I have concerns
	Performative	Per	The (experiences, memories of the) performance of the routine by teachers	11:17 251– 254 in 201201 MCT M3 MH: And that, which has little influence on the content and content. What does that do to them? 00:24:48 LD: They find that boring. Because this morning my question to those students was, I'll take a look. Hey what makes it fun for you to go to school. And then he said: You know the classes where I have a lot of interaction, the class where I have a lot of interaction and can work, I like that, I like it. Hey, because then I have to think about things. But I also have teachers who just stand and explain for a whole hour. Then I am expected to listen and do my work in my own time. While I don't have those questions at all. But there are still teachers here at school who apparently still do it that way. 3 Havo tto. 00:24:48 MC: Yes, sure. Also in the superstructure. 00:24:48 AK: Yes in the superstructure too!
Aspects of reflective dialogue	Asking for other perspectives	A-1	Asking for opinions of others. Ask further Show appreciation for other opinions and expertise	1:91 410 in 200925 MCT M1 "AK: But what you said about, and you said, about being more of a coach, why couldn't you do that?"

	Sharing and evaluating	A-2	Sharing experiences Asking questions about what the problemstatement should be How they should handle Evaluation of previous ways, why that worked or didn't work Why it is like it is Usually connected to a judgement	11:41 366 in 201201 MCT M3 "SK: But how big is that group really. Because if I look, for example, within our section, it is quite small, there are really people in it who find it very difficult. So they just need a little more time. For example, one colleague has only been working since this year, she has made a PowerPoint for the first time, but not because she does not want to. But because until then no one has taken the time to help her on how to do that. And I think that group is much larger than the group that says, no, I don't feel like it anymore."
	Asking for help and offering support	A-3	Ask for feedback, or give feedback Ask for help or offer support	12:4 95–100 in 201103 MCT M2 "That will also make us lag a bit more behind and it's more difficult to keep a good momentum, so that would be a shame. So I'm curious how come? What has happened lately and let's catch up with each other about it." 00:11:44 FT: "I did. Only I didn't understand that we had to email that to you in advance. I thought that was just work materials for now"
	Analysing	A-4	Inquiring about the nature of a problem/issue/methodology - Asking/searching/providing more information - Suggesting possible causes of problems - Discussing the development of students 4 W questions What are characteristics -> dive deeper Why, when, whom, where.	1:43 70 in 200925 MCT M1 "Your colleagues who have been running along the same lines for years. And they say yes, but my way works well. Of course I also discussed this with that master, you have conversations with the teachers of different schools that say yes, but we have been like this for years and that works fine. Yes, but be open to change. For, for a different way, do it, use a different method. Yes no, but my method just works the best. I just get the best grades for you maybe yes. You could also try it in a different way and that is difficult to convince those kinds of colleagues that it can be done in one, another way and that, for example, that students who always work for you choose, because of you or because of the profession. But that could be for a variety of reasons. Or a further education that they want to obtain."
	Underpinning arguments	A-5	- Giving arguments - Identifying/asking for and weighing the pros and cons - Identifying alternative solutions - Identifying conditions - Making well-considered decisions How question, how can we change this and why like this	3:19 272 in 200922 OSGE M1 first of all, those aren't the classes and, uh, secondly, they come next on college and woe-, you know a bit ordinary. Yes, they have, they really don't care. Maybe they learned that if you learn really hard and you know how to jump through hoops, you can do that in other situations too. But, and, and, yes, you don't want that. You don't want to deliver your students to, uh, [57:29]
	Adopting external information, knowledge and offering feedback	A-6	Insert literature and gathered data into the conversation Refer to either literature or gathered data from interviews with external people such as teachers or students.	11:47 399 - 410 in 201201 MCT M3 LD: But that was also what kind of came out of the conversation yesterday, which I think is okay. And what comes up from those surveys
Facilitator	The role of the facilitator	FA	Every outing of the facilitator that gives the impression that the facilitator is facilitating or regulating the process of collective reflection within the reflective spaces (PLC)	1:103 135 in 200925 MCT M1 MH: Well nice to you, all, you yes how you stand in this to hear that. I think the greatest common denominator is yes, how are we really going to secure this? How are we going to get everyone involved? That will certainly be something that we will pay a lot of attention to. Ehm for now I would like to approach the problem with you. (..) Why is that a problem and for whom is it a problem? Then we will discuss this with each other in a moment.