CHAPTER 7

Summary

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Enacting change in undergraduate medical curricula is an intensive and challenging process. In educational practice, as well as medical education literature, we observe a tendency to spend considerable time on the content and pedagogical designs of our curricula, neglecting the importance of the underlying organizational processes that will, ultimately, make or break our beautiful curriculum ideas. Having an idea is not enough; the process of bringing ideas into practice is a long and difficult one. Although overviews of important factors for curriculum change, and practical tips, are available, empirical evidence of what undergraduate medical curriculum change processes looks like in practice, and the actual experiences of stakeholders involved, is still scarce. As curriculum changes are frequently recurring, resource intensive processes, taking a lot of time and energy of a large number of stakeholders, it is in everyone's interest that these processes are going as smooth as possible. Learning from previous processes might help us in supporting future ones. Therefore, in order to support future change processes, this thesis focusses on better understanding the complexities of enacting change in undergraduate medical curricula. This topic is addressed from different stakeholder perspectives and at different levels; personal (the change leader), interactional (stakeholder involvement; educational scientists), organizational (governance processes) and transnational (the role of context).

In **chapter 1**, the introduction of this thesis, we first describe the context of undergraduate medical curricula. In the Netherlands, undergraduate medical curricula have to align to what is called 'Raamplan 2009' (soon updated), also known as 'the Dutch blueprint' for undergraduate medical education. In this blueprint, the required competency (knowledge, skills and attitudes) levels of students at the end of their undergraduate training are determined. Medical schools have considerable amounts of freedom in how they are going to facilitate students to reach these competency levels within their curricula. Therefore, in the Netherlands, the undergraduate medical curricula differ in their curriculum design, underlying educational philosophies and use of teaching and learning methods. Generally speaking, the first three years (Bachelor phase) focus predominantly on gaining a firm base of basic science and medical knowledge, and the development of competencies like communication and collaboration. In this phase, students will have their first experiences with patients. In t he last three years (Master phase) the competency development continues, however training is now largely clinical. In this thesis, the focus is on major change processes in the Bachelor phase of undergraduate medical curricula.

We define 'major curriculum change' as centrally organized, intentionally initiated change projects that affect the entire curriculum and organization involved in the curriculum. This means it is not about the yearly, regular adjust-

ments at course level. Reasons for change vary per institute, however, accreditation, political changes, changes in medical knowledge and health care practices, societal needs and expectations regarding healthcare professionals, as well as advancements in our understanding of teaching and learning, usually play a central role.

Additionally, this chapter also discusses the developments in our thinking about approaching change in organizations and medical education in particular. A dominant way of thinking about change in organizations is that change is a controllable, linear and orderly process, in which good leadership and following the right steps are key to reach the final goals. However, other scholars challenged this perspective. Critique was expressed concerning the assumed linear and predictable nature of change processes, and the underestimation of the human factor in organizational change processes. It was stated that change should be viewed as a vague, difficult to predict, emergent and complex process in which intangible factors such as interacting systems, humans and organizational cultures play an important role. In medical education literature we see a similar development. It is argued that the reason why change processes in medical education are perceived to be so challenging is because these changes are often approached as linear processes, which does not match with the complex reality.

In this thesis, complexity is perceived to be a paradigm, a way of thinking and therefore a lens through which one perceives the organizational world and its processes. In adopting this complexity lens, we look at the curriculum change as dynamic, non-linear unfolding processes, in which medical schools and related hospital(s) are perceived to be complex adaptive systems (that in itself again exist of other, numerus amounts of smaller adaptive systems). Complex adaptive systems (CAS), big or small, consist of multiple people that function together, and whose actions are interconnected. A hospital and medical school for example exist of multiple smaller CAS, such as administrative, health, research, and educational departments, all kinds of committees, student cohorts and teachers belonging to a particular course. Usually the people in one CAS have multiple connections, and/or also belong to other CAS. Therefore, in curriculum change processes, a multitude of stakeholders need to work together, and the new curriculum, ultimately, emerges from these interactions.

In the enactment of the new curriculum, the change leader, the person who leads a curriculum change, plays a prominent role. Although much is written about these change leaders and what they are expected to do, not so much is written about how they perceive these curriculum change processes themselves. Therefore, in **chapter 2**, we dived into their perspective, addressing the following research question: *How do curriculum change leaders conceive of the process of enacting change, and what strategies do they rely on to succeed in their efforts?*

Nine change leaders, from the eight medical schools in the Netherlands, were individually interviewed. We found that change leaders experienced the change processes to be highly dynamic and complex, fraught with several challenges. Three challenges of particular note were dealing with the large and diverse groups of stakeholders; contending with resistance; and steering the change process. We found that change leaders dealt with the challenges using a variety of strategies, and that central to the process of navigating these challenges was maintaining awareness of ever-changing contextual situations. Change leaders used a variety of methods to be aware of what was going on, to make decisions about what actions to take in response, and who to involve, at what time, in the process. This empirical study enriched the understanding of how institutional leaders navigate the complexities of major medical curriculum changes.

In addition to knowing *what* was said about the processes, we were also interested in better understanding *how* people talk about these processes. Therefore, in **chapter 3**, we used a novel analysis method in medical education research called 'Membership Categorization Analysis'. We explored the same data as presented in Chapter 2, this time analyzing the change leaders' discourse about one particular stakeholder group: educational scientists, who are working in educational departments within a medical school. These stakeholders focus on the educational aspects of a curriculum, such as curriculum design, educational methods and assessment. In the literature, they are described to be important stakeholders for medical curricula, however, little is known about what their value and roles looks like in actual practices, such as curriculum changes. As a first step, we wanted to explore how curriculum change leaders talk about these educational scientists in relation to these change processes. The following research question was addressed: *How do change leaders represent and talk about educational scientists in an interview about a major curriculum change process?* By conducting a Membership Categorization Analysis we explored how change leaders refer to educational scientists (use of category terms) and what they say about them (predicates) in relation to the change process. We observed a broad range of references, in which two categories were distinguished: educational scientists referred to by their first name, and more general references such as 'educational scientists, 'people from the educational institute', 'the supporters'. We observed differences in what was said about these two categories. Educational scientists categorized by their first name were suggested to be closer to the change process, more involved in decisional practices and positively described, whereas those described in more generic terms were represented in terms of relatively passive and unspecified activities, were less explicit referenced for their knowledge and expertise and were predominantly factually or negatively described. Our results led us to believe that in various institutes these educational scientists do not

always seem to be optimally visible, engaged and connected, which is inconvenient both for the units in which these scientists work and educational scientists themselves, as well as for the broader organization in general. Medical schools are challenged to establish medical curricula in consultation with a large, diverse and interdisciplinary stakeholder group. We suggested that it is important to invest in interpersonal relationships to strengthen the internal collaborations and make sure people are aware of each other's existence and roles in the process of curriculum development.

In **chapter 4** we dived into an important organizational aspect of curriculum change; governance, the means by which decisions in medical curricula are made, implemented and monitored. In medical education journals, critical questions arise to what extent our change efforts actually result in true, institutionalized, changes in the curriculum in action. It is stated that one of the key mistakes that lead to failed change efforts is focusing on curriculum change while ignoring the organizational, governance, processes. To better understand the role of governance in undergraduate change efforts, this chapter addressed the question: *What is the role of governance in the process of translating the original goals, outlines and philosophies of the curriculum into institutionalized curriculum change at micro-level?* For this study, we interviewed teachers of three medical schools in the Netherlands, and we used a relatively new method called Rich Pictures. We observed that each institute had different governance processes in place. 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. The way decision making was structured in the institutes influenced what the curriculum would ultimately look like. Each governance process will have its pros and cons, and finding 'the right way of doing' is challenging and highly context depending. However, explicating the governance processes in place and making clear arrangements about the decision making procedures, seemed an important step in any institute.

In **chapter 5**, we brought our perspective on curriculum change processes again to another level. As mentioned in chapter 1, undergraduate medical curricula differ from each other. Every educational context is different, certainly in comparison with other countries. Each institute has its own history and local situation

that influences, for example, how things are arranged internally, and what the curriculum looks like. For transnational educational programs, this variety of contexts is particularly challenging, as the newly developed program needs to be adopted in various medical schools in different countries. Therefore, in order to get a better understanding of the role of context in curriculum change processes, we explored the challenges of adopting jointly developed learning modules in different medical school across Europe, as part of a European project on health literacy education, called IMPACCT. In this study, we interviewed project leaders and several local stakeholders of three participating project partners in Germany, Slovakia and Italy. This chapter addressed the following research question: *What are the contextual aspects impacting the adoption of newly developed learning modules, in health professions curricula in different countries?* We observed two overarching themes in which differences appeared between the participating institutions: the drivers of change and the processes of change. We found for example that the participating institutes differed in the availability of related courses in which the learning materials could be adopted. This created differences in possibilities to offer the learning modules to all students. Furthermore, some negative attitudes in the institutes or society towards the specific patient groups addressed in the learning modules, in this case health illiterate patients, were expressed, making the learning modules in some contexts a product that is difficult to sell. Also important differences in the implicit and explicit rules to follow were observed, such as following the formal or informal routes first to get things done. The results showed that each context has different needs and asks for different approaches to make implementation of learning modules happen, and that awareness about these differences is therefore of importance for those involved in transnational curriculum change processes.

Chapter 6 is the general discussion of this thesis. This final chapter provides a summary of the main findings and discusses some overarching themes such as situational awareness, agency and a shared social identity. In addition, strengths and limitations, and recommendations for future research and practice are discussed.

Situational awareness is highlighted as an important competence for change leaders to cope with the ever-changing reality in educational change processes. Furthermore, having different strategies and approaches to bring about change, to keep it going and to respond to what is necessary in different situations, seems to be an important competence. It is unlikely to think that there will be a one-size-fits-all approach to curriculum changes. The reality of change is too complex and contextual differences determine what is needed in different situations. Furthermore, dealing with insurmountable tensions in change processes and the preparation and support of change leaders, is discussed. Besides the

focus on change leaders, this thesis shows how much curriculum changes are about the various stakeholders involved and the importance of their collaboration. In that respect, we discuss the concept of *collective agency* and the notion of a *shared social identity*. At its core, agency is concerned with the extent to which individuals are able to exert control in their personal and social lives. When exercising collective agency people pool their qualities and resources together to reach a shared goal. This type of agency seems to be important for curriculum changes, in which knowing and acknowledging each other's qualities is an important condition for achieving meaningful cooperation. Stimulating cooperation between the large and diverse groups of stakeholders is a challenge, and bringing the sometimes very differently experienced worlds together asks for active facilitation. This also ties in with having a shared social identity, which assumes that identification with a more inclusive, subordinate identity (the new curriculum) can help to bridge differences between groups of people. It takes time to create the feeling of being a team where your own (social) identities, and the shared, new identity, may have a place. Our advice would be that within the usually various teams that work on a new curriculum, room should be made for exploring the different worlds, perspectives, perceptions, qualities, emotions, relationship, languages and ways of working.

We conclude that the results of this thesis contribute to raising awareness about the complexity of curriculum change processes, which could be useful and insightful for all stakeholders involved. The chapters in this thesis show that curriculum change processes are the shared responsibility of a variety of stakeholders. Based on this perspective, we suggest that the emphasis should be much more on the formation of *teams* in the organization, in which even the role of one single change leader could be discussed. We propose to investigate the possibilities of a triple leadership team, which includes expertise in the field of medical content, educational sciences and change processes.