Unraveling the complexities of enacting change in undergraduate medical curricula

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CHAPTER 4

*The art of balancing the hard
and soft sides of governance in
curriculum change processes*

Abstract

Introduction

In the midst of continuous reforms in health professions curricula, critical questions arise to what extent all these change efforts and beautiful ideas on paper result in real changes in educational practice. Often, the curriculum in action does not look like what was aimed for. One under-explored aspect that might play a role in this unsatisfying result, is the role of governance. This paper aimed to explore the role of governance in the process of translating the educational goals and concepts of a curriculum to real changes in educational practice.

Method

In three Dutch medical schools, the first and third author individually interviewed 19 teachers who also hold an educational middle management position. Interviews were between March and May 2018, using the rich pictures method. A qualitative content analysis was performed, conducting an inductive coding process, with data collection occurring concurrently with data analysis.

Results

Different governance processes were observed, each having its own effects and consequences on the actual curriculum and organizational responses. In Institute 1, participants described an unclear governance structure resulting in implementation chaos in which an abstract educational concept could not be fully realized in practice. In Institute 2, participants described a top-down and strict governance structure that contributed to a relatively successful implementation of the educational concept, though also led to demotivation of teachers, who started rebelling to recover their perceived loss of freedom. In Institute 3, participants described a relatively fragmentized process in which they received a lot of freedom that contributed to contentment and motivation; however, the process did not fully support the intended outcomes.

Discussion

Our paper empirically illustrates the importance of governance in curriculum change. Defining and explicating the hard and soft governance processes in place are vital to advancing curriculum change processes and improving their desired outcomes.

Introduction

Worldwide, medical schools seem to be in a constant state of reforming their health professions curricula. Increasingly, however, critical questions arise to what extent all these efforts and ideas on paper result in true, institutionalized, changes in the curriculum in action.[1-3] These concerns have been phrased in the health professions education literature as the curricular carousel, *"the recurrence of reforms with limited change"*,[1 (p.283)] or *"the [continuous] model of endless epicycles"*.[3 (p.800)] These phrases point to a major problem. Despite seeing so many beautiful ideas in curriculum designs on paper, the actual translation at the more micro-level (e.g. teacher-student) does not result in what was intended or aimed for.[3] One under-explored aspect that might be a part of this repetitive dilemma, and presumably plays a role in this unsatisfying result, is the role of governance.

Academic governance - the means by which decisions are made, implemented and monitored in a curriculum - is a vital, yet relatively rarely considered subject in medical education practices.[4] As Casiro and Regehr argue, discussions about content and pedagogy should be complemented with discussions about governance frameworks that enable curriculum change. *"Focusing on curricular changes and program evaluation while ignoring the processes of change (the mechanisms of decision making and implementation) is one of the key mistakes that lead to failed change efforts"*.[4 (p.2)] Therefore, a better understanding of the governance processes in curriculum change implementation might prove to be helpful in gaining a deeper understanding of how to be successful in translating curriculum philosophies and concepts (e.g. problem-based learning) to actual, real changes in the curriculum in action.

For academic medical centers,[5-7] and higher educational institutes separately,[8-10] recent publications have shown some interest in governance. Most papers focus on greater institutional, macro-level governance, such as governance characteristics to ensure the prosperity of the tripartite mission of academic medical centers,[6,7] or ways in which universities perceive shared governance in their strategic plans.[9] However, the governance processes on the lower levels, such as within an undergraduate medical curriculum, operating in a challenging context, remain understudied.

Those curricula face unique governance challenges as medical schools are situated in complex institutional interdependencies between universities and healthcare systems in which the curriculum is embedded. Additionally, there is a large variety of internal and external stakeholders feeling to have a stake in the process and 'final product'.[4] On the curriculum enactment level, complex interactions exist between a large number of staff, teachers, course coordinators and overall curriculum leaders.[4,11] Furthermore, governance processes often remain implicit as discussions tend to focus on curriculum content and design, rather than explicating decision making practices.[4] This is particularly problematic as medical curricula are

dynamic, evolving, multiyear, high-stake programs, thus prone to many changes. Therefore, medical schools should carefully consider these important organizational matters in order to function effectively: *"effective academic governance is critical to effective curriculum delivery"*.[4]

What we know about good/effective governance is that it encompasses hard and soft aspects.[12] ('Hard') formal rules, procedures, and processes function as scaffolds of governance structures of an institute,[6] and include elements like committee structures, lines of reporting, and clearness about responsibility, accountability and authority.[4] Within this scaffold, various other ('soft') human processes further shape the governance system's functioning. This concerns leadership and trust,[10] relationships, participation, communication, and perceived fairness, transparency and legitimacy of the decision making processes by those involved.[4] However, empirical studies on how these governance processes work in actual, lower-level curriculum change practices and shape the implementation are lacking.

In undergraduate medical education in the Netherlands, teachers in middle management positions (e.g. the overall curriculum director and course coordinators) act on this lower-level, and therefore fulfill a key role in translating curriculum ideas into actual curricular practices. Although they play a vital role in curriculum enactment, not much is known about how they perceive governance processes in curriculum change. Knowing more about their perspectives on struggles and experiences with governance will help us better understand how decisions are made and implemented. This deeper understanding of what difficulties are faced will shed a light on deficiencies and needs of support to further improve academic governance practices. Therefore, this paper aims to explore the question: what is the role of governance in the process of translating curriculum goals and concepts into institutionalized curriculum change at micro-level?

Method
The Dutch Association for Medical Education ethical review board approved this study (number: 965).

Context
Out of the eight medical schools in the Netherlands, we approached three schools that implemented a new educational concept/philosophy, resulting in a major curriculum change process. We define major curriculum change as: *"changes that [are] not about the yearly, regular adjustments at course level, but [are] centrally organized, intentionally initiated change projects that affect the entire curriculum and organization involved in the curriculum."*[11] These changes were made in the first three years (Bachelor phase) of the undergraduate medical curriculum, which in total consists of six years. In this Bachelor phase, the focus

is predominantly on gaining a firm base of basic science and medical knowledge, and the development of competencies, following the CanMEDs model. Usually, schools start with the first patient encounters in this phase; however, this is intensified in the last three years (called Master phase) of the undergraduate program, which is predominantly clinically oriented. Annually, each school accepts an average number of ~ 400 students.

Design
We carried out interviews with 5-7 teachers from each medical school who hold an educational middle management position (overall curriculum directors and course coordinators). We used Rich Pictures, a drawing tool from systems engineering, to augment data collection, which will be further explained below.[13,14] Our study was conducted from a constructivist orientation, as we believe that knowledge is co-constructed between participants and researchers, and that multiple realities occur in social processes,[15] like curriculum change.
These realities are constructed in the curriculum change context, but also (re)constructed during the drawing and interviews. As a team, we further co-constructed the interpretations of our analysis during frequent team discussions. Therefore, our backgrounds also serve as an important factor, shaping our results: FV studied social psychology and is interested in organizational processes of curriculum change. HD is a senior educationalist chairing educational development taskgroups, and RC is a senior curriculum innovation consultant. They are both daily dealing with curriculum (change) matters such as governance. AJ is a professor in health professions education, having experiences with curriculum changes in several institutes. Finally, EH is an elderly care physician and an experienced rich picture researcher.

Participants
All participants (7 female, 12 male) had been teaching for many years within medical education and worked as basic scientists or physicians. Some had been part of the preparation phase of the curriculum change process, others were primarily involved in the implementation phase of translating the ideas into actual curricular practices. Deans of education were asked for permission to conduct research in each medical school. FV elaborately informed them about the study and the intended participants; teachers in middle management positions (course- and overall curriculum directors) that were engaged in the curriculum change and who could share their experiences with the governance processes. The deans of education introduced the study and FV by email to a variety of potential participants as they saw fit. Those who were interested to participate were invited to contact FV.

Data collection

FV conducted 15 individual face-to-face interviews using the rich pictures method between March and May 2018. After instructions and practicing together, 4 interviews were carried out by RC. To develop the interview guide, FV studied the literature on (academic) governance, and developed the final guide in frequent consultation with the team. To refine the interview guide, FV conducted two pilot interviews with a curriculum director and course director outside the target population.

The rich pictures method is useful in describing and understanding messy or complex problems, as the pictures aim to reflect on a 'reality', with all its interacting elements such as people, objects, emotions, beliefs and relationships.[13] Rich pictures capture these interplays in one drawing, and provide insights into the multiple interactions taking place simultaneously.[14] As we were to explore the complexity of curriculum change governance, this method suited our goals.

One week before the interviews, participants received a short introduction to governance (informed by Casiro and Regehr 2018 and Kezar 2004),[4,10] followed by the instruction to think about a case illustrating the governance processes in their curriculum change implementation. This was repeated during the actual interview, and thereafter participants were asked to draw their illustrative case, covering in the picture all that mattered for them (people, objects, relationships, emotions, etc.). Each participant drew for half an hour (they were left alone with a large white paper and color pencils), followed by a semi-structured interview that used the rich picture to tell the participant's story. In addition to explorative questions about the drawing and its meaning to the participant, the interview included questions like: what are consequences of the described governance processes for the educational outcome/educational practices? How does this process help or hinder the implementation/translation process? What is your opinion about the final result; is that what was aimed for realized in practice? Sessions lasted between 1-1.5 hours. The drawings were photographed, and interviews were audio-recorded and rendered anonymous in the transcription process. For the Results section, the drawings are anonymized and, if used, native words are translated to English.

Data analysis

We employed qualitative content analysis, a *"dynamic form of analysis of verbal and visual data that is oriented towards summarizing the informational contents of that data."* [16 (p.338)] Qualitative content analysis is an inductive coding process, with data collection occurring concurrently with data analysis. The result is a descriptive summary of the event of study.[16]

FV started with detailed, open coding of five interviews using Atlas.ti 8 (ATLAS.ti Scientific Software Development GmbH, Berlin), followed by discussions

with EH and AJ who shared their reflections on the same interviews. We reached consensus about the coding. Thereafter FV conducted more focused coding of all the interviews from one institute, and wrote summaries of each interview to grasp the main messages. To bring the storylines of one institute together, FV used the Atlas.ti network-tool to create an overview of the codes and their connections. FV discussed the developing network with EH, HD and AJ to ensure accuracy and reach agreement about the interpretations. Subsequently, FV repeated this process for the other two institutes (coding, summarizing, creating networks). Intermittently, regular team meetings were held to discuss the process and our evolving interpretations.

The pictures were analyzed as an illustrative addition to the stories. After each interview round, FV discussed the drawings with the research team. The most remarkable aspects, figures and metaphors were identified in this stage. In the Results section, we used parts of the pictures to visually enrich the storylines of each institute. Finally, we performed a member check, and all participants agreed with the way the results of their institute were presented.

Results
Each of the three institutes will be discussed separately by describing and visually illustrating the main characteristics of governance processes in place and their role in bringing about the desired changes in curriculum practices.

Institute 1: The big brown mess
The strategy of Institute 1 was to implement one central educational concept in every year, with additional goals aiming at more coherency between the educa-tional courses and teachers, and the integration of clinical and preclinical sub-jects. Implementing these assumptions proved to be somewhat problematic. To illustrate, the striking metaphors in the drawings of participants were a 'great pile of shit' to explain the governance processes (figure 1), and the use of the 'ugliest colors' to draw a 'dirty plate of spaghetti' that represented the chaos of decision making (figure 2). This big brown mess illustrated an ambitious, yet frustrating and chaotic curriculum change process, in which clear decision making was perceived to be lacking, causing troubles that persisted during the entire change process.
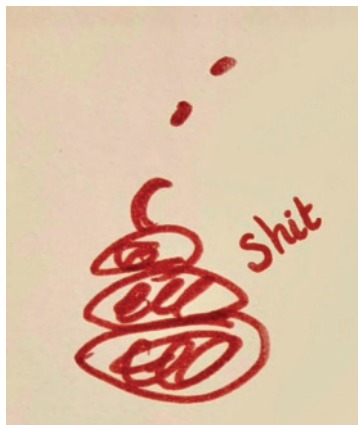
Figure 1: *Decision making explained as 'a great pile of shit.' (P11)*

Figure 2: *from left to right: The curriculum committee, the initiators and the Board of Directors. (P9)*

The messiness was there from the beginning. As participants explained, the idea was to radically change the curriculum. According to those who were involved in earlier stages of the curriculum change, the starting point was an outline on paper about the new educational concept, which was considered too philosophical, and therefore vague and abstract. Together with a lack of time and a strong focus on progression from those in leadership positions, there appeared to be no room for a more in-depth discussion to further the understanding of what was meant with the new educational concept, or how it should be understood. As one described:

> *"No time has been taken to come to one interpretation of how we are going to translate this [educational concept]." (P9)*

Additionally, participants experienced the discussions in the curriculum committee to be endless, as no final decisions were officially made, resulting in repeatedly re-discussing issues that had been already decided upon, creating ambiguity. This was claimed to be mainly due to a lack of clarity about who was ultimately responsible for decision making, and vagueness about roles, tasks, authority, and leadership.

This perceived lack of clear decision making, referred to as resulting in *"implementation chaos"*, created more time pressure, with teachers experiencing the governance processes to be top-down. As one described and illustrated this as heavy bags thrown from the tower:

> *"One man shouts from the tower and throws down (…) the assignment into the organization with some background information: "you have to develop the new curriculum and make sure that it works." That was done under very high time pressure. According to me we knew half a year before what we actually had to do, so that felt like as if, all of a sudden, a heavy bag falls down on you." (P8)*

Figure 3: *The head of the curriculum throwing the new curriculum as an assignment into the organization. (P8)*

Figure 4: *Students swimming between different educational materials/tools with a teacher who wants to save them but is also uncertain himself about what to do and what is expected of this new curriculum. (P8)*

Additionally, participants were unsatisfied with the decisions made regarding the support structures. They experienced that both the educational scientists from the faculty support department and the scheduling/logistics department were not optimally involved (or, in turn, were not sufficiently supported themselves), and therefore insufficiently able to be of support for the curriculum change. This was said to be hindering the radical changes that were aimed for. In addition, the lack of time, and therefore high time pressure, was explained to be resulting in teachers predominantly focussing on their own work rather than working together, which did not support the desired integration of subjects in the curriculum. Overall, especially in the first year many teething troubles were experienced, and students were 'swimming' in the chaotic situation (Figure 4). To improve this, students' voices were an important factor in the decision making processes concerning adjustments.

Looking back, participants thought that the disruptive approach supported shaking up everything to really try to create something new; however, the final result was not to everyone's satisfaction. The governance processes in place did not help in getting clear what was meant and aimed for with this new educational concept. As this affected the entire process, teachers ended up making their own interpretations, which resulted in a wild variation of methods and translations of the concept, causing uncertainty and ambiguity among students. Additionally, time pressure and a lack of support were claimed to be resulting in many teachers also (re)using their old courses and materials. As one looked back:

> *"Learning from that [period] I now think: at least governance needs to be clear before we start working on something." (P11)*

Following the curriculum change implementation, a new governance structure was put into place. Within this new structure, several people were involved in discussions about adjustments, but the final decisions were now made by one

curriculum director who is ultimately responsible for the curriculum. With this new structure, clearness around decision making was perceived to be greatly improved.

Institute 2: The blueprint as Bible
In Institute 2, one central educational concept was chosen to be implemented in every year. Additional goals were to create more coherency between courses, and integration of clinical and preclinical subjects. A document outlining the new curriculum on paper, in Dutch medical schools is usually referred to as 'curriculum blueprint'[2]. Not surprisingly, the blueprint also turned out to be the core element in the drawings and stories about governance in this medical school. The blueprint as central governance instrument was broadly applied within the formal decision making structures; a metaphor of the Bible represented the overall image of a formal, clear, strict and centrally managed structure, through which curriculum decisions were made.

"So, this is my Bible, so to say. And similar to the Bible you can question some stories, however, this just happens to be the principle/ the starting point of the creed that is called our new curriculum. This Blueprint, therefore, decreed that the chosen educational concept plays a central role in our curriculum." (P5)

Figure 5: *the Blueprint represented as blue Bible in a church. (P5)*

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[2] Raamplan 2009 (Framework 2009, also known as 'the Dutch Blueprint') describes the attainment targets to which medical programs in the Netherlands have to align.

A formally installed curriculum committee monitored the compliance with this blueprint during the implementation, and recalled course coordinators and teachers in case they deviated:

> *"There are also a few educationalists [in this committee] that, every time when too much freedom is created, by me, or by teachers, they push me back to the blueprint." (P5)*

To get the new curriculum's concept implemented, the centrally organized governance structure was also put into place to increase cohesion and avoid the so-described 'islands' of the former curriculum in which teachers worked too much in isolation. As one explained:

> *"That was also deliberately chosen, and that was also said in advance: we have to go to a more centrally organized structure in which course coordinators no longer play the king over their own educational course. (…) In the past, that was a process that got out of hand (…) where did the consistency remain in the curriculum? In that sense I do understand [this approach], (…) but that also creates tensions of course." (P1)*

Many participants experienced the process as top-down and restrictive:

> *I fail to achieve my objectives in adhering to a holy grail of educationalists. And ultimately, if I don't do that, the King [the curriculum director] says: listen to the holy-, he knows how it works, do what he says." (P2)*

Figure 6:: *The educational scientist with the holy grail pointing at the outlines of the curriculum. (P2)*

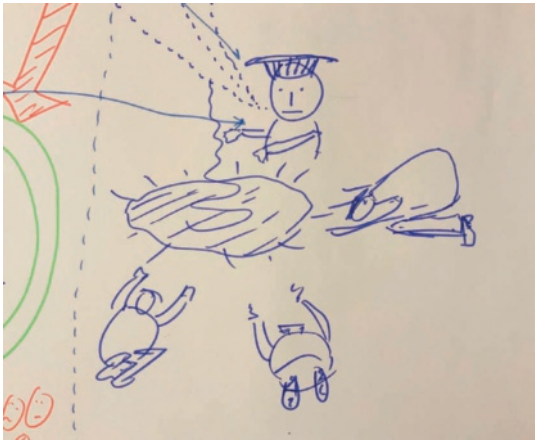**Figure 7:** *The curriculum director represented as a king. (P2)*

Figure 8: *People worshipping an external Oracle. (P1)*

Another example of a top-down experience was that participants complained about curriculum leaders worshipping 'an Oracle' (an external expert in medical education) instead of listening to the ideas or suggestions from faculty (Figure 8).

In this strict governance structure, participants experienced a strong loss of freedom and autonomy, both in classroom practices and during the change process. The blueprint dictated what teachers had to do in the new curriculum, with regards to content and pedagogy. Additionally, a repeatedly mentioned complaint was that only a small group of people was involved in decision making about the new curriculum, with teachers not experiencing enough opportunities to think along or have a say in this process. This led to feelings of not being acknowledged for their expertise.

In response to this strict approach, participants described how they deviated from the blueprint. They sought freedom/space to pave their own path, because they experienced that the new methods seemed good on paper but did not work well enough in practice. They experienced a mismatch between the dictated educational methods and the content of their teaching, perceived tensions between more time consuming methods and amount of study materials that had to be taught in the already limited time, and felt that it was sometimes artificial to integrate teaching subjects. As a result, participants created workarounds:

> "We discuss this with the other directors in our course (…) but of course we are not going to mention all these small changes to [the head of the curriculum] (P6)

These deviations in turn created tensions amongst participants themselves. For example, some participants seemed to interpret the resistance from others as an unwillingness to change or a failure to take the change seriously:

> *"For a strikingly long period of time people are allowed to disagree (…) According to me, too structurally, there are people who think like: okay, the new curriculum, I will do the old one and I put a little tuft of whipped cream on top of that and then it's enough. I think that that is, in general, pretty much tolerated. (P4)*

In general, the top down, centralized and strict structures and procedures, with the blueprint as main instrument, was supportive in getting the new concept off the ground. However, teachers experienced the governance structure to be so top-down, resulting in a lack of support for the decisions that were taken by only a select group of people. Teachers' lack of autonomy in decision making created tensions, making them look for workarounds to reclaim their loss of freedom. All in all, these deviating responses threatened the aspired cohesion of the curriculum, as well as the motivation and enthusiasm of teachers.

Institute 3: Fragmentation
The overall goal of this curriculum change was to stimulate student's active learning by using several methods. Additionally, Institute 3 strived for more cohesion and integration of knowledge and competencies, and clinical and preclinical subjects. In this institute, we could not identify a central symbol or image. This was reflected both in the lack of real drawings (the rich pictures were primarily word-maps and organizational schemes rather than visualizations) and in the stories; the overall impression we got was an undefined or unclear image. A new, yet developing, more centralized governance structure was described in which many people were still seeking for their own, others' and committees' roles and positions. Furthermore, considering the curriculum, we observed the use of a variety of methods, hailing from different educational philosophies and principles. As one summarized this:

> *"We adopt a number of aspects and that still feels a little fragmented, different themes, it is not one structure, like 'we work from problem based learning' for example, or 'we do everything via team-based-learning and that is how we design our curriculum'. The advantage is that you could do your own thing, which is nice, however, sometimes it's a disadvantage that I think: to what extent is this clear for students?" (P18)*

A curriculum committee had developed the outlines of the new curriculum. However, this committee was dissolved right before the implementation, causing a gap of someone having the entire overview of the new curriculum. This decision was claimed to be a shortcoming for the solidity of the new curriculum, and it kept on being experienced as problematic for those further developing and implementing the new curriculum:

> "They were the only ones having an overview, also in detail, what happened where [in the new curriculum]. (…) It is still very difficult to get an overview of what is happening where. (…) The fundament, the solidity of the curriculum, the source for that, was in that committee and they were dissolved." (P15)

The new curriculum was accompanied by a new governance structure:

> "I think it's good that this [new educational management] is there because otherwise there wouldn't have been any decision making. Then the only decisions taking place were my decisions about the course. And now, the [new educational management] monitors, I assume, the whole. I assume they try to create unity." (P13)

However, at the time of interviewing, the new structure did not seem to be fully mature yet. Although the institute strived for more centralization, decision making and outcomes of the new curriculum seemed to be predominantly based on individual person's actions and initiatives. Autonomy for faculty was valued:

> "It is actually up to [faculty] to decide how the Raamplan is going to be transposed, to a certain extent." (P14)

Participants experienced a lot of freedom to pave their own path and make decisions about what their course should look like. Although this freedom and autonomy were highly appreciated, they also threatened the aspired curriculum alignment and cohesion. Participants described how they worked predominantly on their own educational course or observed others doing that, without connecting to each other. Integration of subjects therefore appeared in many situations to be depending on each other's willingness to collaborate and integrate, making the educational outcomes vary and dependent on those relationships and interactions. As one explained how decisions about involvement in other courses took place:

> *"That depends on the relationship with a course director and if they have asked for that or indicate that they appreciate it. The course director assembles that [group]. I think that [it is based on whether] he thinks that this is important for his course. (…) We have always actively approached the course director to ensure that we got time in the new curriculum." (P17)*

Some people therefore worried about the coherency of the curriculum. On the question of who was having an overview of the entire curriculum to ensure coherency, participants pointed at the management board, however, nobody was sure whether they actually had this overview:

> *"I think there is some annoying overlap now and then [in the curriculum], but also gaps, that it's assumed that students know something however, they actually never got that taught, properly. If all is well, our management has an overview on that, but I cannot estimate that very well." (P15)*

Also in this institute, students' input played an important role in decision making about adjustments in the curriculum. Participants experienced a clear evaluation structure through which the curriculum is evaluated with students, however, some believe that not so much is done with these evaluations afterwards:

> *"There is an evaluation meeting with the student year-representatives and the director of the entire year. (…) However, nothing is done with the evaluation report. I will extract some things I could use, but furthermore, nothing is done with that." (P13).*

The governance structure in which autonomy was perceived to be provided to faculty contributed to faculty's motivation and happiness. However, it did not seem to be perceived as successful for bringing about all the desired changes. The integration of subjects, and activation of students did not always reach the level of what was aimed for, and it was doubted by some participants whether the coherency of the program was clear for students. Many activities were described to take place based on people's own initiatives and at one's own discretion. Whether things take place or whether ideas are implemented seemed to be depending on those individual initiatives. Ongoing efforts to keep on improving the central management of the curriculum were claimed to be made. As one articulated:

> *"It is all very informal. (…) For the next curriculum change we cannot work like this, we need to work more formally." (P14)*

Discussion

This paper explores the role of governance in the process of translating curriculum goals and educational concepts on paper to actual curriculum practices. Our findings indicate that the way decisions are made, implemented and monitored plays a prominent role in the enactment of the new curriculum. In our study, each institute had different governance structures in place, each having its own consequences for the actual curriculum and the way the organization responded. The results demonstrate the interactions between 'hard' (e.g. structures, procedures, authority), and 'soft' sides (the interpersonal, social interactions and relationships) of governance.[12] In Institute 2, with the strict, top-down governance structure, we observed a focus on the 'hard' governance aspects with the blueprint as central governance instrument and its centrally managed structures around it. Whereas in the other two institutes - albeit on different levels - these (clear) governance structures and processes were less apparent or were experienced to be lacking. On the other hand, in Institute 2 with the strict, top-down governance structure the involvement of faculty - the 'soft' governance aspects - was experienced to be overlooked, resulting in teachers disagreeing and looking for workarounds to reclaim their freedom and autonomy, threatening the institutional and curriculum cohesion and motivation of teachers. In Institute 1, with the unclear experienced governance structure, we observed similarities in teachers' experiences of an imposed, top-down process; in Institute 3, with the more free, teacher-centered governance structure, this was almost the opposite. Here, we observed contentment and happiness about the amount of freedom they received in the limited centralized curriculum; however, at the same time, this was also claimed to be contributing to a lack of coherency in the new curriculum and structural collaboration to establish curriculum integration. This shows that either way, each governance process will have its pros and cons, and that finding "the right way of doing" is challenging and highly context depending.

Our study empirically illustrates many governance aspects described in the paper of Casiro and Regehr.[4] One aspect that particularly struck us was the observation of people circumventing the system. Teachers disagreed with the governances processes; it was not always perceived as legitimate, and communication and participation were missing as important governance aspects.[4,10] This contributed to teachers' workarounds to recover their loss of freedom, and by making adjustments to the program without reporting this. They acknowledged the risks of fragmentation, as well as curriculum bloating, with students ultimately being negatively affected. Additionally, this circumventing behavior also resonates with the concept of 'micropolitics' in schools.[17,18] Teachers are known to use strategies and tactics to further their interests, represented in trying to maintain their preferred work conditions, protecting them against changes and trying to recover them if necessary.[18] Thus, in order to reach the desired curricu-

lum change goals, awareness of this behavior seems vital.

More broadly, our study illustrates the importance of academic governance in medical schools. In order to bring curricular practices in line with educational concepts and ideas, the importance of defining and explicating governance procedures is emphasized.[4] The illustrative example of 'the big brown mess' of Institute 1 shows indeed what happens when governance is not clearly defined and explicated. In this example, the experienced lack of leadership, clear decision making, and a well-thought educational concept, created "implementation chaos", where teachers ended up making their own interpretations, resulting in a variation of methods and translations of the educational concept. Although researchers emphasize that changing procedures and structures are not the main solution for improving malfunctioning governance processes,[10] our study shows that they also should not be underestimated. In line with others,[12] we believe that governance procedures and structures function as a fundamental foundation for governance systems, alongside the informal social powers that are negotiated in interactions and relationships among stakeholders in that same system. Scholars emphasize that one should perceive governance in, and match it with, its local environmental, historical and cultural context.[5,8, 9,12] Various governance structures might work well, however, as with many efforts, it depends heavily on the culture and people involved.[5,12] Our study empirically endorses these observations in medical educational curriculum enactment.

Strengths and limitations
One of the strengths of this paper was the use of the relative new method in medical education research; rich pictures. The rich picture method enabled us to embrace the complexity of governance processes in curriculum change in one 'snapshot'. Participants were able to explore the entire process, covering all elements that mattered. Rich pictures helped us map a complex story of multiple interacting factors and actors, a story that might get lost when told in a linear prose.[14] Both a strength and limitation of our study approach was the sampling of participants. We left the selection (partly) to the local curriculum leaders. They knew their context better than anyone else and could help us with the invitations. On the other hand, we therefore did not had full control of whom we talked to, as this depended on who was asked and responded. Furthermore, for each institute we planned three fixed interviews days, which might have caused another selection bias due to availability issues. A limitation of the study design is that we asked participants at one moment in time to look back at the entire process, therefore creating a recall bias. Future studies could follow governance processes over time, to better understand its course and influence at different moments in the process. Additionally, we considered governance from one perspective; teachers in mid-level positions. Future research, therefore, could cover other

perspectives to further enrich our understanding of the role of governance, and what possibilities and difficulties are experienced in other stakeholder positions, e.g. teachers without directing positions, board members and students. Finally, our study was conducted in three Dutch medical schools, and shows the highly context-relatedness of governance, and the importance of alignment to local contexts. Therefore, in itself, our study makes a plea for looking at governance in other systems worldwide to further the scholarly debates, as well as our practical understanding to support all stakeholders operating in the system.

Conclusion
Acknowledging the role of governance in curriculum change processes is crucial. Our paper highlights the importance of paying more attention to governance in curriculum changes processes, at the critical translation level - from paper to people - in medical schools. To advance curriculum change processes and improve their desired outcomes it seems important to define and explicate both hard and soft governance processes.

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