

# Tying the knot between faculty development and educational change in clinical settings



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# **TYING THE KNOT BETWEEN FACULTY DEVELOPMENT AND EDUCATIONAL CHANGE IN CLINICAL SETTINGS**

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Institutet**

Stockholm 2021

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Published by Karolinska Institutet.

Printed by Universitetservice US-AB, 2021

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ISBN 978-91-8016-394-1

Cover illustration by Linda Sturesson Stabel

# Tying the knot between faculty development and educational change in clinical settings

## THESIS FOR DOCTORAL DEGREE (Ph.D.)

By

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The thesis will be defended in public in Inghesalen, Widerströmska huset, Karolinska Institutet  
Friday, November 19, 2021, at 09.00

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Till min familj



## PREFACE

‘Tying the knot’ is an expression that supposedly originates from ancient Celtic wedding traditions where couples were bound together with cloths tied around their hands to symbolise a strengthening bond and lasting union.<sup>1</sup> Today, the phrase is still used to refer to marriage. In the title of this thesis, the partners who are to tie the knot and merge in union are faculty development and educational change, partners that are inextricably linked, yet partly detached. The title is future-oriented in the sense that the findings of the thesis will hopefully contribute to bringing faculty development and educational change one step closer towards tying the knot. In this regard, it is also postulated that there are several ways to tie the knot, perhaps even more than one knot to tie. This is to say that there is not one only way in which faculty development may contribute to educational change, neither is there one way in which educational change may unfold in clinical settings.

Tying the knot also alludes to the use of activity theory in this thesis, specifically the concept of knotworking, which describes how people and entities come together in interaction and collaboration – ‘the knot’. Throughout the work on this thesis, the very foundational ambition has been to better understand how faculty development and educational change may come together in such a knot.

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<sup>1</sup> Chalmers, T. (2018, July 8). Where does the phrase ‘tying the knot’ come from? The Culture Trip. <https://tinyurl.com/wbcnuv6>



## POPULAR SCIENCE SUMMARY

Students in the health professions spend a great deal of their study time in clinical workplaces such as hospitals and primary health care facilities. By participating in daily clinical practice, they develop skills and competencies that are crucial to their future work. The quality of learning in these settings is highly dependent on the supervision and teaching provided by doctors, nurses and other health professionals. However, these clinicians are not primarily teachers; they are care providers, and they lack preparation and training for their teaching responsibilities. Furthermore, many clinicians struggle to find time to teach, and the healthcare sector is experiencing major changes that threaten the quality of clinical education. The intensity of clinical practice is increasing, as are the demands for productivity. The number of patients is also increasing, and the population is growing older with changing needs, at a time when health care is already understaffed. Care is becoming increasingly fragmented with an increasing number of specialties. Patient safety and quality of care are highly prioritised, making it difficult to actively involve students in patient care. At the same time, the number of students is increasing, and so clinicians, who are already heavily burdened, are tasked with teaching more students.

To respond to these challenges and support clinicians who teach, universities around the world offer workshops, courses and programmes, often referred to as faculty development. These activities aim to support clinicians in their teaching roles, essentially training them to teach, thereby contributing towards enhancing the quality of clinical education. While such activities are often appreciated by participants, and while they report gaining new skills and knowledge, we do not know whether they can implement their new learning in practice. Thus, we do not know whether or how these activities contribute to educational change in practice. Understanding such processes is important to guide future faculty development activities if we want these to successfully contribute to improving the education of our future healthcare workforce.

Through four studies, this thesis explored faculty development and educational change in clinical settings. It focused on the perspectives and experiences of clinical teachers, who are clinicians with formal responsibility to teach in clinical settings. *Study I* aimed to explore clinical teachers' engagement in faculty development, and how this is influenced by their clinical workplaces. Collecting data from universities in Sweden and South Africa, *Study II* explored clinical teachers' experiences of working with educational change in their workplaces. *Study III* used a faculty development programme as a starting point, in which participants worked with educational projects and developed educational innovations, and the study explored how these innovations were implemented in practice. *Study IV* explored what aspects of a faculty development programme had supported the clinical teachers to work with change.

The findings suggest that clinical educators experience difficulty developing their practice and implementing educational change because teaching is afforded a low value and priority

within clinical settings. The findings also suggest that what is learnt and created within faculty development activities cannot be readily or easily implemented in practice, and that this needs to be adapted to the specific workplace context through processes that are dependent on interactions between clinical educators and their workplace colleagues.

In conclusion, the thesis suggests that current faculty development practices may need rethinking in order to better support change in practice and achieve its goal of enhancing the teaching of students in the health professions. Suggestions for future faculty development include focusing on teams of educators rather than on individuals and offering long-term programmes rather than shorter seminars or one-off workshops. Suggestions also include that faculty development explicitly offer participants support and guidance on how to work with change and offering activities in which participants can work on educational projects and innovations guided by their own needs and priorities, rather than a 'one-size-fits-all' approach. These recommendations will hopefully move us closer to tying the knot between faculty development and educational change.

# POPULÄRVETENSKAPLIG SAMMANFATTNING

Läkarstudenter, sjuksköterskestudenter och andra studenter inom hälso- och sjukvårdsyrken tillbringar en stor del av sin utbildning i kliniska miljöer såsom sjukhus och vårdcentraler. Genom att delta i det dagliga arbetet utvecklar de färdigheter och kompetenser som är viktiga för deras framtida arbete. Lärandet i dessa miljöer är starkt beroende av den handledning och undervisning som tillhandahålls av läkare, sjuksköterskor och annan vårdpersonal. Dessa personer är dock inte primärt lärare, utan vårdgivare, och de saknar både de förberedelser och den kunskap som krävs för deras undervisningsansvar. Dessutom upplever många att det fattas tid för att erbjuda bra undervisning, och sjukvården står inför stora förändringar. Intensiteten i kliniskt arbete ökar, liksom kraven på produktivitet. Patienter ökar i antal och befolkningen blir äldre med förändrade vårdbehov, medan sjukvården redan är underbemannad. Vården blir mer och mer fragmenterad, och det finns fler specialiteter. Patientsäkerhet och vårdkvalitet prioriteras högt, vilket gör det svårt att aktivt involvera studenter i vården av patienter. Samtidigt ökar antalet studenter, vilket innebär att sjukvårdspersonal som redan är hårt belastad får i uppdrag att undervisa fler studenter. Sammanlagt riskerar dessa förändringar att sänka kvaliteten av den kliniska utbildningen.

För att bemöta dessa utmaningar och stötta sjukvårdspersonal som undervisar erbjuder universitet runt om i världen workshops, kurser och program, ofta kallat fakultetsutveckling, kompetensutveckling eller pedagogisk utveckling. Dessa aktiviteter syftar till att stödja personal i deras roller som lärare och handledare, alltså träna dem i att utbilda, och genom detta kunna bidra till att förbättra kvaliteten på den kliniska utbildningen av studenter i sjukvårdsyrken. Forskning visar att sådana aktiviteter ofta uppskattas, och att deltagare rapporterar att de får nya färdigheter och kunskaper, men vi vet inte om deltagarna kan omvandla sina nya kunskaper i praktiken, eller om och hur dessa aktiviteter bidrar till faktisk förändring i praktiken. En djupare förståelse för dessa processer behövs för att kunna förbättra framtida utvecklingsaktiviteter och se till att de framgångsrikt kan bidra till att utveckla utbildningen av framtida vårdpersonal.

Denna avhandling undersökte pedagogisk utveckling och förändringsarbete i kliniska miljöer genom fyra studier. *Studie I* utforskade kliniska lärares engagemang i pedagogisk utveckling och hur detta påverkas av deras kliniska arbetsplatser. *Studie II* samlade in data från två olika universitet i Sverige och Sydafrika och undersökte kliniska lärares erfarenheter av att arbeta med förändringar rörande utbildning på sina arbetsplatser. *Studie III* tog avstamp i ett pedagogiskt utvecklingsprogram där deltagarna arbetade projekt-baserat och utvecklade pedagogiska verktyg, och undersökte sedan hur dessa verktyg implementerades i praktiken. *Studie IV* undersökte vilka aspekter av ett pedagogiskt utvecklingsprogram som hade stöttat de kliniska lärarna i deras förändringsarbete.

Resultaten tyder på att kliniska lärare upplever svårigheter med att engagera sig i pedagogisk utveckling och genomföra förändringar som rör undervisning, eftersom undervisning har låg prioritet inom kliniska miljöer. Resultaten tyder också på att det som deltagare lär sig på

utvecklingsaktiviteter inte direkt eller enkelt kan implementeras i praktiken, utan att detta måste anpassas till den specifika arbetsplatsen genom processer som involverar samarbete mellan kliniska lärare och deras arbetskamrater.

Sammanfattningsvis visar avhandlingen att nuvarande metoder för pedagogisk utveckling kan behöva utvecklas för att bättre kunna bidra med förändring i praktiken. Förslag för framtida aktiviteter inkluderar att fokusera på team av kliniska lärare snarare än på individer, att erbjuda longitudinella program i stället för korta seminarier eller engångsworkshops, att erbjuda deltagare stöd och vägledning i hur man arbetar med förändringar, och att designa aktiviteter där deltagare kan arbeta med projekt som styrs av deras egna prioriteringar och behov, snarare än ett 'one-size-fits-all' tillvägagångssätt. Dessa rekommendationer kan förhoppningsvis bidra till att pedagogisk utveckling kan uppnå målet om att förbättra den kliniska undervisningen av framtida vårdpersonal.





## ABSTRACT

Clinical workplaces offer important learning experiences for the next generation of health professionals, and clinicians serving as supervisors and educators are a critical determinant of the quality of learning in these settings. However, many clinicians are unprepared for their educational roles, and the complexity and changing nature of health care present substantial challenges that threaten the quality of clinical education. As a way to address these issues, there has been increasing provision of faculty development targeting teaching clinicians. While such initiatives are often appreciated, there are questions regarding their impact on teaching practices and the inadequacy of current research approaches in addressing how faculty development may contribute to change in practice. Yet, such understandings are crucial for faculty development to enhance the quality of teaching.

The overall aim of this thesis was to explore faculty development and educational change in clinical settings. Employing a socio-cultural perspective, it breaks from traditional notions of linear knowledge transfer. Specifically, activity theory was applied to emphasise individuals as acting within social and cultural systems, and four qualitative studies were conducted. *Study I* explored how clinical educators' engagement in faculty development was affected by the systems they act within. *Study II* explored experiences of working with educational change in clinical workplaces from the perspective of clinical educators from two different countries. *Study III* explored how clinical educators integrated educational innovations developed in a faculty development programme into their clinical workplaces. Lastly, *Study IV* identified aspects of a faculty development programme that supported participants in working with educational change in practice.

The findings suggest that the tensions between education, research and patient care in clinical settings – where the activity of education is less valued – limit clinical educators' opportunities for faculty development and educational change. The findings further emphasise educational change as dynamic and collaborative processes that are heavily influenced by workplace context, and thus alludes to the limitations of the concept of knowledge transfer. In contrast, collaborative knotworking is suggested to more rightfully conceptualise how faculty development can contribute to educational change in clinical settings.

Taken together, the findings contribute to the understanding of educational change as dynamic, interactive and influenced by the context in which it unfolds. This has implications for how to design faculty development activities that support participants in working with change in practice, thus moving towards tying the knot between faculty development and educational change in clinical settings.



## LIST OF SCIENTIFIC PAPERS

- I. **Elmberger A**, Björck E, Liljedahl M, Nieminen J, Bolander Laksov K. (2019). Contradictions in clinical teachers' engagement in educational development: an activity theory analysis. *Advances in Health Sciences Education, 24*(1), 125–140.
- II. **Elmberger A**, Blitz J, Björck E, Nieminen J, Bolander Laksov K. "It's not our job to transform people": A multi-institutional study of clinical educators' experiences from working with change. *Manuscript*.
- III. **Elmberger A**, Björck E, Nieminen J, Liljedahl M, Bolander Laksov K. (2020). Collaborative knotworking – transforming clinical teaching practice through faculty development. *BMC Medical Education, 20*:497.
- IV. Bolander Laksov K, **Elmberger A**, Liljedahl M, Björck, E. (2020). Shifting to Team-based Faculty Development: a Programme designed to facilitate change in Medical Education. *Higher Education Research & Development*.



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# 1 INTRODUCTION

Across the world, a large part of health professions education takes place in clinical workplaces. This clinical education is vital for the development of core skills and competencies and supports students and graduates in developing into competent healthcare professionals. In these settings, healthcare staff, also referred to as clinicians, are responsible for the supervision and teaching of students, and research shows that they have a fundamental impact on the quality of learning (Dornan et al., 2014; Isba & Boor, 2011; Liljedahl, 2016; Wiese et al., 2018). However, most clinicians are unprepared and untrained for their roles as supervisors and educators despite wide recognition that teaching is a skill set in its own right which requires training and knowledge (Bleakley et al., 2011c; Irby & O'Sullivan, 2018; McLean et al., 2008; Steinert, 2014; Swanwick & McKimm, 2010). Moreover, while clinical settings offer highly valuable learning experiences, they are complex and ever-shifting environments that serve a twofold, sometimes threefold, purpose; patient care, education and research (Irby, 2014; Morris & Blaney, 2010; Teunissen, 2015; Wiese et al., 2018). Growing patient numbers, understaffing, increased fragmentation of care, and demands on productivity present substantial challenges for clinical supervisors and educators, and concerns are being raised about the quality of clinical education (Dornan et al., 2019; Irby et al., 2010; Irby & O'Sullivan, 2018; Swanwick, 2008; Wiese et al., 2018). In the endeavour to address these concerns, faculty development has been singled out as pivotal (Irby & O'Sullivan, 2018; O'Sullivan & Irby, 2011; Steinert, 2014; Steinert et al., 2016). Today, medical universities worldwide offer a variety of faculty development activities, including workshops, seminars and programmes, aimed at supporting clinicians in their teaching as well as achieving high-quality education in clinical settings (Hodgson & Wilkerson, 2014; Irby & O'Sullivan, 2018; Leslie et al., 2013; Steinert et al., 2016).

Alongside the growing interest in providing faculty development has been increased research within the field, and there is now widespread knowledge about the design, content and nature of activities, and the various associated outcomes. Faculty development participants often report high satisfaction, increased knowledge and skills about teaching and learning and change in teaching approaches (Cilliers & Herman, 2010; Gibbs & Coffey, 2004; Onyura et al., 2017; Sorinola et al., 2017; Steinert et al., 2016). However, there is a dearth of research focusing on if and how faculty development contributes change beyond the individual participant, such as the organisation, and current research approaches fail to offer insights into the processes of change behind reported outcomes. This implies that we do not know how a formal faculty development activity may lead to educational change in practice. Relatedly, faculty development has been criticised for being based on poor theories of change, relying on linear ideas of knowledge transfer from the faculty development activity to the local workplace of participants, excluding the important influence of the workplace context on how learning and development may be actualised in practice (Amundsen & Wilson, 2012; Jones et al., 2017; Trowler et al., 2005; Trowler & Bamber, 2005; Webster-Wright, 2009). As such, although there is growing recognition of the context-dependent nature of knowledge and the impact of social and organisational structures on teachers'

practices (Bleakley et al., 2011b; Boud & Brew, 2013; O’Sullivan & Irby, 2011; Trowler & Cooper, 2002; Webster-Wright, 2009), surprisingly little research has explored processes of educational change in relation to formal faculty development while remaining attentive to the interactions between teachers and their workplaces.

To advance the practice of faculty development, we must better understand what unfolds in the workplace during and after faculty development activities, how these activities may contribute to change in practice, and how social, cultural and organisational structures in clinical settings shape these processes. This knowledge can enable faculty developers to design activities that contribute to the improvement of clinical education and that offer the best possible support for clinical supervisors and teachers in their imperative task of educating and preparing the next generation of healthcare professionals. In essence, this is the underlying impetus behind this thesis. It seeks to deepen the understanding of faculty development and educational change in clinical settings in order to tie the knot between them. More specifically, the thesis explores how change may unfold in practice following a formal faculty development activity, and how clinical settings influence opportunities for development and change from the perspective of clinical educators taking part in faculty development. The concept of change serves to describe the processes above, namely, the ways in which clinicians who have taken part in faculty development make use of their learnings to change their teaching practices and that of others. The thesis is primarily situated within the field of health professions education, but it also draws on literature from higher education to frame and guide the studies and interpret the findings. It combines research on faculty development, knowledge transfer and educational change and seeks to bridge the divide between individual clinical educators and their settings.

## **1.1 OUTLINE OF THE THESIS**

This thesis is organised into eight chapters. The introduction has served to provide a brief overview of the thesis and the point of departure. **Chapter 2** offers more detailed insights into the empirical and theoretical foundations of the thesis, and describes clinical education in the health professions, including definitions of clinical supervisors, teachers and educators. It also provides an outline of faculty development practices, current concerns about its conceptual underpinnings and includes a discussion on transfer and change, as well as suggestions for advancing faculty development research.

The overall aim and sub-aims of the thesis are presented in **Chapter 3**, while **Chapter 4** introduces the theoretical framework applied, namely, activity theory. In **Chapter 5**, the philosophical positioning and approach to inquiry are described, as well as the methods applied. **Chapter 6** presents the main findings of the four empirical studies.

**Chapter 7** includes a discussion of the findings in relation to previous empirical and theoretical work and addresses the methodological and theoretical considerations. **Chapter 8** presents the conclusions and implications for practice and research.

Finally, the papers describing the four empirical studies of this thesis are enclosed.





## 2 BACKGROUND

This chapter provides an outline of the literature on clinical education and faculty development practices, including current issues and knowledge gaps. Thus, it offers insights into the background of the thesis and the scientific field within which it is situated. It concludes by summarising the rationale behind the research conducted within the frame of this thesis.

### 2.1 CLINICAL EDUCATION IN THE HEALTH PROFESSIONS

This section provides a short overview of clinical education, including definitions of the terms used to describe those who teach in clinical settings. This is followed by an examination of the challenges of clinical teaching, including the complexity of clinical settings, and the recurrent calls to professionalise teaching practices within the health professions.

#### Teaching in clinical settings

Clinical settings play an integral role in the education and preparation of future healthcare professionals, and educational programmes within the health professions worldwide include large amounts of clinical education. By participating in clinical practice, students form professional attitudes, learn how to act and interact, and develop their roles and identities as professionals (Bleakley et al., 2011a; Dornan et al., 2014, 2019; Morris & Blaney, 2010; Teunissen, 2015). Clinicians serving as supervisors and teachers are a fundamental part of clinical education, and research suggests that the supervisor has critical influence on the quality of learning in clinical settings (Dornan et al., 2014; Isba & Boor, 2011; Kilminster et al., 2007; Liljedahl, 2016; Wiese et al., 2018).

The extent, nature and level of clinicians' teaching practices vary. The majority of clinicians conduct 'on-the-job' supervision in their daily clinical practice and might not view themselves as teachers (Kilminster et al., 2007; Launer, 2010). Some may teach more intensively, develop an interest in education and reflect upon teaching and learning issues, while not having any formal qualification in teaching. Yet some others may identify as teachers, have assigned educational tasks and gain teaching qualifications by undertaking courses or programmes in teaching and learning (Bleakley et al., 2011c). In describing those involved in clinical teaching, terms such as supervisor, mentor, preceptor, trainer, teacher and educator are used interchangeably in the literature. In this thesis, a distinction is made between clinical supervisors and clinical teachers/educators. The term *clinical supervisor* refers to all clinicians – doctors as well as other health professionals – who offer instruction, guidance and feedback to students as part of their daily clinical practice, with no formal educational role or association with the university. In contrast, the terms *clinical educator* and *clinical teacher* are used synonymously to describe a clinician who holds a formal educational assignment including dedicated teaching time, specified educational tasks, and managerial and/or administrative functions such as responsibility for student scheduling,

assessment or planning of educational activities. Thus, these individuals have a formal responsibility to teach students. In the Swedish context, these educators can be full-time employees at the hospital, but they can also have joint appointments between the hospital and the university. Related to these definitions, it is acknowledged that supervision and teaching can have different connotations, for instance, supervision is something that many clinicians engage in as part of clinical practice (the clinical supervisor), while teaching is not something that all clinicians do; it includes aspects of planning or learning assessment (the clinical educator/teacher). However, as these terms are used synonymously in the literature, often without definitions, distinguishing them here has proven difficult. Therefore, they will both be used to describe the activities of clinicians as they instruct, guide, support and oversee students while carrying out clinical work.

### **The complexity of clinical settings**

Clinical settings are designed and organised primarily for work. This is reflected in tensions between clinical service, research and teaching where clinicians frequently report having insufficient time to supervise and experiencing difficulties balancing teaching responsibilities with pressures from clinical service (Irby et al., 2010; Kilminster et al., 2007; Wiese et al., 2018; Zibrowski et al., 2008). In a recent survey from the UK, one-third of the supervisors surveyed reported that they were unable to use time for teaching despite this time being allocated specifically for that purpose (General Medical Council, 2021). Likewise, students report being unsatisfied with the teaching in clinical settings, experiencing it as lacking or of poor quality (Boor et al., 2008; Liljedahl et al., 2015; The Swedish Medical Association, 2016). A recent review concluded that important aspects of clinical postgraduate training such as feedback, dialogue, role modelling and reflection, are constrained due to lack of time (Wiese et al., 2018). As such, the problem of limited time for teaching, and the challenges it brings for teaching clinicians, is widespread. Unfortunately, the problem risks being further aggravated in the face of the increased intensity of clinical work and extensive demands on productivity, where an already understaffed healthcare workforce faces the rising and changing needs of a growing and ageing population (Dornan et al., 2019; Irby et al., 2010; Swanwick & McKimm, 2010; Wiese et al., 2018).

Clinical education is also increasingly challenging due to changes in the organisation of health care, with the growing complexity and fragmentation of care (Dornan et al., 2019; Wiese et al., 2018). Coupled with shorter rotations for students, this has negative consequences for learning as continuity is lost and the relationship between teacher and student, which is fundamental for learning, is contested (Dornan et al., 2014, 2019; Irby et al., 2010; Launer, 2010; Wiese et al., 2018). Moreover, opportunities for students to actively participate in patient care are gradually becoming restricted due to demands on patient safety and quality of care, implying that clinical teachers face the difficult task of offering valuable experiences for learners while simultaneously having to provide safe and high-quality patient care (Dornan et al., 2014, 2019; Swanwick & McKimm, 2010; Wiese et al., 2018). Also, in order to meet society's growing healthcare demands, many nations have begun increasing the

number of students within the health professions (Andersson & Lundbäck, 2017; Dornan et al., 2019; Swanwick & McKimm, 2010). This means that while working in an increasingly complex, fragmented and demanding healthcare sector with high demands on productivity, clinical teachers and supervisors are charged with the responsibility of training more students (Irby et al., 2010; Morris & Blaney, 2010; Swanwick & McKimm, 2010; Wiese et al., 2018).

As such, clinical settings are highly complex and becoming even more so, with growing distress about the quality of clinical education and the significant challenges faced by clinicians who teach in terms of balancing competing roles and responsibilities (Dornan et al., 2019; Irby, 2014; Irby & O'Sullivan, 2018; Launer, 2010; Morris & Blaney, 2010; Steinert, 2014; Wiese et al., 2018). Therefore, the need to prepare and support clinicians in their teaching is well recognised (Cantillon et al., 2016; Irby & O'Sullivan, 2018; McLean et al., 2008; Steinert, 2014; Steinert et al., 2016; Wiese et al., 2018).

### **Calls to professionalise teaching practices**

Besides the challenges in clinical education caused by the complexity of healthcare settings, the need to develop teaching practices within the health professions is also driven by demands on accountability and quality assurance and the growing requirement that teaching and assessment be based on appropriate educational evidence and principles (Bleakley et al., 2011b; Steinert, 2014; Swanwick & McKimm, 2010). Moreover, educationalists and governing bodies within health professions education are calling for better-informed teaching aligning with shifts in perspectives on teaching and learning (Bleakley et al., 2011b; Irby & O'Sullivan, 2018; Morris & Blaney, 2010). This implies moving from the previously dominant cognitive models of knowledge acquisition and reproduction and relying on instructional teaching methods to socio-cultural perspectives foregrounding participatory learning in practice. Adhering to such a push for renewal requires individual clinicians to develop their educational practices and acquire new educational skills, for which they need support and training (Bleakley et al., 2011c; Irby et al., 2010; McLean et al., 2008; Morris & Blaney, 2010; Steinert, 2014, 2017; Swanwick, 2008).

Further, although a majority of clinicians teach during their careers, that they are imperative for the quality of clinical education, and the increasingly complex nature of the teaching task, most have no training for acting as teachers and supervisors (McLean et al., 2008; Steinert, 2014; Swanwick & McKimm, 2010). It has traditionally been assumed that the expert knowledge of medical professionals is enough to effectively and successfully teach others (Bleakley et al., 2011c; Irby & O'Sullivan, 2018; Steinert et al., 2016). The renowned concept of 'see one, do one, teach one' reflects the old idea of apprenticeship and assumes that individuals instinctively and easily develop teaching tools and qualities that make them apt for teaching (Bleakley et al., 2011c). These assumptions have long been heavily contested, and it is now widely recognised that training to teach is essential in order for teaching to be of high quality (Bleakley et al., 2011c; Irby, 2014; Irby & O'Sullivan, 2018; McLean et al., 2008; Steinert, 2014). As such, there are recurrent calls to professionalise teaching practices in health professions education, and the demands and expectations that

those who teach acquire skills in teaching and learning are growing, as are the requests that medical faculties provide sufficient training and support (Irby & O'Sullivan, 2018; Steinert, 2014; Steinert et al., 2016; Swanwick, 2008). The importance of training for clinicians who teach has also been recognised by regulatory and accreditation bodies internationally, echoing the aforementioned calls for clinicians who teach to be prepared for the task and that medical schools are responsible for providing resources to enhance teaching skills among clinicians (see, e.g. 'Tomorrows Doctors' by the General Medical Council in the UK (2009), the 'Standards for Accreditation of Medical Education Programs' in North America (Liason Committee on Medical Education, 2021), or the agreement between the state and healthcare regions concerning medical education in Sweden (ALF, 2014).

## **Section summary**

This section has shown that clinical education offers vital experiences that support students in developing into competent and capable healthcare professionals. However, the complexity and changing nature of clinical settings present challenges for clinical teaching and risk jeopardising the quality of clinical education. Furthermore, whereas most clinicians are unprepared and untrained for their teaching role, shifting perspectives on teaching and learning require them to develop new educational skills and strategies. The need to develop and support clinicians who teach is further fueled by the push to professionalise teaching in health professions education. As such, at times when there is a need not only to sustain, but also expand a well-prepared and competent workforce in health care, those responsible for teaching the next generation of health professionals face great challenges and demands for development. The need to meet these challenges and to support and prepare individual clinicians for their teaching responsibilities is well recognised (Cantillon et al., 2016; Irby & O'Sullivan, 2018; McLean et al., 2008; Morris & Blaney, 2010; Steinert, 2014; Swanwick, 2008; Wiese et al., 2018). In an attempt to meet this need, faculties around the world are offering faculty development. This is acknowledged as the pivotal approach to support clinical teachers in responding to the challenges they face, and essentially to strengthen and improve clinical education in the health professions (Cantillon et al., 2016; Irby & O'Sullivan, 2018; Leslie et al., 2013; McLean et al., 2008; Steinert, 2014; Steinert et al., 2016). The next section will provide an outline of faculty development, its practices and foundational principles.

## **2.2 FACULTY DEVELOPMENT**

In the context of Swedish higher education, educational consultants offering support for individual teachers interested in developing their teaching can be traced back to the 1960s (Roxå & Mårtensson, 2008). In the 1970s and 1980s, educational programmes and courses started to emerge within medical education in Europe and North America, followed by the creation of units and departments for educational development and support (Hodgson & Wilkerson, 2014; McLean et al., 2008). In the late 1990s, a report focusing on the long-term development of higher education in the UK was published, known as the Dearing Report (National Committee of Inquiry into Higher Education, 1997; Trowler et al., 2005). Among

other things, it suggested that institutions offer accredited teacher training programmes to their academics. In Sweden, a similar report to improve teaching and learning in higher education was published in 2001, recommending that higher education institutions establish units to promote the development of teaching in the event that such units were not already in place (Fransson, 2001). Such reports, coupled with the general push to renew and professionalise teaching, contributed to a considerable growth of interest in teacher development and resulted in many institutions establishing educational units (Irby & O'Sullivan, 2018; McLean et al., 2008; Roxå & Mårtensson, 2008; Trowler et al., 2005). Today, these units, referred to as, for example, 'faculty development units' or 'educational units', are common around the world within health professions education institutions. A major function of these units is to offer faculty development activities, with the last decade witnessing a substantial increase in the number of activities offered as well as growing interest in faculty development research (Leslie et al., 2013; O'Sullivan & Irby, 2011; Steinert, 2014). This section provides information about faculty development, what it is, its conceptual underpinnings, purposes and nature, and looks at current faculty development practices and research.

### **Terms and definitions**

Various terms are used to describe activities aimed at supporting and developing clinicians in their role as teachers, including faculty development, academic development and educational development. Both faculty development and academic development include activities that professionals pursue to develop their academic roles and responsibilities, including teaching, leadership, management and research (Steinert, 2014; Stes, Coertjens, et al., 2010). However, there seems to be a geographical difference between the usage of terms, with faculty development tending to be more common in North America, while British and Australasian contexts tend to use academic development (Stes, Coertjens, et al., 2010). Slightly different from faculty development and academic development, educational development has been defined to 'describe actions, planned and undertaken by faculty members themselves or by others working with faculty, aimed at enhancing teaching' (Amundsen & Wilson, 2012, p. 90); thus, it excludes activities focused on management and research. In this thesis, the terms are not viewed as being at odds with each other and are largely understood as synonyms. *Faculty development* is primarily applied within this thesis because of its wide use within the research literature in health professions education. Here, it refers to activities pursued by health professionals to develop their teaching and supervision, which may also include aspects of leadership and management.

### **The purposes, conceptual underpinnings and nature of traditional faculty development**

The goals of faculty development are varied and trying to distinguish and define them may prove difficult (Leibowitz, 2014). The purposes can change over time; they often relate to institutional cultures and policies; activities draw their foundations from a variety of fields including education, organisation, change management and sociology; and oftentimes, even a

single activity has multiple aims (Gibbs, 2013; Gibbs & Coffey, 2000; Jones et al., 2017; Leibowitz, 2014; Leslie et al., 2013). In large, faculty development focuses on developing conceptual understandings of teaching and learning as well as knowledge, skills and practices among individual teachers (Amundsen & Wilson, 2012; Boud & Brew, 2013). Within the context of health professions education, there seems to be some agreement that the foundation of faculty development is to serve the overarching aim of health professions education, namely, to train and educate competent health professionals who can contribute to high-quality patient care (Hodgson & Wilkerson, 2014; McLean et al., 2008; Steinert, 2014; Steinert et al., 2016). It has been postulated that this aim can be achieved by training and developing professional and competent supervisors and teachers (Bligh, 2005; McLean et al., 2008), an assumption built on at least two foundational premises. The first is that practitioners who are well educated will provide better patient care (Swanwick, 2008). The second is that student learning and outcomes are influenced by teaching, and therefore, improved teaching practice (which in itself builds on the assumption that there are better or worse ways of teaching) will contribute to improved student outcomes (Bligh, 2005; McLean et al., 2008; Swanwick, 2008). Without going into the details of faculty development outcomes, which will be dealt with later in this section, there is research pertinent to this second premise. For example, in a review of faculty development programmes, Prebble et al. (2004) suggested a two-step relationship between faculty development and student learning, where faculty development initiatives can enhance the quality of teaching, and where good teaching can contribute to better student outcomes. This has been supported by other work (Gibbs & Coffey, 2004; Postareff et al., 2007; Stes, Coertjens, et al., 2010), and there thus seem to be a general belief that (a) teachers' conceptions about teaching and learning change post faculty development, and (b) that this is linked to positive changes in their teaching practices which (c) subsequently influences students' approaches to learning (Hodgson & Wilkerson, 2014; McLean et al., 2008; Steinert, 2014).

In line with this foundational idea of the purpose that faculty development should serve, namely, to enhance teacher performance and contribute to better student outcomes, the focus of development activities includes providing individual participants with knowledge about teaching and learning, changing their conceptions of teaching and developing teaching skills and competencies (e.g. feedback, assessment techniques) (Amundsen & Wilson, 2012; Bligh, 2005; Hodgson & Wilkerson, 2014; McLean et al., 2008; Steinert et al., 2016; Swanwick, 2008). Additional foci include promoting the creation of communities of likeminded individuals, educational leadership and scholarship and supporting the formation of teacher identity (Bolander Laksov et al., 2008; Bolander Laksov & Tomson, 2017; Steinert et al., 2016, 2019). To exemplify, in a review of faculty development programmes in medical education, Leslie et al. (2013) identified that the most common goal of the initiatives included was enhancing teaching effectiveness, followed by (in descending order), promoting scholarship, including curriculum design and research capacity development, supporting career development, including professional academic skills and career management, and

finally, fostering leadership, including supporting participants' understanding of and ability to influence change in their local setting.

Relatedly, faculty development has been suggested as an important tool in assisting organisational change by influencing departmental cultures and contributing to curricular change (Jolly, 2014; Steinert, 2012). Faculty developers have emphasised organisational change as a highly valued outcome, with participants being described as advocates who will bring about wider change within their workplaces (Gibbs & Coffey, 2000). The enterprise of faculty development thus seems to exceed 'training the teachers', and it has been proposed that it can aid in 'enhancing educational infrastructure and building educational capacity for the future' within institutions (Swanwick, 2008, p. 339).

To sum up, the underlying line of reasoning behind traditional faculty development is to develop teachers' conceptions of teaching and learning and improve their practices so as to enhance student outcomes (Boud & Brew, 2013; Gibbs & Coffey, 2004; Postareff et al., 2007). Furthermore, within health professions education, faculty development is to ultimately contribute to improved health care (McLean et al., 2008; Steinert et al., 2016; Swanwick, 2008; Thomas & Steinert, 2014). In striving towards these outcomes, a diversity of activities are being offered, spanning from longitudinal programmes through to shorter seminar series and courses and one-off workshops. Key features include didactic lectures, interactive discussions, role-plays, reflection, peer feedback, project-based learning and/or online learning (Leslie et al., 2013; Steinert, 2014; Steinert et al., 2016). The activities are commonly offered off-site (away from participants' local workplaces) in university settings, and while they are usually delivered in group settings, they often target the development of individual teachers (Amundsen & Wilson, 2012; Boud & Brew, 2013; Steinert et al., 2016). Much research has focused on the effect and outcomes of these activities, a subject to which we now turn.

### **Faculty development outcomes**

There have been considerable efforts aimed at evaluating faculty development and exploring the impact of the activities offered. There is currently a vast body of literature, including a number of reviews, describing, defining and measuring faculty development outcomes. In two consecutive reviews of faculty development activities and their outcomes conducted 10 years apart, Steinert et al. (2006, 2016) showed that faculty development participants report high overall satisfaction and that activities are considered valuable, helpful and enjoyable. Participants also report gaining knowledge and skills, increased awareness of teaching practices, increased confidence, and positive changes in attitudes. The programmes also seem to contribute to changes in teaching behaviour, although most studies rely on self-reports from participants.

The findings from these comprehensive reviews have been corroborated by a large body of research suggesting that faculty development contributes to change in individuals' conceptions of teaching and learning; impacts their teaching approaches; enhances teaching

confidence; increases educational knowledge, including understanding of specific teaching methods, assessment strategies and how to best facilitate learning in different situations; and changes participants' teaching behaviour and skills (Cilliers & Herman, 2010; Gibbs & Coffey, 2004; Leslie et al., 2013; Onyura et al., 2017; Postareff et al., 2007; Proctor et al., 2020; Sorinola et al., 2015, 2017; Stes, Coertjens, et al., 2010; Stes, Min-Leliveld, et al., 2010; Weurlander & Stenfors-Hayes, 2008). Thus, one could argue that there appears to be some evidence that faculty development contributes to positive outcomes for participants.

However, research on the outcomes of faculty development tends to focus on the individual level, relying mostly on self-reports, while the impact on the level of the organisation or student learning is seldom explored. This implies that little is known about the impact and change in the organisations and systems in which teachers work, and how teachers may work with change in practice following formal activities (Bolander Laksov, 2019; Chalmers & Gardiner, 2015; Clavert et al., 2015; Houston & Hood, 2017; Leslie et al., 2013; Onyura et al., 2017; Steinert, 2017; Steinert et al., 2016; Stes, Min-Leliveld, et al., 2010). As such, the assumption that improved teaching, through faculty development, contributes to improved student learning is suggested to be based on weak evidence (Houston & Hood, 2017; Jääskelä et al., 2017; Trowler & Bamber, 2005) and research indicate that there might be a mismatch between teachers' conceptions of teaching, and their teaching practices (Bolander Laksov, 2019). Thus, this challenges some of the foundational ideas of traditional faculty development.

### **Concerns about the conceptual underpinnings of faculty development**

Coinciding with the increase in faculty development programmes around the world is the substantial increase in interest for researching and developing the field (Gibbs, 2013; Steinert, 2017). In particular, the conceptual underpinnings of faculty development have been the subject for intense discussions. As previously described, the idea behind faculty development, in short, is that teachers who attend activities will be better teachers after participation than they were before (e.g. Gibbs, 2013; Hodgson & Wilkerson, 2014; McLean et al., 2008; Trowler et al., 2005; Trowler & Bamber, 2005). However, this assumption has been debated from several perspectives, one being related to ideas about how people learn and construct knowledge and, consequentially, whether or not knowledge can be transferred between settings.

### ***Different perspectives on professional learning***

The health professions have long been dominated by learning perspectives emphasising isolated individuals and their thinking processes (Bleakley et al., 2011b; Morris & Blaney, 2010). These perspectives focus on individuals' cognitive and psychological capacities, and are often categorised as 'the acquisition metaphor of learning' (Sfard, 1998). Learning is viewed as the acquisition and accumulation of knowledge and skills, for example, through the transfer from one person to another, and takes place inside an individual's mind, separately from the social and cultural contexts of the individual (Baker et al., 2021; Bleakley et al.,

2011b; Illeris, 2009; Morris & Blaney, 2010). Contrary to this focus on individual processes, socio-cultural theories highlight learning as a social and participatory activity, hence the label ‘participation metaphor of learning’ (Baker et al., 2021; Bleakley et al., 2011b; Morris & Blaney, 2010; Sfard, 1998). It postulates that individuals learn by participating in practice and that knowledge is constructed through experience and in interactions between people. Thus, learning cannot be separated from the context in which it is created and includes an enculturation process into a setting by which the norms, ways of acting and talking of that specific setting are picked up (Baker et al., 2021; Bleakley et al., 2011b). This view of learning is currently being proposed to illuminate aspects of work-based education as well as reflect contemporary views on how professionals learn (Bleakley et al., 2011b, 2011c; Boud & Brew, 2013; Hartford et al., 2017; Webster-Wright, 2009).

While there seem to be consensus within the research community that faculty development should be based on understandings of learning as being social and situated in practice, this appears to have had little effect on the practice of faculty development (Boud & Brew, 2013; Webster-Wright, 2009). Instead, an underlying cognitive assumption of learning has placed the focus of traditional faculty development on formal workshops, courses and programmes aimed at developing (transferable) knowledge, skills and conceptions among participants (Gibbs, 2013; Hodgson & Wilkerson, 2014; Steinert et al., 2016; Strand, 2017; Webster-Wright, 2009).

### ***Moving beyond linear theories of transfer and change***

Along with these contrasting understandings of learning follows further discussion on the conceptual underpinnings of faculty development, with it being repeatedly critiqued for applying simplified and unrealistic theories of transfer and change (Gibbs, 2013; Jones et al., 2017; Miller-Young & Poth, 2021; Trowler et al., 2005; Trowler & Bamber, 2005; Webster-Wright, 2009). A large body of literature from across fields criticise knowledge transfer for relying simple and unrealistic ideas of how new knowledge is integrated in practice (Davies et al., 2008; Greenhalgh & Wieringa, 2011; Greig et al., 2012; Kitson, 2009). This accords with the faculty development literature, where the idea that activities can lead to outcomes and change in practice through a linear and casual chain of events is argued as flawed (Houston & Hood, 2017; Jones et al., 2017; Miller-Young & Poth, 2021; Trowler et al., 2005; Trowler & Bamber, 2005; Webster-Wright, 2009). This is because such an understanding largely leaves out the impact of context and does not pay attention to the multifaceted nature of how faculty development outcomes may be achieved (Chalmers & Gardiner, 2015; Jones et al., 2017; Trowler et al., 2005; Trowler & Bamber, 2005; Webster-Wright, 2009); thus, it reflects cognitive views on transferable, acontextual knowledge. Rather, there is growing recognition that the extent to which individuals can incorporate new knowledge and change their practices is influenced by the social structure and local culture (the shared norms, values and ways of doing things) of the settings in which they are situated (Barman, 2015; Knight & Trowler, 2000; Lisewski, 2021; Mårtensson et al., 2014; McGrath, 2017; O’Sullivan & Irby, 2011; Webster-Wright, 2009). For example, the concept of teaching and learning regimes

have been proposed to explain why individuals may have limited opportunities to change their practices following faculty development (Lisewski, 2021; Trowler et al., 2005; Trowler & Bamber, 2005). These regimes reside within workgroups and workplaces and include sets of meanings, assumptions and practices that act as a powerful lens through which change initiatives are interpreted (Trowler & Cooper, 2002). In other words, this suggests that change in practice following faculty development cannot be realised, researched or understood through concepts of linear transfer but that it is a dynamic process that is influenced by context (Bolander Laksov, 2019; Gibbs, 2013; Lisewski, 2021; Trowler et al., 2005; Trowler & Bamber, 2005).

This reasoning regarding knowledge transfer in relation to faculty development is supported by literature on change practices in higher education and organisational research. Here, theories of change as complex – where context, people and culture are important – have been proposed on the behalf of more traditional change perspectives centred around mechanical and rationalist understandings (Braithwaite et al., 2018; Kezar & Eckel, 2002; Kitson et al., 2018; McGrath, 2017; McRoy & Gibbs, 2009; Trowler et al., 2003; Wells & McLean, 2013). The latter has been challenged as change is portrayed as linear, predictable and unidirectional (from cause to effect) and because of its emphasis on general and universal change strategies that do not account for the influence of different settings and local organisational cultures (Kezar & Eckel, 2002; Kitson et al., 2018; McRoy & Gibbs, 2009; Wells & McLean, 2013). Instead, change is proposed to be understood as an emerging, iterative and dynamic process that takes place in and is influenced by specific contexts with set cultures, values and ways of working (Braithwaite et al., 2018; Kezar & Eckel, 2002; McGrath, 2017; Trowler et al., 2003; Wells & McLean, 2013).

### ***Studies on transfer and change – context emphasised***

The reasoning above is mainly theoretical in nature, and there is limited empirical research into how faculty development activities may contribute to outcomes and how change unfolds in practice. The studies that do exist have pointed to the importance of individual characteristics, such as engagement and motivation, and well as the various aspects of the activity, such as social interaction and protected time (De Rijdt et al., 2013; Proctor et al., 2020; Sorinola et al., 2015, 2017). Further, findings have shown that the workplace setting influences participants' use of new knowledge and skills through its values and norms of teaching, where social support from colleagues and leaders and the opportunity and recourse to use skills and knowledge is important, as well as personal networks and relationships (Bossche & Segers, 2013; De Rijdt et al., 2013; Houston & Hood, 2017; Kumar & Greenhill, 2016; Onyura et al., 2017). One study even found that social networks in the workplace had greater influence on clinical teachers' adoption of educational innovations compared to participation in faculty development initiatives (E. Jippes et al., 2013). While these studies offer important information, some are not related to faculty development in the health professions (e.g. Bossche & Segers, 2013; De Rijdt et al., 2013; Houston & Hood, 2017); some focuses on factors influencing how knowledge is applied (e.g. Kumar & Greenhill,

2016); others focus on aspects relating to individual participants and the faculty development intervention without including the workplace context (e.g. Proctor et al., 2020; Sorinola et al., 2015, 2017); and one uses quantitative measures to explore the adoption of an educational innovation (E. Jippes et al., 2013). This implies that these studies offer very limited insights into processes of change unfolding in the workplace, something which only one of the studies can offer insights into (Onyura et al., 2017). This calls for a look further into other fields to understand more about these issues.

Looking into research on educational change in general, thus not in relation to faculty development, studies within postgraduate medical education describe change processes as non-linear and dynamic (E. Jippes et al., 2012). Communication, shared commitment and ownership, and a supportive structure within the workplace (including time) have been described as factors facilitating change, while resistance, demands in clinical service and lack of consensus hinder educational change work (Bank et al., 2019; Fokkema et al., 2012; E. Jippes et al., 2012).

Moreover, research on curriculum change within health professions education suggest that national and organisational culture are important influences on change (M. Jippes et al., 2015), and, again, that curriculum change processes are dynamic and complex where change leaders have to deal with resistance and balance a multitude of stakeholders with different perspectives (Velthuis, 2019; Velthuis et al., 2018). This is supported by studies of educational change agents in medical and higher education suggesting that change involves complex and dynamic processes of bargaining and negotiation, relying on networks and significant others to achieve consensus and engagement in the workplace (McGrath, 2017; McGrath et al., 2016, 2019).

Widening the perspective to also include research within higher education, this too suggests that social and cultural structures in the workplace influence teachers' practices and development in important ways and support or hinder the integration of new educational ideas (Englund et al., 2018; Kezar & Eckel, 2002; Van Schalkwyk et al., 2015).

The studies discussed here vary in context, methodology and theoretical perspective, and few of them explore how change unfolds in practice in relation to faculty development in the health professions. However, the findings emphasise change processes as non-linear and complex, and point to the workplace context as an important influence on the ability of teachers to make use of faculty development activities and work with educational change in practice. Thus, they offer empirical support to the previously described critique of the overreliance on linear transfer from formal faculty development activities based in cognitive understandings of learning.

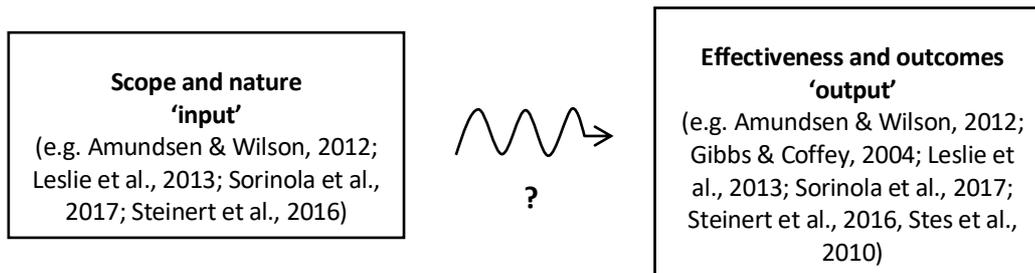
### **Calls to reform the practice of faculty development**

All of the aforementioned concerns regarding faculty development – shifting perspectives on how professionals learn, the associated criticism of conceptual underpinnings, including the transfer concept, and empirical research suggesting that the workplace context is highly

influential in teachers' practices and opportunities to change – substantiate calls to reform the practice of faculty development in order to make it effective in supporting teachers' learning and change in practice (Boud & Brew, 2013; Steinert et al., 2016; Webster-Wright, 2009). This includes moving from formal off-site activities that target individuals, to focusing on groups of practitioners who work together and situating activities in sites of practice: the workplaces (Boud & Brew, 2013; Steinert et al., 2016). Such developments have begun, with a greater focus on disciplinary cultures, socio-cultural perspectives on learning, and activities driven by educational theory and research (Gibbs, 2013; Hodgson & Wilkerson, 2014; Kim et al., 2021). A recent example is a workplace-situated faculty development programme based in social practice theory (Strand, 2017). Nevertheless, the focus on traditional approaches seems to endure, with a persistent overreliance on formal activities such as workshops and programmes delivered away from participants' workplace context, targeting the development of individual teachers, and emphasising skills acquisition (Boud & Brew, 2013; Steinert et al., 2016, 2019; Webster-Wright, 2009).

### **Calls to reframe research on faculty development**

While the above outlined the critique of traditional faculty development practices and the assumptions upon which they are based, there have been concomitant and related discussions about research on faculty development, its scope, theoretical perspectives and methods of inquiry. The underlying assumption that faculty development activities will lead to improved teaching in practice, which is critiqued largely on the basis of theoretical reasoning drawing on insights about learning and transfer, is seldom critically explored in research (Chalmers & Gardiner, 2015; Steinert, 2017; Steinert et al., 2016; Webster-Wright, 2009). To reiterate, the majority of studies on faculty development in health professions education focus either on exploring the nature of faculty development offerings, aiming to map activities and their content, or measuring and evaluating outcomes and effects, with a heavy emphasis on quantitative methods and self-reports (Leslie et al., 2013; Steinert et al., 2016). The consequence is that the existing research has rarely explored change in practice. In essence, this can be described as an input-output approach (Onyura et al., 2017) where a large body of research focuses on mapping and investigating faculty development activities and/or their outcomes (Figure 1). Although this kind of research remains important in offering insights into faculty development practices and demonstrating their value (Bamber & Stefani, 2016; Webster-Wright, 2009), it does not enable a broader understanding of how outcomes are realised or how change unfolds in the workplace. Thus, there are calls for research into why or how change in practice might be achieved as a result of formal faculty development (Amundsen & Wilson, 2012; Chalmers & Gardiner, 2015; Cilliers & Herman, 2010; Jones et al., 2017; Miller-Young & Poth, 2021; O'Sullivan & Irby, 2011; Onyura et al., 2017; Steinert, 2017; Steinert et al., 2016; Webster-Wright, 2009).



**Figure 1.** A large body of research on faculty development focuses on activities (input) and/or on outcomes (output), but there is a lack of understanding regarding what happens in between, that is, how change may unfold in practice.

Moreover, the alternative line of reasoning on professional learning as situated and social, and how faculty development may realise outcomes in practice, both outlined above, also adds to the shift of focus advocated in the literature. Specifically, previous research has been heavily criticised for not exploring the workplace context of faculty development participants as this is where faculty development ultimately unfolds (Amundsen & Wilson, 2012; O’Sullivan & Irby, 2011; Steinert, 2014, 2017; Webster-Wright, 2009). Therefore, there are requests for increased attention on the workplace context and how it may influence teachers’ opportunities for faculty development (Amundsen & Wilson, 2012; Miller-Young & Poth, 2021; O’Sullivan & Irby, 2011; Onyura et al., 2017; Steinert, 2014, 2017; Steinert et al., 2016; Webster-Wright, 2009). Similarly, studies seeking to understand how faculty development may contribute to outcomes and educational change in practice are urged to stay attentive to interactions between individuals and their workplaces (Leslie et al., 2013; O’Sullivan & Irby, 2011; Steinert, 2017). Among those who have requested reform of faculty development research along these lines are Irby and O’Sullivan (2011). They have called on researchers to go beyond the focus on programmes and explore the workplace contexts of programme participants as these strongly shape educational change and faculty development outcomes. They maintained that if these are not addressed, ‘real change will be difficult if not impossible to achieve’ (O’Sullivan & Irby, 2011, p. 425). In addition, much of the previous research on faculty development outcomes has relied on quantitative methods, and there are demands for qualitative studies exploring processes of change within the workplace and participants’ experiences of change work and development (Jones et al., 2017; Leslie et al., 2013; O’Sullivan & Irby, 2011; Steinert, 2017; Steinert et al., 2016; Stes, Min-Leliveld, et al., 2010; Webster-Wright, 2009). Also, applying methods that can offer an in-depth understanding of the interactions between individuals and systems may be even more important in health professions education because of the complexity of clinical settings (O’Sullivan & Irby, 2011).

Given these points, the perspective on change taken in this thesis is one in which change is viewed as non-linear, dynamic, interactive and context-dependent (Kezar & Eckel, 2002; Trowler et al., 2003). It is viewed not as an event or object, but more as a process. In this regard, the thesis attempts to break with linear ideas of knowledge transfer and input-output

approaches to exploring faculty development. The concept of change is used to refer to the process by which faculty development may achieve its various outcomes in practice; it is what (potentially) happens when participants return to their workplaces after a faculty development activity. It concerns change in practice, referring to change in the ways of doing things (the 'practices'). The focus is specifically on educational change, which refers to changes that relate to issues of teaching and learning. Such change can for example include an individual teacher changing feedback practices, or an initiative aimed at implementing interprofessional teaching within a clinical department.

### **Section summary**

This section presented an overview of the literature on faculty development practices and research. It began by describing the conceptual underpinnings and nature of faculty development activities and continued by reviewing research on the evaluation of activities and their outcomes. Here, it was suggested that faculty development has positive outcomes at the level of individual clinical teachers, who report high satisfaction and gains in knowledge and skills. However, there is a paucity of research on the impact and change on levels exceeding the individual participant. The section then moved on to discuss current concerns regarding faculty development, including shifting views on learning, criticism of the underlying assumption of linear transfer and an overview of the alternative line of reasoning being advocated, which emphasises the influence of workplace context on change and development. This alternative line of reasoning warrants in-depth research into the interactions between individuals and their context, and there are calls for approaches exploring the processes of change rather than capturing aspects of a linear input-output chain.

Whilst studies have investigated variables influencing the transfer of learning from faculty development, and whilst there is research on educational change practices within higher education institutions, there is still scant research on the processes of change in relation to faculty development within the context of clinical education in the health professions. Accordingly, questions such as why or how change may come about in the clinical workplace through faculty development remain unanswered. Thus, there is a need for research on faculty development and educational change that also pays attention to interactions between individuals and their workplace contexts. Such research would offer important information for faculty developers to construct valuable activities that support clinical teachers in enhancing their teaching and working with change in practice.

### **2.3 RATIONALE SUMMARISED**

The importance of clinical education in supporting the development of health professions students into competent professionals is widely accepted, as is the integral role of clinical supervisors and teachers for the quality of learning in clinical settings. Yet, there are concerns about the quality of clinical education, and the complexity of clinical settings places high demands on clinical teachers to balance their responsibilities as care providers, researchers and teachers. Also, while many clinicians are unprepared for their teaching role and lack training in teaching and learning, there are increasing calls to professionalise teaching practices within the health professions.

Faculty development has been raised as a key element supporting clinicians in their teaching as well as in achieving and maintaining high-quality clinical education. While there is a large body of research on the nature of formal faculty development activities and their outcomes, much less is known about how these activities contribute to change in practice and how development ultimately unfolds in the clinical workplace. Relatedly, faculty development activities, and the research that informs them, have been criticised for adopting poor theories of knowledge transfer and largely leaving out the influence of the workplace context. Deepening our understanding for how change unfolds in practice during and after formal activities is vital to advance the field of faculty development, support the clinicians faced with the increasingly difficult task of supervision and teaching, and enhance clinical education in the health professions.



### **3 AIM**

The overall aim of this thesis is to explore faculty development and educational change in clinical settings in order to deepen the understanding of how faculty development may contribute to improving clinical education in the health professions.

The overall aim is addressed through four studies guided by the following sub-aims:

- Study I To explore how clinical educators' engagement in faculty development is affected by the systems they act within.
- Study II To explore the experiences of working with educational change in clinical workplaces from the perspective of clinical educators who have undergone faculty development training.
- Study III To explore how clinical educators integrate educational innovations developed within a faculty development programme into their clinical workplaces.
- Study IV To explore what aspects of a faculty development programme support clinical educators in working with educational change in practice.



## 4 THEORETICAL FRAMEWORK

The work in this thesis is founded on broader socio-cultural ideas about the world, where individual activity is understood as bound to social and cultural settings. Specifically, cultural historical activity theory (Engeström, 1987), henceforth referred to as activity theory, has served to guide the thesis and the following sections will provide an overview of the theory, including its basic tenets and major contributors.

### 4.1 ACTIVITY THEORY

Activity theory offers a way to explore and understand interactions between individuals and systems (Engeström et al., 1999; Nicolini, 2012). It views individuals as part of a collective practice and as interconnected within a systemic whole, acknowledging that systems cannot be understood without paying attention to the individuals within them (Engeström, 1987; Engeström et al., 1999). The theory is used within a broad range of research areas including education, psychology and work and organisation. It has also gained increasing attention within health professions education research where it was recently discussed as being suitable for studying complex and messy ‘wicked problems’ (Varpio et al., 2017) and has also been highlighted as tool to explore the tensions between clinical service and education (Cleland & Durning, 2019).

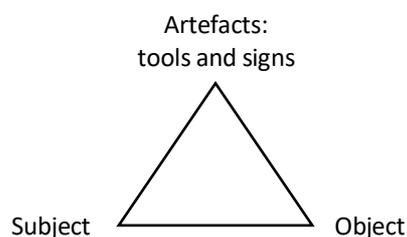
The theory stems from the work of Lev Vygotsky, Alexei Leont’ev and others in the early 20<sup>th</sup> century in Russia (Engeström, 2001). The theories developed by Vygotsky and his colleagues differed from early natural science where objects were seen as separate and existing independently, and instead emphasised a dialectical understanding where objects, including humans, were seen as interacting with each other and their environment (Nicolini, 2012; Virkkunen & Newnham, 2013). As described by Virkkunen and Newnham, ‘an organism can only be understood in its interaction within its life world and the history of its evolution’ (2013, p. 30). These notions thus moved the perspective from viewing individuals as solitary units to seeing them in interaction with their social and cultural environment (Engeström, 1987).

Central principles of today’s activity theory that are particularly important to understand include mediated action, object-oriented activity, the activity system and the notion of contradictions (Engeström, 2001; Nicolini, 2012).

#### **The notion of mediated action**

Building on the dialectical view that humans interact with each other and their environment, Vygotsky (1978) formulated the notion of mediation. It implies that the interaction between individuals and the outside world is indirect and mediated by artefacts, often illustrated through a reworked version of Vygostky’s own figure, showing a triadic relationship among the object, subject and artefact (Figure 2) (Engeström, 2001; Vygotskij, 1978). Artefacts are cultural and social tools that share the function of mediating human action, and include both material devices such as a hammer but also for example language (Nicolini, 2012; Vygotskij,

1978). This idea of mediated action has later been described as first-generation activity theory (Engeström, 1987).



**Figure 2.** The common reworked version of Vygotsky's mediated action (adopted from Engeström, 2001, p. 134).

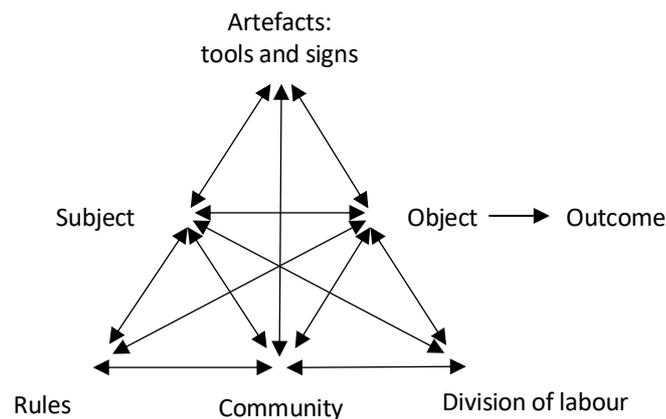
### **Object-oriented and collective activity**

Vygotsky's mediated action focused on individuals and subsequent work by Leont'ev centred around activity as a collective practice oriented towards an object, referred to as second-generation activity theory (Engeström, 2001; Nicolini, 2012). Using the now famous example of a medieval hunt, Leont'ev (1978) illustrated the difference between individual action and collective activity and the principle of object-oriented activity. Leont'ev reasoned that the object of the activity, understood as a motive, is what defines the activity and separates it from other activities; it is what gives the activity its direction, and thus, without the object, there is no activity (Engeström, 1987; Leont'ev, 1978; Virkkunen & Newnham, 2013). The object can be ideal or material, meaning that it can be present in thought as well as in perception (Leont'ev, 1978). In the example of the hunt, the motive of an individual taking part in the hunt may be hunger. However, the individual need alone cannot direct collective activity; instead, it must meet with a culturally and historically grounded object in the surrounding world that can direct the activity of a collective hunt (Leont'ev, 1978). The individual in the example plays the role of a beater, scaring the animal so that it moves towards other hunters. Thus, the individual action carried out (making the animal run away) may seem irrational, given that the individual need is hunger, but the action becomes logical when understood in the larger context of the collective activity of a hunt with a shared object. This idea of collective activity has had important implications in turning the focus away from individuals to the complex interactions taking place between individuals and their communities (Engeström, 2001).

### **Activity systems as the unit of analysis**

Building on Leont'ev's theories on collective, object-oriented activity, Engeström (1987) set out to construct a model of human activity that would fulfil four criteria: (1) activity must be modelled at its simplest form; (2) activity must be analysed in its dynamic form; (3) activity must be analysed as contextual and the relation between the individual and the outside world must be included in the model; and (4) activity must be analysed as culturally mediated.

Through Engeström's work, the focus of the second-generation activity theory was broadened by emphasising contextual and social influences on activities. He theorised that human beings are seldom alone working on a task: directly or indirectly, others are involved and individuals are members of a community in which there are rules and a division of roles and power (Engeström, 1987). The resulting activity system (Figure 3) was introduced as the basic unit of analysis and included rules and the division of labour between those involved in working towards the object, thereby offering a more complex and contextually grounded representation of human activity (Engeström, 1987, 2001; Nicolini, 2012).



**Figure 3.** The activity system and its interconnected elements (adopted from Engeström, 1987, p. 78).

In the triangular system, Vygotsky's mediated action and Leont'ev's focus on object are visible in the upper part. The subject is the individual or group working towards the object, those whose viewpoints are employed as perspective in the analysis. The object can be distinguished as a specific object, relating to the needs of an individual and present on the personal level, as well as a generalised object, connected to social and cultural meaning present at the system level (Engeström & Sannino, 2010). Using mediating artefacts, the object is turned into an outcome, which is the product of the activity. Further, the activity is regulated by rules which include both implicit norms and values as well as explicit regulations, it takes place in a social and cultural community, and a division of labour specifies how power, roles and tasks are divided among participants in the community (Engeström, 1987). To exemplify, the system of patient care could include a physician (subject) using diagnostic measures or medical treatments (tools) in her work to treat a patient (object), which could result in improved health (outcome). This activity also includes other healthcare professionals (community), an arrangement of how work, tasks and power are divided among them (division of labour), and the activity is regulated by, for example, workplace policies and medical guidelines (rules).

The activity system is dynamic and the elements in the system are inherently interconnected (Engeström, 2001). This system-ness is emphasised using bi-directional arrows to illustrate how multiple interactions and mediations occur among different elements. Mediation does

not only take place between the subject and object through artefacts but also through, for example, a social mediation between the subject and the other members of the community, including a set of rules such as implicit norms or expectations (Virkkunen & Newnham, 2013). The interconnection between the elements implies that a change or shift in one element will affect the whole system (Engeström, 1987, 2001; Fenwick, 2007). For example, the introduction of a new rule could collide with existing rules or existing ways of organising work, requiring the division of labour between community members to transform. As such, the activity system shifts the focus from a separate study of elements to the studying of the whole (Nicolini, 2012; Virkkunen & Newnham, 2013).

Moreover, activities seldom exist in a vacuum, and several activities are often interconnected. Therefore, the unit of analysis can be composed of two or more interconnected activity systems (Engeström & Sannino, 2010). This is referred to as third-generation activity theory and is the generation that is applied in this thesis.

### **Contradictions as drivers of change**

Another central aspect of activity theory is that of contradictions. As activity systems are dynamic and collective and include multiple perspectives and priorities, contradictions can arise within systems or between different interconnected systems. Engeström (1987) describes four types of contradictions. The first one is inner contradictions within the elements of an activity system, for example, inner contradictions within rules (incompatible rules) or the community. A second contradiction can occur between the elements of the activity system, for example, between a new tool and the old rules. The third contradiction can occur between the remnants of an old activity system and the more advanced or new form of the system. The fourth contradiction occurs between an activity system and its neighbouring systems. While the studies in this thesis did not focus on different kinds of contradictions, the levels illustrate the multi-voicedness of systems where participating individuals carry different views and where the system itself includes historical differences in its tools, rules and ways of doing things. Contradictions also contribute to illustrate the system-ness in emphasising the tensions that arise when new elements are introduced (Engeström, 2001).

Within activity theory, contradictions does not equal problems; rather, they are seen as drivers of change. They are tensions that trigger new solutions, and when they are worked upon to be resolved, the activity system evolves (Engeström, 1987). While it is difficult to capture contradictions, their discursive manifestations can be assessed in empirical data through dilemmas, conflicts, critical conflicts and double binds (Engeström & Sannino, 2010). Dilemmas are expressions of incompatible values; conflicts are expressed as resistance and criticism; critical conflicts are situations of inner doubt where individuals feel violated or guilty; and double binds are situations where individuals are faced with unacceptable alternatives and end up feeling helpless (Engeström & Sannino, 2010).

Relating to contradictions, activity theory offers a way to study interactions between different systems through the concept of knotworking (Engestrom, 2000; Engeström & Sannino, 2010; Fenwick, 2007). This metaphor illustrates how systems and actors, that are not necessarily connected, come together in collaboration in response to contradictions. The knot illustrates the collaboration as improvised, and the knot may be untied and retied, tightened and loosened, and so knotworking is characterized by ‘pulsations’ (Engestrom, 2000). Each thread in the knot constitutes the elements, practices, and actors of the systems. The knotworking serves to mediate different perspectives and practices, and as they are aligned, the tensions can be resolved, stimulating change to the systems and new forms of practice are formed (Fenwick, 2007).

### **Applying activity theory**

In summary, activity theory sees individuals as part of a systemic whole and offers a comprehensive framework to explore human activity as a collective and situated practice (Engeström, 1987; Virkkunen & Newnham, 2013). It rejects cognitive and individualistic perspectives of learning, and the related notion of knowledge as an acontextual entity that can be transferred, and instead emphasise action and learning as situated in social contexts (Bleakley, 2006; Bleakley et al., 2011b; Fanghanel, 2004; Greig et al., 2012; Nicolini, 2012). As discussed in Chapter 2, there are calls that research on faculty development go beyond ideas of linear transfer of static and acontextual knowledge, and rather study change as dynamic and interactive processes unfolding in social contexts. The use of activity theory in this thesis was an attempt to respond to these calls. It was reasoned that the theory could enable an understanding of faculty development and educational change that goes beyond the parting between an individual and their environment and, instead, highlight the complex interactions between them during development and change processes.

The theory was interwoven with the research presented in this thesis in the sense that it guided the attention and permeated the interpretations made, and activity theoretical concepts have been used to shape the data collection and analysis for some studies (*Studies I and III*). In sum, it offered a theoretical lens through which the research phenomenon was explored. The hands-on use of the theory is further described in the material and methods section.



## 5 METHODOLOGY

Methodology, ‘the logics of methods’, is not merely a procedural description of the methods and materials used; it also describes and outlines the choices and beliefs upon which research is based (Guba & Lincoln, 1994). In this section, I will address the methods used as well as the choices behind them and describe the principles underpinning the research presented in this thesis. First, I will discuss my philosophical positioning and underlying assumptions and how I approached the phenomenon under study. This will be followed by an overview of the four studies and a description of the materials and methods for each study, before concluding the chapter with a discussion on reflexivity, trustworthiness and ethical reflections.

### 5.1 PHILOSOPHICAL POSITIONING

Researchers within health professions education constitute a mixed breed of individuals from different academic backgrounds within the humanities, social sciences and medical sciences. This variety implies that the way in which research is understood and conducted, including the ways in which reality is understood, differ within the field. In the 1970s, Thomas Kuhn defined different ways of approaching science and knowledge as scientific paradigms, with a paradigm understood as a set of assumptions shaping how an individual or a scientific field reasons about knowledge and research (Guba & Lincoln, 1994; Varpio & Macleod, 2020). Following Kuhn, Guba and Lincoln (1994) described the nature of different paradigms based on three fundamental issues. The first is that of ontology, which refers to the nature of reality and what can be known about it. For example, is there a single ‘real’ reality, or can multiple realities co-exist? The second is epistemology, namely, the nature of knowledge and the relationship between the knower and what can be known. This relates to the ontological position; if a real reality is assumed, then this reality can be discovered by an objective knower. The third is methodology, which is informed by the ontological and epistemological standpoints and answers the question of how the researcher can go about acquiring what is to be known (Guba & Lincoln, 1994; Varpio & Macleod, 2020).

Historically, the dominant paradigm in science, including the medical research tradition, has been positivism, which posits that one reality, the ‘truth’, can be uncovered through objective and value-free inquiry (Bunniss & Kelly, 2010; Guba & Lincoln, 1994; Park et al., 2020). Here, randomised controlled trials are the golden standard of research, controlling for potential biases or confounders which would otherwise call into question the validity of the results. The paradigm of post-positivism developed as an extension of positivism and is common within the health professions (Young & Ryan, 2020). It critiqued positivism for going from observations to conclusions that were understood as truths, and rather suggest that scientific understandings are developed through falsification of theories. This means that although post-positivism believes in a single reality, a scientific fact or knowledge represents a current understanding but can never be proven to be *the* correct account of reality as there is always the possibility of future falsification. Further, post-positivists assert that we lack the

tools to fully understand the external reality and so it can only be partially understood (Guba & Lincoln, 1994; Young & Ryan, 2020).

In contrast, the paradigm of constructivism, also referred to as interpretivism, is a broad philosophical stance that understands reality as relative (Guba & Lincoln, 1994; Mann & MacLeod, 2015; McMillan, 2015). It suggests that there are multiple interpretations of reality, depending on the individual observer, and does not understand reality as a single objective ‘truth’, waiting to be uncovered (Guba & Lincoln, 1994; Mann & MacLeod, 2015). As reality is interpreted and subjective, the researcher and the researched interact and cooperate to co-construct meaning around experiences, acknowledging that there is no such thing as a fully objective inquirer. Thus, research within this paradigm does not aim to eliminate bias but attends to how the inquirer’s personal experience and preunderstandings influence the research and interpretations made (Bunniss & Kelly, 2010; Mann & MacLeod, 2015).

While I was fostered in the tradition of positivism through my medical studies, this thesis is based on constructivist assumptions about what reality is and what we can know about it. Here, knowledge is understood as situated and contextual, as constructed and interpreted in processes of interaction between individuals (Guba & Lincoln, 1994). Furthermore, and consistent with the earlier discussion on activity theory, the research presented within this thesis is founded on socio-cultural perspectives where individuals and their actions are bound to the social and cultural settings of which they are part (Engeström, 1987). The constructivist approach to research and knowledge also aligns well with the primary interest of the thesis, that is, to understand more about peoples’ experiences and their perspectives with regards to the complex and contextual issues of educational change and faculty development. The aim was never to measure or evaluate faculty development impact or reveal any universal ‘truths’ about how educational change is achieved. Rather, the research presented here contributes through descriptions of peoples’ personal experiences of the phenomenon under study.

## **5.2 APPROACH TO INQUIRY**

In line with the constructivist stance taken in this thesis, the purpose was not to test a hypothesis, uncover a ‘truth’ or to create fully generalisable results; rather, the research presented here was guided by an explorative approach (Creswell, 2013; Ringsted et al., 2011). In accordance with this approach, participants were chosen not because they would compose a representative sample, which would serve the purpose of generalisability, but because they had first-hand experiences of the phenomenon of interest and, thus, could inform the research in a purposeful way (Creswell, 2013; Flyvbjerg, 2011). Qualitative methods were applied as they promote in-depth explorations of individuals’ experiences and perspectives and enable inquiry into the complex nature of change, as called for in previous literature (Jones et al., 2017; Steinert, 2017; Steinert et al., 2016). Furthermore, in line with the philosophical positioning of the thesis, qualitative research acknowledges the

interpretative role of the researcher when attempting to make sense of the world (Cleland, 2015; Creswell, 2013).

### **Case study research**

The thesis was inspired by case study research, which is a research approach that focuses on detailed and rich understandings of one or several cases and aids researchers in yielding insights into complex issues (Cleland et al., 2021; Crowe et al., 2011; Harrison et al., 2017). It is especially suitable for exploratory research and acknowledges the interpretative role of the researcher (Cleland et al., 2021; Flyvbjerg, 2011; Yin, 2014), which aligns well with my ontological and epistemological orientation and the research interest in understanding more about faculty development and change. Moreover, case study research aims to understand phenomena as part of their context (Yin, 2014), thus trying to explore contextual features rather than seeking to control them. This aligns with the aforementioned call for more research into the contextual nature of change as well as activity theoretical notions where individuals cannot be separated from the systems of which they are part.

Noteworthy, talking about ‘case study research’ or ‘approach’ may give the misleading impression that it is a single entity when, in fact, there are different variations of this approach, with the main methodologists being Yin, Stake and Merriam (Cleland et al., 2021; Yazan, 2015). What unifies the approaches is that they share definitions of a case study as a multi-faceted and in-depth exploration of a specific phenomenon or problem in its real-life setting, that is, the natural setting in which it occurs (Cleland et al., 2021; Creswell, 2013; Crowe et al., 2011). While there are guides on what methods to use and how to go about conducting a case study, some suggest that a case study is defined by its theoretical orientation and its case, and not by the specific methods employed to explore the case (Flyvbjerg, 2011; Harrison et al., 2017). To cite Flyvbjerg (Flyvbjerg, 2011, p. 301); ‘if you choose to do a case study, you are therefore not so much making a methodological choice as a choice of what is to be studied’. It is this very founding principle of case studies – the focus on in-depth understanding of a phenomenon as part of its context – that has inspired the research conducted in this thesis. The phenomenon in focus was faculty development and educational change in clinical settings, and the cases upon which the studies build were chosen because they allowed explorations of this phenomenon.

*Studies I, III and IV* all built on the same faculty development programme, forming the case for these studies. The specific programme, which will later be described in greater detail, was chosen partly because of its uniqueness. It differed from what could be seen as more traditional programmes in its focus on teams of teachers who worked with educational innovations to be implemented in their workplaces. This thus aligns with an intrinsic case study where the case is chosen on the basis of its distinctive features (Cleland et al., 2021; Crowe et al., 2011). The programme was also chosen as case because it allowed inquiry into the phenomenon in focus, where it was reasoned that the programme could allow valuable understandings with the potential to address some of the gaps in the literature, such as how faculty development participants work with change in their workplaces. This is comparable to

an instrumental case study where a particular case is chosen because it facilitates the researcher to more broadly understand a phenomenon (Crowe et al., 2011). For *Study II*, the design was influenced by the collective case study in its aim to investigate multiple contexts to arrive at broader understandings of a phenomenon (Crowe et al., 2011). The choice of the specific cases for this study will be described later on, but in summary, the cases were chosen because they allowed comparisons between them and as they offered an opportunity to explore the problem at hand.

In summary, one can conclude that the case study approach served to inspire and guide the research conducted in this thesis, including the choice of what to study, in order to address the research aim.

### **5.3 METHODS**

This section provides a summary of the materials and methods employed in the empirical work. First, it presents an overview of the studies, study context, data collection and participants. This will be done jointly for *Studies I, III and IV*, and then separately for *Study II*. After this, there will be a general discussion on data analysis before describing the analysis for each study in greater detail.

#### **Overview of studies**

This thesis explored faculty development and educational change through four empirical studies. It took the perspective of clinical educators who had participated in faculty development, including individuals from different health professions and workplaces. *Study I* applied activity theory and explored educators' engagement in faculty development. *Study II* explored educators' experiences of working with educational change in clinical settings. *Study III* investigated how faculty development participants worked with change in relation to a specific programme by studying the integration of educational innovations, and *Study IV* explored aspects of that programme that had supported participants in working with educational change. Taken together, the four studies serve as different but integrated parts of an in-depth exploration of faculty development and educational change within clinical settings. Table 1 presents a summary of the studies.

**Table 1.** An overview of the four studies.

<b>Study</b>	<b>Study focus</b>	<b>Participants</b>	<b>Data collection</b>	<b>Data analysis</b>
I	Clinical educators' engagement in faculty development	Clinical educators in a faculty development programme	Focus group interviews	Thematic analysis informed by activity theory
II	Educational change practices in clinical workplaces	Clinical educators who had undergone faculty development training	Individual interviews	Thematic analysis
III	Integration of educational innovations developed within faculty development	Clinical educators in a faculty development programme	Focus group interviews	Thematic analysis informed by activity theory
IV	Aspects of a faculty development programme that supported participants in working with change	Clinical educators in a faculty development programme	Focus group interviews, follow-up email/phone contact	Conventional content analysis

### **Studies I, III and IV**

*Studies I, III and IV* were conducted within the same empirical setting, the case of a faculty development programme, and involved data collection at two time points involving the programme attendees. Since these studies share many commonalities, the context and the methods of data collection are described below in an integrated fashion; however, any differences or actions for a specific study will also be described.

Noteworthy, the participants in these studies are referred to by different terms in the thesis and the scientific papers, namely, clinical teachers (paper I and IV) and clinical educators (paper III). As described in the background section, the designations vary within the literature, and clinical teacher and clinical educator are used synonymously within this thesis. However, for the sake of clarity, the term clinical educator will be used from now on to refer to clinicians with appointed educational roles within clinical settings.

### ***Context of studies***

*Studies I, III and IV* build on a one-year faculty development programme held at Karolinska Institutet in 2016. Karolinska Institutet is a research-intensive, mono-faculty, government-funded medical university in Sweden, with about 6,500 full-time students (research is

externally funded). The university offers a number of programmes within medicine and the health professions at the undergraduate, postgraduate and doctoral levels. Many of the programmes include a large degree of clinical education in teaching hospitals and the primary healthcare sector where clinical staff are responsible for supervision and teaching (Karolinska Institutet, 2021).

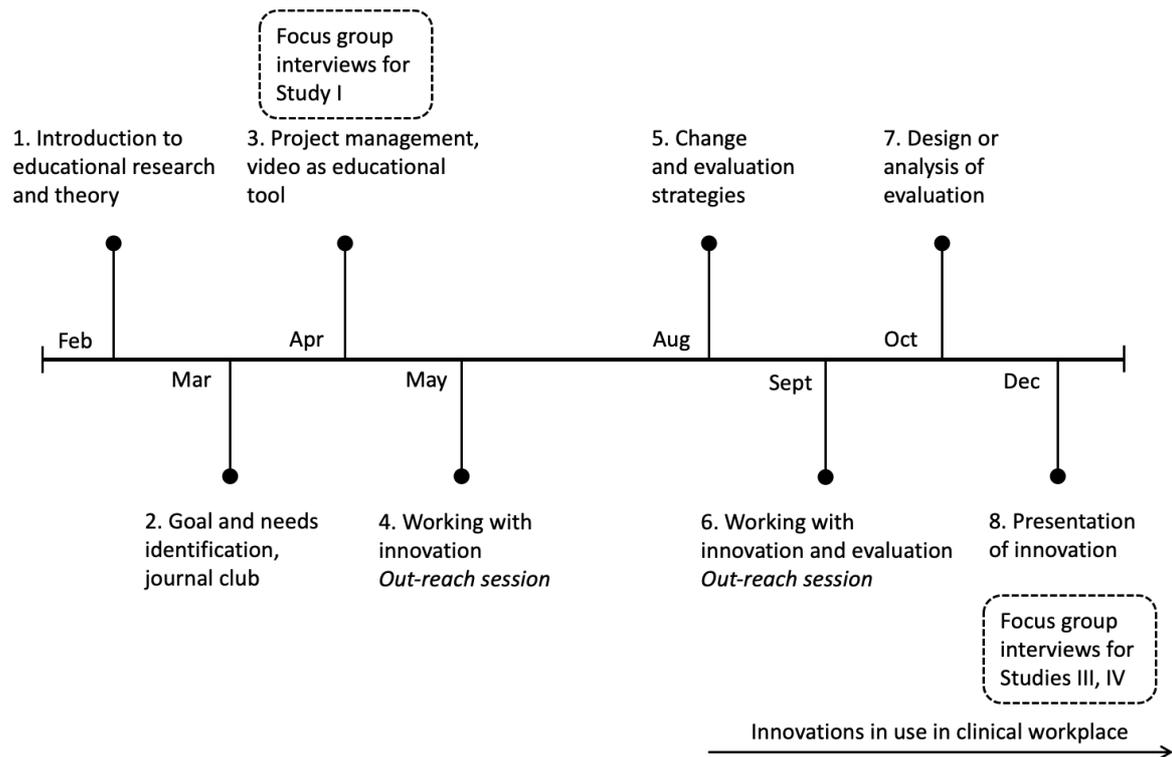
The faculty development programme upon which these studies build was designed as part of a research project exploring clinical learning environments. The programme sought to support teams of clinical educators, who were engaged in the clinical education of undergraduate students, in working with educational change in their workplaces by developing and implementing educational innovations in their workplaces. While each team separately identified an area of improvement in the teaching taking place in their workplace and constructed specific aims for their innovation, the programme stipulated that the innovation should aim to improve teaching practices and was to be informed by educational research and theory. Table 2 presents a summary of the innovations.

**Table 2.** Summary of innovations developed in the faculty development programme (adopted from Elmberger et al., 2020, p. 3).

Innovation	Focus	Target group
Reorganisation of clinical rotation and a new learning activity*	Interprofessional communication and profession-specific tasks	Students
A new learning activity including an educational video resource	Interprofessional ward rounds	Students
An educational video resource	Student feedback	Teaching clinicians
Reorganisation of clinical rotation to create educational teams of two students and two teaching clinicians	Peer learning	Students and teaching clinicians
A new learning activity including an educational checklist	Interprofessional ward rounds	Students

\*For further information, see (Ivarson et al., 2021).

The attendees had applied to the programme in self-formed teams of clinical educators from the same clinical workplace. In all, five teams were enrolled, three of which were interprofessional. The teams included two to six members, and the programme consisted of six half-day sessions at the university and two out-reach sessions in the workplace, where the course leaders met separately with each team. Each session included time to work on the innovations in addition to seminars and lectures focusing on issues such as educational research, project management and change and evaluation strategies. At the end of the programme, each team had developed and introduced an educational innovation in their workplace. The programme is summarised in the timeline in Figure 4.



**Figure 4.** Timeline of the faculty development programme held in 2016, including the focus of each programme session, and time for focus group interviews for *Studies I, III and IV* (adapted from Elmberger et al., 2020).

### ***Data collection and participants***

#### ***Participants***

In terms of strategies for selecting participants for *Studies I, III and IV*, all attendees of the faculty development programme were invited to take part, as the programme had been chosen as case. Programme attendees were informed of the study and invited to participate face-to-face at the first programme session. They were also handed written information about the study and informed consent-forms which they were asked to return signed if they wished to take part in the study.

For *Study I*, 16 out of the 17 programme attendees participated. At the time for the data collection for *Studies III and IV*, one attendee had dropped out of the programme, and two were unable to take part, resulting in 14 participants. The participants represented five different healthcare professions, two teaching hospitals and five different workplaces. Many had a long experience of teaching, and several had participated in faculty development before attending this programme. The group included course directors and teaching assistants, among others, and all participants had a designated educational assignment besides their clinical work. Table 3 presents a summary of participant characteristics.

**Table 3.** Participant characteristics in Studies I, III and IV.

Participant characteristics	Study I	Study III and IV
Participants (total nr)	16	14
Academic hospitals represented (nr)	2	2
Clinical departments represented (nr)	5	5
Profession (nr of participants)	Physiotherapy (7) Medicine (4) Nursing (3) Occupational Therapy (1) Social work (1)	Physiotherapy (6) Medicine (4) Nursing (2) Occupational therapy (1) Social work (1)
Mean age in years (range)	45 (30-63)	44 (30-63)
Male/female (nr/nr)	2/14	3/11
Years of teaching experience (nr of participants)	≥5 (8) 3-5 (5) 1-2 (2) ≤1 (1)	≥5 (8) 3-5 (4) 1-2 (2)

### *Procedures for collecting data*

Data for *Studies I, III and IV* were collected using focus group interviews. This method was chosen to enable and promote interaction and discussion among the participants and capture joint experiences as well as contrasting views or perspectives between and within the teams (Kamberelis & Dimitriadis, 2011; Krueger & Casey, 2000; Stalmeijer et al., 2014).

The interviews were conducted at two points in time. For *Study I*, focus groups were held at the third programme session (Figure 4). The groups were arranged to maintain teams and achieve a group size which would allow different perspectives while also ensuring that all individuals could participate actively in the group discussion (Krueger & Casey, 2000; Stalmeijer et al., 2014). Accordingly, three groups were formed: group A consisted of two teams working with similar patient categories ( $n = 5$ ), group B comprised two teams working with similar student categories ( $n = 5$ ), and group C was made up of one larger team ( $n = 6$ ). The interviews were held simultaneously after the programme session to facilitate participation, and each group were guided by a separate moderator in charge of asking questions and encouraging all participants to contribute (myself and co-authors KBL, ML). Each focus group also had an observer who kept track of time and assisted the moderator in following up on loose ends or asking clarifying questions. The interviews followed a semi-structured guide (Kvale & Brinkmann, 2009) developed in relation to the study aim, specific research questions and activity theory. To direct the discussion, the guide was divided into three areas – the individual, the group and the organisation – and included questions on individual motivation for engaging in teaching and faculty development, the structure and management of teaching within the workplace and the approach and attitude towards

education within the clinical community. The interviews lasted around one hour and were recorded.

For *Studies III and IV*, the focus group interviews were held at the end of the programme. The groups from the previous interviews were maintained, but this time group A had six participants, group B five participants, and group C three participants. The interview procedure was similar to the first one in terms of moderators, observers, interview duration and recording. The interviews followed a new semi-structured interview guide that had been developed in relation to the aims of *Studies III and IV* and included questions pertinent to both studies. The reasons for this were partly that the study foci were interconnected, and partly due to time issues on behalf of the participants, where it was considered difficult to gather teams outside of a programme session for a third focus group interview. Questions pertinent to *Study III* covered the process of integrating the innovations in the workplace, including reactions and responses from clinical staff, and issues of power and mandate. Questions relating to *Study IV* concerned the programme design, such as participants experiences of working with developing and integrating their innovations and working in teams.

For *Study IV*, the data was supplemented three years after the end of the programme by follow-up phone calls or emails with one member from each team, asking whether they were still working with their projects and whether innovations were still in use.

## **Study II**

Attempting to respond to previous calls for more research focusing on the contextual influences on change work (e.g. O’Sullivan & Irby, 2011; Steinert, 2017; Steinert et al., 2016), this study aimed to include participants from different contexts to allow comparisons across sites and enable in-depth insights of the contextual, organisational and systemic features of educational change practices. Therefore, in line with the collective case study design, a multi-institutional, international approach was applied to collect data from two sites.

### ***Contexts of study***

*Study II* was conducted at two government-funded universities situated in urban areas in Sweden and South Africa, respectively, offering a number of programmes within health professions education. The Swedish university, Karolinska Instiutet, was previously described as part of the context for *Studies I, III and IV*. The South African university (Stellenbosch University) is a multi-faculty university where the medical faculty is separate from the main university campus. These sites were chosen because they allowed the research team access to participants, and they were similar in terms of the design and organisation of the medical programme, including number of students, clinical education, and structure of faculty development. However, it was also considered that they differed in terms of culture, traditions, values and norms. It was assumed that this would allow for comparisons between the sites exploring different perspectives on the contextual influences on change practices.

The medical programme at each site includes large amounts of clinical rotations organised and managed by physicians with appointed educational roles, either being employed by the hospital or on joint appointments with the university. Both sites are within geographical proximity to a government-funded teaching hospital in which the clinical rotations take place. Besides, other healthcare institutions, such as other hospitals or healthcare centres, are also utilised for clinical education. At each site, the government remunerates the hospitals for their teaching. The medical faculties and the organisation of the medical programme at each site are outlined in Box 1.

The sites were also similar in terms of faculty development. Both had faculty development units offering a variety of faculty development activities in teaching and learning, including for example one-time workshops, lectures and longitudinal programmes. Participation is mainly voluntary but is recommended and/or required for some employment positions, such as directors of studies and associate professors.

**Box 1.** A brief overview of the medical programmes at study sites in Study II.

<b>Swedish study site</b>	<b>South African study site</b>
<p>Duration and organisation of medical programme: 5,5 year in total, including 2 years of pre-clinical phase, and thereafter 3.5 years of integrated clinical phase.</p>	<p>Duration and organisation of medical programme: 6 year in total, including 2 years of pre-clinical phase, 2,5 years of integrated clinical phase, and thereafter 1,5 years of clinical phase.</p>
<p>Degree upon completion: Master of Science in Medicine.</p>	<p>Degree upon completion: Bachelor of Medicine and Bachelor of Surgery (Stellenbosch University, 2013).</p>
<p>Additional training: 18-21 months of internship + 5 or more years of specialist training.</p>	<p>Additional training: 24 months of internship + 12 months of community service + 4 or more years of specialist training.</p>
<p>Medical programme in numbers: In 2019 (Karolinska Institutet, 2019):</p> <ul style="list-style-type: none"> <li>- 389 admitted students</li> <li>- 273 graduates</li> <li>- 1708 students in total</li> </ul>	<p>Medical programme in numbers: In 2019:</p> <ul style="list-style-type: none"> <li>- 289 admitted students</li> <li>- 274 graduates</li> <li>- 1800 students in total</li> </ul>

## ***Data collection and participants***

### *Participants*

A purposeful sampling strategy was used for *Study II*, meaning that participants were chosen because they were considered to offer rich information in relation to the focus of the research (Creswell, 2013). The perspective of clinical educators was still in focus, but compared to *Studies I, III and IV*, only physicians were included. The reason for this was to ensure that the sample would share some basic characteristics to enable comparisons between sites, especially because of the relatively low number of participants.

Three inclusion criteria were applied to identify participants: they had to (1) be clinically active as physicians, (2) have a designated educational appointment within a clinical setting, and (3) have four or more weeks of faculty development participation focusing on teaching and learning. To identify participants who fulfilled these criteria, attendance lists for faculty development programmes held in 2017 and first semester of 2018 were scanned at both sites. At the Swedish study site, this resulted in 16 individuals, six of whom agreed to participate after being invited via email (five declined, and five did not reply). At the South African study site, the same procedure resulted in 12 individuals being invited via email, two of whom agreed to participate (three declined, and nine did not reply). The invitation was then extended to individuals at the South African study site who were participating in the master programme in health professions education and who fulfilled the inclusion criteria. Of the three identified individuals, all agreed participation after being invited face-to-face. However, the number of participants at the two sites were still uneven and considered relatively low (six at the Swedish site compared to five at the South African site), and a third attempt was made to include participants at the South African study site. This time, two senior faculty developers were asked to identify individuals who fulfilled the criteria, after which seven individuals were invited by email, three of whom agreed to participate (four did not reply).

In total, the procedures above yielded 14 participants (six at the Swedish site, and eight at the South African site), including directors of studies, course directors, and module chairs. They represented a variety of medical specialities including internal medicine, surgery, family medicine and psychiatry. Each participant was asked to report their participation in faculty development at the start of each interview. CV's and/or course registration certificates were not collected. It surfaced that two participants did not meet the third inclusion criteria of four or more weeks of faculty development participation, both of whom reported activities corresponding two weeks. One of these individuals were participating in the master programme in health professions education. However, they were still included as it was considered that they had relevant experiences of the phenomenon in focus and could thus purposefully inform the study. In total, the mean time for faculty development participation was 6.9 weeks and median six weeks. Table 4 provides more information on participants.

**Table 4.** Participant characteristics in Study II.

<b>Participant characteristics</b>	<b>Swedish study site</b>	<b>South African study site</b>
Male/female	2/4	6/2
Mean age in years (range)	44 (32-53)	49 (43-62)
Medical specialties represented (nr)	Internal medicine (4) Emergency medicine (1) Psychiatry (1)	Internal medicine (4) Emergency medicine (1) Surgery (1) Family medicine (1) Laboratory medicine (1)

### *Procedures for collecting data*

As briefly mentioned above, data in this study were collected using individual interviews to in-depth explore participants' experiences (Creswell, 2013; Kvale & Brinkmann, 2009). The interviews were performed face-to-face by me, first in Swedish at the Swedish study site at the end of 2018, and then in English at the South African study site at the beginning of 2019. The interviews followed a semi-structured approach and were guided by an interview guide with specified, open-ended questions, allowing for explorations of topics and aspects arising during the interview (Kvale & Brinkmann, 2009). The guide was developed to generate data of relevance to the study aim. It covered aspects such as participation in faculty development and experiences from working with change in practice in relation to such activities as well as in-depth explorations of how participants worked with change in their workplaces by discussing examples of such work. The interviews were conducted at a time and place chosen by the participant, free from disturbances, such as an office or meeting room. They were recorded and lasted an average of 70 minutes (median 66 minutes, range 41-110 minutes).

### **Data analysis**

Before describing the step-by-step data analysis for each study, I will discuss some general points regarding the analyses conducted throughout the research undertaken within the frame of this thesis.

#### ***Deductive, inductive and abductive approaches***

One important aspect of qualitative analysis which has been reflected upon during the work with this thesis is the use of theory as part of the analytical process. Traditionally, there have been two main ways to describe this. On the one hand, there is the deductive approach, also called a theoretical analysis, in which one or several existing theories are applied during the analysis. This can range from researchers using predetermined frameworks and coding schemes to map data, for example mapping data to an activity system, to researchers who are more openly searching for data pertinent to a specific theory. This process is thus driven by the researcher and their theoretical focus (Braun & Clarke, 2006). On the other hand is the inductive approach, which entails little involvement of theory and can be described as a data-driven analysis in which the researcher engages in an analysis of the data without theoretical

influence or a predetermined framework (Braun & Clarke, 2006; Creswell, 2013). As such, this form of analysis is not driven primarily by the researcher's theoretical preunderstandings or interest but, rather, by the data themselves (Braun & Clarke, 2006).

However, it is questionable whether qualitative data analysis can really be fully inductive in the sense that it is freed from the influence of preconceptions or theories. In line with the ontological stance taken in this thesis, I agree with what others have argued, that researchers can never fully separate themselves from their preunderstandings of a phenomenon, including theories that are relevant to that phenomena, and that qualitative analysis is an interpretative process influenced by the way in which the researcher perceives the world (Braun & Clarke, 2006; Timmermans & Tavory, 2012; Varpio et al., 2017). As such, instead of juxtaposing inductive and deductive analyses as two distinctly separate ways of approaching qualitative analysis, whereby one must abide by one of them, I would suggest seeing them as the two ends of a continuum along which analysis can be more or less driven and influenced by theory. Similarly, there are alternative ways to label and approach the use of theory in an analysis, one of which is abduction (Timmermans & Tavory, 2012). While primarily developed for theory-generation, it offers useful ideas about the interaction between the researcher, theory and data during the analysis. It stipulates an analytical approach that eschews the notion of an objective researcher, free from preunderstandings, and, rather, acknowledges the theoretical lens that a researcher brings to the research, proposing iterative inquiries between data and theory throughout the analysis (Timmermans & Tavory, 2012).

### ***Different forms of qualitative data analysis***

This thesis applied two different methods for qualitative analysis: thematic analysis (*Studies I, II, III*) and conventional content analysis (*Study IV*), both of which aim to provide a rich account of participants' experiences by exploring and identifying themes or patterns across data (Braun & Clarke, 2006; Hsieh & Shannon, 2005). They do not adhere strictly to any specific theoretical framework or methodology, in contrast to other qualitative analysis methods such as grounded theory (Braun & Clarke, 2006). While they are very similar, one difference between the methods have been suggested to concern the level of analysis, with thematic analysis often focusing on identifying the underlying meanings of data (latent level), while conventional content analysis often gives precedence to the manifest meaning (Vaismoradi et al., 2013). Another difference relates to quantification of data which can be used in content analysis to measure frequency of categories and themes, which is not included in thematic analysis (Vaismoradi et al., 2013).

For *Studies I, II* and *III*, a thematic analysis approach was applied, as described by Braun and Clarke (2006). The reason behind this choice was the freedom and flexibility of the method in relation to theoretical perspectives and approaches, as it can be combined with different theoretical and epistemological positions (Braun & Clarke, 2006, 2019). This was valued considering the activity theoretical stance taken in several of the studies. Further, it was also considered suitable due to the exploratory nature of the research, as it supports a thorough,

systematic approach to analysis while also allowing for innovation and flexibility in the analysis procedure (Braun & Clarke, 2019).

For *Study IV*, conventional content analysis was chosen because it aims to describe a phenomenon or problem through the analysis and interpretation of data without using predefined analytical frameworks (Hsieh & Shannon, 2005). This corresponded well with the study focus to explore participants' explicit experiences of the faculty development programme they had participated in.

### *Thematic analysis*

While the procedure for each analysis will be described later, the general steps of the thematic analysis applied in *Studies I, II* and *III* will now be described (Braun & Clarke, 2006). First, transcripts were read repeatedly, actively and systematically, meaning that after an initial read-through, ideas and reflections were noted in the margins. Second, data were coded, meaning that data relevant to the study aim and research questions were marked and extracted. All the coded data were then collated together within each code, which was given a descriptive name. Third, the codes and their associated data extracts were assembled into potential sub-themes and themes. At this stage, post-it notes were used for organising and mind-maps were used to visualise the relationships between codes, sub-themes and themes. Fourth, the developing themes were refined and reviewed in relation to the coded material and the entire data set, which will soon be discussed in greater detail. Fifth and finally, all themes and sub-themes were named to reflect the central concept therein, and illustrative quotes were chosen and translated into English.

### ***Construction of themes***

Both thematic analysis and conventional content analysis include the construction of themes. In the process on conducting this work, I considered Patton's dual criteria of internal homogeneity (data within a theme connect logically together) and external heterogeneity (themes are clearly distinguishable from one another) (Patton, 2002). Therefore, while reviewing themes, all coded data within a theme were revised to ascertain whether it formed a logical coherence reflecting the central idea of the theme. When this was not the case, the coding, sub-themes and themes were again examined to determine whether the problem lay within the theme itself, or if whether there were data extracts that fitted poorly within the theme and, thus, had to be moved to another or a new theme. After this, the transcripts were revisited to consider whether the developing themes captured the meaning of the data. This process could result in additional coding, either by adding new extracts to already existing themes, or new codes were identified, thus requiring another round of collating codes and reviewing and/or adding themes. Lastly, once these two steps had been performed, the themes were compared to assess whether they constituted separate entities or whether they should be merged as a theme and/or sub-theme. As such, the analytical processes were iterative and dynamic, moving back and forth between steps in the analysis, and transcripts were continuously revisited to ensure that the ensuing interpretations were anchored in the data.

In the following sections, the data analysis for each study will be described, including whether and how theory was used to make sense of the data.

### ***Study I***

To explore the study aim, namely, how clinical educators' engagement in faculty development is affected by the systems they act within, activity theory was applied to formulate two research questions which guided the analysis of the transcribed interviews: (1) what systems are clinical educators part of, and what are the contradictions in these systems, and (2) how do these contradictions manifest in the system of education? To answer the first question, transcripts were read and re-read to systematically code and map the data in relation to the elements of the activity system. Following discussions in the research group, the systems were plotted. After this, and to answer the second question, the data were again carefully examined to explore contradictions within and between the identified systems, thus to explore the second research question. To do this, we applied a thematic analysis approach to search for recurrent patterns across the data relating to contradictions (Braun & Clarke, 2006). As part of this work, we searched for signs and expressions of conflict, argumentation and tension, and as an analytical tool, we looked for discursive manifestations of contradictions. These discursive manifestations have been named dilemmas, conflicts, critical conflicts and double binds (Engeström & Sannino, 2011), and can be identified by looking for linguistic cues in text, in this case the interview transcripts. For dilemmas and conflicts, such cues include 'but' and 'no', while critical conflicts are expressed by narrative stories and emotional accounts, and double binds by expressions of helplessness (Engeström & Sannino, 2011). After identifying the manifestations of contradictions, which had the form of text sequences rather than words or solitary sentences, we continued with the thematic analysis procedure by following the previously described steps: coding of manifestations, collating codes into sub-themes and themes, and, lastly, reviewing and naming all themes. During this process, we also identified mediations between and within systems, which we included in the final steps of our analysis.

Based on the research questions and the process described above, it is evident that the analysis had a clear theoretical perspective. The work related to the first research question was deductive in nature, while that relating to the second question held characteristics of an abductive approach where we moved back and forth between data, theory and the evolving results throughout the analysis.

### ***Study II***

This study sought to explore educators' experiences of working with educational change in their clinical workplaces. It employed the perspective of clinical educators who had undergone faculty development training, and posited a three-pronged research question: 1) what educational changes do clinical educators experience as feasible in clinical workplaces, beyond those concerning their individual teaching; 2) how do they approach educational

change; and 3) what contextual aspects in the workplace do they identify as influencing their opportunities and approaches to change?

The analysis focused on a latent level, that is, an interpretational approach to make sense of the underlying meaning of the data. While activity theory was not explicitly applied in the analysis, the fundamental notion of individuals as part of systems as well as results from previous studies were factors that I, as researcher, brought with me into the analysis, thereby conforming with the viewpoint described previously.

The analysis commenced after all interviews had been completed. Applying a thematic approach (Braun & Clarke, 2006), the analysis included the following steps. First, I performed a verbatim transcription of all the interviews before repeated readings of all transcripts whereby data relevant to the research questions and aim were coded. In addition, two senior researchers (KBL, JB) read and coded two transcripts each. The codes were then discussed between the three coding authors to review and discuss differences. Second, I assembled codes and their associated data extracts into sub-themes and themes. Third, all authors reviewed the candidate themes in relation to the coded material and data, and lastly, the themes were named. These steps were performed separately for each data set before performing a cross-case analysis where the themes and sub-themes from each data set were compared to identify differences and similarities. This cross-case analysis was first performed individually, by me, and then again through a discussion among all authors. The cross-case analysis showed very limited differences between the preliminary results from each analysis, and therefore, the final step of the analysis was to merge the results and define and name themes representing the data from both study sites. NVivo (QSR International Pty Ltd. version 12) was used to keep track of the data extracts, codes, sub-themes and themes.

### ***Study III***

In this study, activity theory, including its notion of activity systems and contradictions, was again used to explore the aim of how clinical educators integrated their educational innovations in their clinical workplaces. The analysis was guided by two questions: (1) which activity systems were involved in the integration process, and what were the contradictions between them; and (2) how can the interaction between these systems be understood? In relation to the first question, four of the authors (AE, EB, KBL, JN) read the interview transcripts individually. Each transcript (three in total) was read by two researchers, one of which was a senior researcher: thus, I (AE) read all transcripts, and EB, KBL and JN read one transcript each. During the reading, data were coded to identify the activity systems involved and any contradictions arising in relation to the integration of the innovations. Through a discussion among all authors, we then compared our coding and agreed on the activity systems and the contradiction between them.

For the second question, data were analysed using thematic analysis (Braun & Clarke, 2006). First, the transcripts were again read, and any data relating to how the participants had worked to integrate their innovations were coded by three of the authors (AE, EB, KBL).

This time, I again read all the transcripts, and EB and KBL read one transcript each. The codes were then collated into sub-themes. Up until this stage, the analysis in relation to question two had taken an inductive stance, and activity theory had not been applied. However, going forward, we discussed the sub-themes in relation to the activity systems we had created and constructed themes that related to the interaction between the systems. Before naming the final themes, another round of reading was performed to look for any uncoded data related to the interaction between systems. For this study, the analysis was supported using NVivo (QSR International Pty Ltd. version 11) to keep track of codes, sub-themes and themes.

The analysis focused on the latent meaning of the data, and activity theory influenced the analytical questions posed, the focus of the analysis and the final themes. The first part of the analysis – constructing activity systems – could be described as more deductive, using a predetermined framework (the activity system) to map the data. The second part of the analysis – relating to the interactions between systems – first took a more inductive approach in identifying the process of integration, but preliminary findings were later discussed in relation to the activity systems that had been constructed, thus applying abductive reasoning, going back and forth between data and theory.

#### ***Study IV***

For *Study IV*, which aimed to explore what aspects of a faculty development programme support participants in working with educational change in practice, the analysis applied a conventional content analysis (Hsieh & Shannon, 2005). It followed an inductive approach, focusing primarily on the manifest level, with the results reflecting what the interviewees explicitly expressed in the interviews. First, all transcripts were read and re-read by two of the authors (KBL, AE), who independently identified text sequences relating to the study aim. These sequences were then compared and coded, using a label or keyword close to the text. As the analysis advanced, the preliminary codes were used to code new data, while new codes were also added if data did not match any existing code. Then, all codes and their related data sequences were compared and discussed before being collated into sub-categories and categories. Finally, the evolving categories were discussed in the group of authors before a decision was made on the final structure and naming of the final categories.

#### **5.4 TRUSTWORTHINESS**

The issues of quality and rigour in research have been the subject of much attention and debate, and scholars have sought to define criteria for evaluating the quality of research. Compared to positivist or post-positivist traditions, where issues of validity and generalisability are key, constructivist research focuses on human experiences of social and complex phenomena and seeks to advance the shared understandings of the studied problem. To better align with the basic assumptions of constructivist, and often qualitative, inquiry, alternative criteria have been proposed to assess trustworthiness. In the following sections, the principles of credibility, transferability, dependability and confirmability (Graneheim &

Lundman, 2004; Guba & Lincoln, 1994; Mann & MacLeod, 2015) will be used to describe how issues of rigour and quality were considered and addressed during the work presented in this thesis.

*Credibility* deals with the alignment between what is said to be studied, that is the focus of the research, and the processes of inquiry (Graneheim & Lundman, 2004). It concerns how well the method, including the data and analysis, can address the aims of the study, and also relates to whether the research has followed accepted practices and arrived at trustworthy findings (Mann & MacLeod, 2015). To ensure this, the focus of the research and the methods and theories applied were continuously reflected upon and discussed within the research group.

Another effort to enhance credibility included the use of multiple perspectives when collecting data (Graneheim & Lundman, 2004; Lingard & Kennedy, 2010). While the viewpoint of the clinical educators was persistent throughout the studies, participants from various settings, professions and/or medical specialties were included to ensure that several perspectives and aspects of the phenomena under study would be explored. Furthermore, researcher triangulation was applied to ensure that several perspectives would be considered when interpreting the data (Graneheim & Lundman, 2004; Patton, 2002). For all four studies, the research group included researchers within health professions education (both senior as well as junior with backgrounds in social sciences and medicine), health professionals (including those who were clinically active within medicine and psychology), clinical educators and faculty developers. For *Study II*, another researcher representing the South African study site was included to ensure insights and understandings of the institutional and cultural context. The use of investigator triangulation was not aimed at avoiding ‘bias’ from a single researcher or validating the interpretations made as ‘right’; it was to enhance credibility by ensuring that the data were reflected upon from different perspectives (Graneheim & Lundman, 2004; Varpio et al., 2017). As such, differences between researchers’ interpretations, which sometimes surfaced during analysis, generated discussions and further exploration of data, which served to inform a richer understanding.

Credibility also requires the researcher to become familiar with and to gain in-depth understandings of the studied context. In this regard, I had an extensive understanding of clinical contexts, specifically clinical education, through my experiences as a medical student and later as a junior doctor. However, at the beginning of my research, I had a very limited understanding of faculty development, which is why I participated as an observer during all sessions of the faculty development programme for *Studies I, III and IV*. For *Study II*, I participated in several faculty development activities and engaged in informal discussions with clinical educators to become familiar with the setting at the South African study site before starting the data collection.

*Transferability* relates to the extent to which findings can be applied in other contexts (Mann & MacLeod, 2015). It is sometimes noted as a challenge in case study research seeing that the research is based on a bounded case that might hold little resemblance to other settings

(Cleland et al., 2021). However, case studies offer detailed insights with the possibility of contributing to wider understandings of investigated phenomena (Cleland et al., 2021). Importantly, the transferability of findings is ultimately the decision of the reader (Cleland et al., 2021; Graneheim & Lundman, 2004). Strategies to enhance transferability by enabling the reader to make informed comparisons to their setting includes offering thorough descriptions of the study context and comprehensive reports of the research process, both of which were applied here. In presenting the results, we aimed for thick descriptions and quotes were presented to facilitate comparisons and to enable readers to make sense of the findings. Moreover, the data were analysed, explained and discussed in relation to relevant theories and literature, which could further help the reader in judging the transferability of the findings (Kuper et al., 2008).

Thirdly, *dependability* concerns the research process and includes a description of the research process and methodological choices made throughout the research to make it openly available to the reader (Mann & MacLeod, 2015). To promote this, efforts were made to thoroughly and consciously track the process in a log, including all decisions made and the discussions within the research group leading up to them, sometimes also referred to as an audit trail (Kuper et al., 2008). The processes were described as clearly and structured as possible during the reporting of each study.

*Confirmability* refers to the extent to which researchers provide information about the research process, including the researchers' personal understandings and contribution, so that readers can understand how findings were reached (Mann & MacLeod, 2015). In line with the interpretative tradition, confirmability does not equal reproducibility, and it does not seek objective inquiry. Instead, it serves to audit research processes and ensure that the researcher is reflective of the interpretations made throughout the process. In the work with this thesis, this included extensively engaging with the data, with later stages of analysis including going back and forth between theme construction and original data. It has also included discussions with co-researchers to confirm that interpretations were corroborated by individuals with perspectives other than my own. Connected to this is reflexivity, where the researcher consciously reflects on how her preunderstandings have influenced the research process, a discussion to which I now turn.

## **5.5 REFLEXIVITY**

Aligning with the constructivist stance of this thesis, I viewed myself as a co-constructer of data, as the tool through which the data were collected, interpreted and presented. Therefore, it was crucial to recognise and reflect upon my background and pre-understandings and be reflexive about how this might have influenced the research (Kuper et al., 2008; Malterud, 2001; Varpio et al., 2017). Attending to reflexivity feeds back into trustworthiness as it allows the researcher an opportunity to become and stay aware of their contribution in the construction of knowledge and also offers readers insights into the researcher's position, values and beliefs (Berger, 2015).

When I started this research project, I was in the last year of my undergraduate medical training at the same university constituting the research context, Karolinska Institutet. As the medical studies had included a large degree of clinical education, I had experience from a number of workplaces and departments at several of the teaching hospitals which were connected to the university, albeit as a student and not as a staff member. Upon completing my medical studies, I began working part time as a junior doctor in genetics, which I continued with during the larger part of the research. This last year, (2020-2021) I had a nine-month break from research to complete parts of the post-graduation mandatory internship, which included clinical work in medicine and surgery.

As a student, I had oftentimes experienced the teaching and supervision during clinical rotations to be of low quality, if not entirely wanting sometime, an experience which I shared with many of my peers. At first, this had made me rather distressed and disappointed, especially as there were situations where I was lucky enough to spend an hour or day (sometimes even a whole week) with a doctor who was an engaged and competent teacher. Rather naïvely, I reasoned that, maybe, the rest just could not be bothered to engage in teaching or that they just did not know enough about how to supervise. As such, I entered this research with an interventionist aim, the idea that I would fix the problem. As I was expanding my knowledge through engaging with the literature at the beginning of my research, and as I stepped out of the role of a student and into that of a junior doctor, my insights and understandings were changing, and I became more focused on exploring the perspectives and experiences of teachers. Also, moving forward, I developed more and more into the role of a researcher, trying to understand phenomena, rather than solving what I as a student had experienced as problems. This was, for example, reflected in my turn away from implementation research, focusing on stepwise approaches to improvement, and the growing focus on explorative research, using activity theory to understand more about how workplaces influenced individuals. What has been incredibly valuable throughout the research process and in making sense of data was the continuous discussions with my supervisors and co-authors, who contributed with perspectives other than my own and challenged the way I saw things. Further, I have kept reflective logs during the data collection and analysis to note my reasoning and reactions to participants' stories.

Throughout these studies, I saw myself partly as insider (exploring from within) and partly as outsider (exploring from outside). My experiences from clinical education and work positioned me as an insider. I shared, in part, knowledge and perspectives with the study participants, which allowed me to better understand their context in terms of culture, values and norms. I believe that this might have benefited the data collection, as I experienced that it contributed to building rapport, with participants seeing me as 'one of them' and not as an educational researcher or expert. At the same time, there were situations where I suspected that participants viewed me as a student and thus might have refrained from sharing negative experiences about teaching. This was especially so during data collection for *Study I*, where I was still in fact a student. In part, I believe that this was counteracted by the focus group set-up, where the participants discussed issues together, placing less focus on the interaction

between myself and the interviewees, and where I was assisted by an observer who had a senior position as a researcher.

A major focus of the research was on faculty development and change, and all participants had designated educational positions. In this regard, I viewed myself as an outsider. I have never participated in a faculty development programme, and while I have supervised students, I have certainly never had an assignment as a teacher. I believe that this was important as I talked about change with participants, as it may have helped not taking for granted any assumptions and asking clarifying questions. Further, in *Study II*, the outsider perspective became more evident as I, a junior doctor from Sweden, had travelled to South Africa to talk to clinical educators about their experiences of change. During the design and undertaking of this study, the support and feedback from the co-author working at Stellenbosch University was integral as she had contextual knowledge and insights that I was lacking. Similarly, the discussions with peers at the local research centre where I was working helped me to better understand the cultural context of the study. It was also my experience that the participants openly discussed their experiences with me, maybe because I did not represent their university and, thus, could be perceived as more neutral without any interest in judging what was ‘correct’ or not.

Lastly, a question I have oftentimes asked myself during this research is ‘who am I to say something about their work?’ It relates to being an outsider in terms of faculty development and change work but also to the fundamentals of research. What I have tried to remind myself of is that it has never been my interest to assess participants’ work, and my unconditional ambition has always been to give voice to educators and the stories they told me, and to highlight their work and efforts. Nevertheless, I recognise my interpretative role as a researcher and, in this chapter, I have made efforts to declare my position to readers.

## **5.6 ETHICAL CONSIDERATIONS**

All studies within this thesis received approval from ethical review boards and the research has been conducted according to the principles of the Declaration of Helsinki (World Medical Association, 2018). *Studies I, III and IV* were approved by the Regional Ethical Review Board in Stockholm (2016/1425-31), and *Study II* was approved both by the Regional Ethical Review Board in Stockholm (2018/2213-32) and Stellenbosch University Health Research Ethics Committee (N18/10/131). Ethical considerations were continuously made during the course of the research and some major issues are discussed below.

First, participation in all studies was voluntary, and all participants were informed about their right to exit the study at any time without having to state why. All participants received written and oral information about the aim and scope of the study, the processes of data collection and the handling of personal information before giving their consent to participate. Before each interview and focus group, information about the study and data collection processes was reiterated and participants were encouraged to pose any questions they might have had. The participants in *Study II* were also informed about the storage and sharing of

data between institutions, for which they were asked to give their explicit consent. Furthermore, a data transfer agreement was formulated between the universities to ensure the protection of personal data.

When recruiting participants, considerations were made to safeguard everyone's right to choose whether to take part. For *Study II*, this was largely achieved by inviting participants by e-mail, which offered a simple way to decline by not responding to the e-mail. However, this recruitment strategy was complimented at the South African study site by asking the participants of a master's programme. This was done, by me, face-to-face after a lecture, and while I had no previous relationship with the participants and was not involved in the master's programme, I acknowledge the potential difficulty that these individuals might have experienced should they have wished to decline participation. For this reason, I followed up by e-mail where these individuals received written information about the study and the informed consent form, asking whether they still wanted to participate. For *Studies I, III and IV*, I invited the participants during the first programme session, where I presented the study before all programme attendees who also received written information and an informed consent form. They were informed that those teaching in the faculty development programme were part of the researcher group and would be involved in the data collection. For this reason, I invited all participants (as I was not involved in designing or offering the faculty development programme), and they were thoroughly informed that the aim of study was not to evaluate their participation in the programme as well as about their right to decline.

During transcription, all data were pseudonymised, meaning that personal information, such as name, profession and workplace, was removed and replaced by codes. The coding sheet was stored safely, and could only be accessed by myself. The findings were presented at the group level, and careful considerations were made when reporting the results so as to ensure not to include any sensitive information that could potentially risk the confidentiality and anonymity of the participants. This implied a (sometimes) difficult balancing act between offering readers a valuable contextual understanding and preserving participants' anonymity, aiming to always give precedence to the latter.

The ethical dimensions of the research interview require a special note as interviews are a specific form of conversation, with inherent power dynamics between the interviewer and the interviewee (Kvale, 2006). The interviewer rules the interview by deciding on the topic, posing the questions and choosing when to move on from one topic to another. Further, the interview includes only one-way questioning and serves as an instrument for the researcher to gather information about the research interests (Kvale, 2006). In this research, the interview guides focused on broad and open-ended questions where participants were given time to expand on their answers and perspectives. They were repeatedly informed about the study and its purposes, and when requested, the interview guide was shared with participants prior to data collection. For all four studies, participants were informed that the purpose was to explore their experiences of broader aspects of the development of teaching and learning in clinical workplaces – not to assess their teaching. Furthermore, power dynamics can also

concern issues such as gender, age, education and profession. In terms of professional experience and age, all participants were more senior than I. This implies that while the power hierarchy privileged me through my role as researcher, in other ways, I may have held a less powerful position in relation to the participants, illustrating the complexity of power dynamics in interviews.



## **6 FINDINGS**

The main aim of this thesis was to explore faculty development and educational change in clinical settings, which was explored through four empirical studies. The findings from these studies are summarised below.

### **6.1 STUDY I**

This study focused on clinical educators' engagement in faculty development from an activity theoretical perspective. The findings demonstrate that the engagement was contested due to a contradiction between the activities of an academic hospital, where clinical work and research were prioritised over education. The participants struggled to balance their conflicting roles as teachers, clinicians and sometimes researchers, and because of the lack of time and resources, they were left with little room to engage in education generally and educational development specifically.

The contradiction manifested in a number of ways, with implications for teaching. For example, it was visible through the misalignment between the espoused and enacted values of the hospital. Teaching was described as an integral and important task when working in an academic hospital, something that was also communicated from management. However, participants described a lack of support and buy-in from management, that teachers or other educational representatives were missing from management boards, that the responsibility for education had been fully delegated to clinical educators, and that acknowledgement for educational work remained wanting. Further, participants described educational discussions as an important source of reflection and support. However, formal arenas for such discussions were lacking within the workplace, limiting the opportunities to discuss and create a common agenda around teaching and learning within the clinical community. Also, the low priority assigned to education was reflected in the division of labour and staffing of educational roles, where roles were sometimes allocated to individuals rather than people applying for them. Assignments were also oftentimes limited to one or two years, which limited continuity and the opportunities for prolonged engagement in educational work.

In sum, this study proposed that clinical educators' priorities are negotiated in relation to the priorities of the academic hospital, where the activity of education constitutes a marginalised task, thus implying that their engagement in teaching and the development thereof is subject to challenges and constant negotiations. In other words, one conclusion is that the contradiction between education and the other activities of an academic hospital limits clinical educator's opportunities to work with development of teaching.

### **6.2 STUDY II**

Study II took the perspective of clinical educators who had participated in several faculty development programmes at two study sites. Focusing on participants' experiences of working with educational change in their clinical workplaces beyond the individual level, the

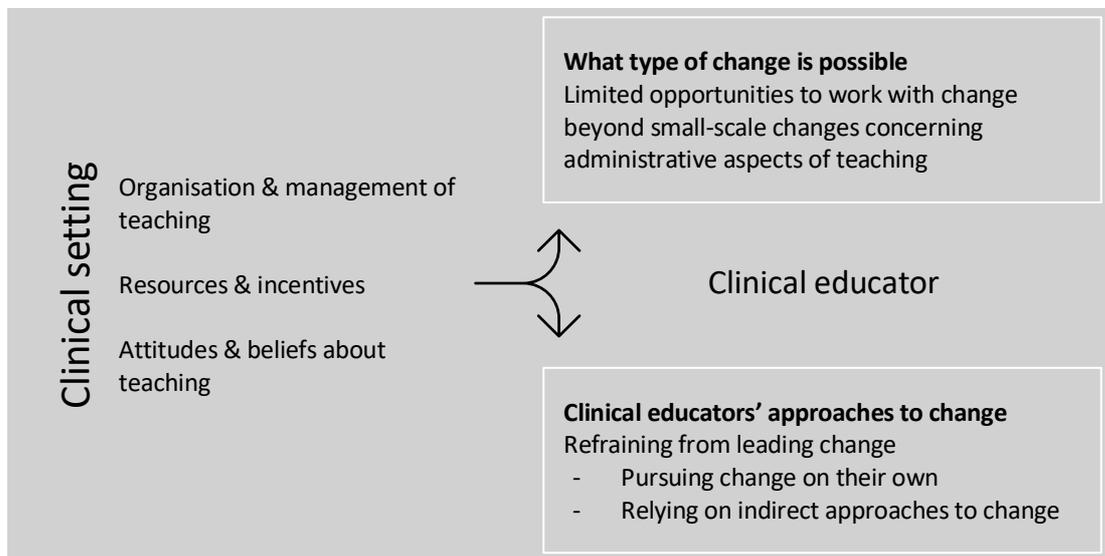
findings show that clinical settings influence both what kind of change is possible and how clinical educators approach change. While we searched for differences between the study sites, these were few and minor in relation to the study aim, and so the findings are presented below under three themes which corresponds to both study sites.

First, the participants described *limited opportunities to work with educational change in the clinical workplace* and distinguished between working with change in a university setting, which was perceived as manageable, and working with change in a clinical context, which was described as more challenging. While they were able to change administrative aspects of the formal curriculum, such as scheduling, the participants struggled to work with change that required wider engagement within the clinical community. With respect to this, they reasoned that major cultural and organisational change, such as changing the values and norms as well as financial policies within the clinical workplace, needed to take place at the system level before they could work with educational change in their workplaces.

The second theme, *refraining from leading change* – with the sub-themes *pursuing change on their own* and *relying on indirect approaches to change* – demonstrates the participants' approaches to change where they did not actively enter the role of change agent and did not consider themselves to be leaders of change within their departments. For example, they described several instances where they had refrained from pursuing change initiatives, despite having identified problems in the teaching practices within the workplace. They described working with change in isolation and seldom involved clinical colleagues in their change efforts. When they did, it was only to a minimal extent, thus *pursuing change on their own*. Also, the participants relied on what we understood as more *indirect approaches to change*, such as hoping that colleagues would be inspired by watching them teach or sharing educational knowledge at department meetings, striving for colleagues to take note, yet, at the same time doubting that it would bring any change their colleagues' teaching behaviour.

The last theme, *workplace aspects hindering educational change work*, describes the contextual aspects – such as rules, norms and ways of working – that the participants experienced as influencing their approaches to change and limiting their opportunities to work with change. More specifically, *the organisation and management of teaching*, where the participants had limited access to traditional means of power, while management often did not focus on educational development, implied that they experienced a lack of authority and support to work with educational change. Further, *resources and incentives* for education and educational change work were limited, and coupled with competing priorities between education and clinical service, this implied that there was a lack of space, resources and incentives for educational work. Lastly, *attitudes and beliefs about teaching in the clinical community*, where management and colleagues were described as inattentive to teaching and lacking understanding of education as a science or skill to be developed, contributed to a lack of shared commitment and involvement in teaching within the clinical community. In sum, these contextual aspects resulted in limited space and capacity to work with educational change and difficulties creating engagement within the clinical community. This contributed

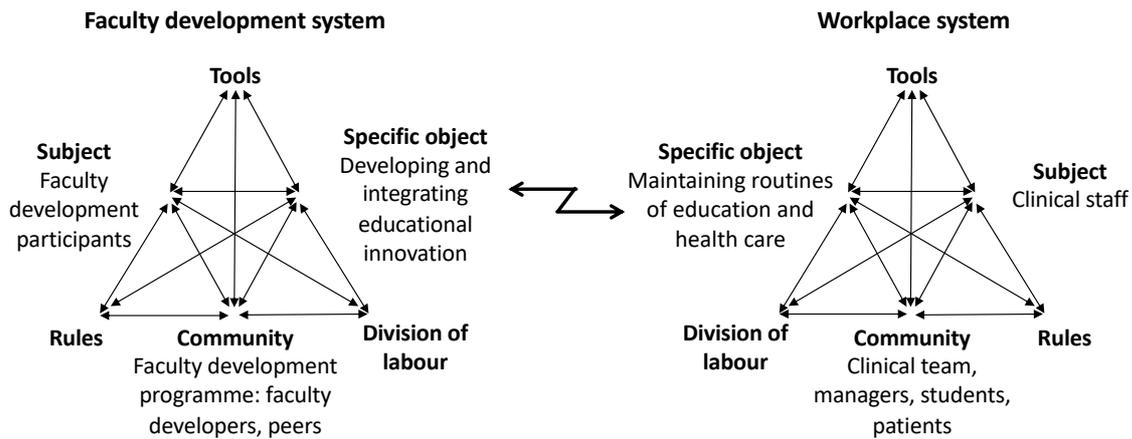
to the participants experiencing limited opportunities to work with educational change beyond the individual level, and rather pursued change on their own or relied on more indirect approaches to change, as illustrated in Figure 5.



**Figure 5.** Clinical educators educational change practices in relation to workplace aspects.

### 6.3 STUDY III

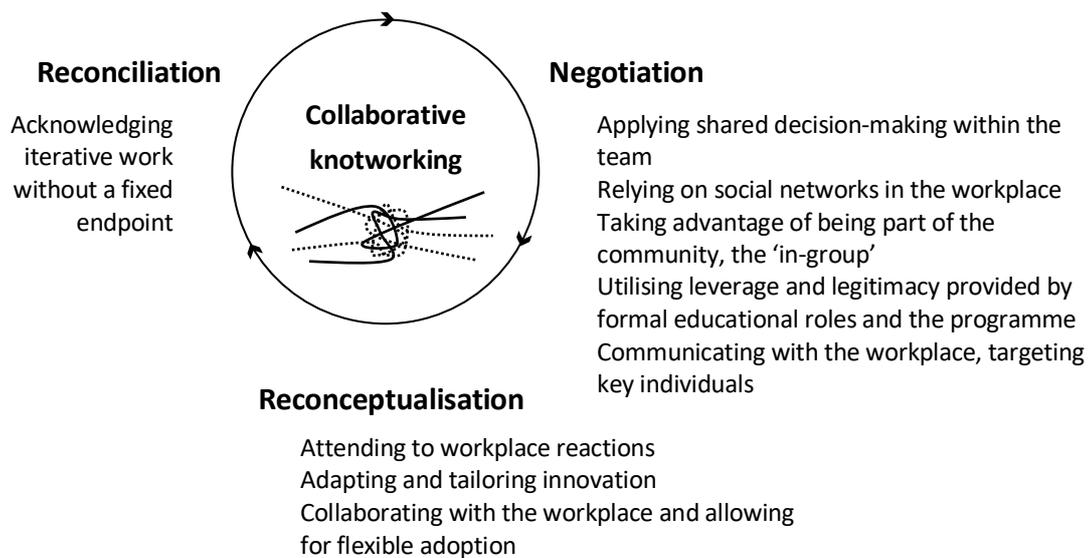
This study focused on change work in relation to faculty development by exploring how the participants of a faculty development programme worked to integrate educational innovations created within the programme into their clinical workplaces. Through the use of activity theory, we identified two systems involved in the integration of the innovation: the faculty development system and the workplace system (Figure 6). In the faculty development system, the programme participants acted as subjects, and in the workplace system, clinical staff acted as subjects. The programme participants worked towards the object of developing and integrating their innovation and as the innovation was introduced in the workplace, the object of clinical staff appeared to be to maintain functioning routines and practices. As such, a contradiction arose between the systems, which was reflected in resistance and questioning among staff. The study further showed how the two systems came together in interaction to overcome the contradiction, which we conceptualised as three integrated and iterative processes – *negotiation*, *reconceptualisation* and *reconciliation*.



**Figure 6.** The two activity systems involved in the integration of educational innovations with a contradiction between them (zigzag arrow) (adapted from Elmberger et al., 2020, p. 6).

Participants described *negotiating* a mandate for change using a number of strategies (listed in Figure 7). In terms of *reconceptualisation*, this implied that the evolving innovations were changed and tailored in response to reactions among workplace staff, aiming for the innovations to become an accepted part of the daily work. This work was not reserved to the faculty development participants alone but could also be performed by workplace staff who could adapt their use of the innovation. While the process was iterative and ongoing without a defined end, the participants gave voice to a state of equilibria between the systems when the innovation was in use, which we termed *reconciliation* to illustrate how the initially contradicting objects between the systems had been reconciled.

The concept of knotworking (Engestrom, 2000; Fenwick, 2007) was used to further illustrate and discuss the interaction we had identified between the systems. In knotworking, the interaction between systems is seen as an activity in itself, ‘the knot’, and the systems contribute with threads (constituted by practices, actors and elements of each system), highlighting the collaborative nature of negotiation, reconceptualisation and reconciliation where both systems played an active role. Another central idea relating to knotworking is that of ‘pulsations’, where the knot is loosened and tightened, untied and re-tied continuously as the interaction is ongoing, illustrating the iterative nature of the processes we identified. Figure 7 presents an overview of the iterative processes and what they included.



**Figure 7.** Collaborative knotworking and its iterative processes of negotiation, reconceptualisation and reconciliation (adapted from Elmberger et al., 2020, p. 10).

## 6.4 STUDY IV

*Study IV* explored what aspects of a faculty development programme supported participants in working with educational change in practice. We identified four key features, summarised in figure 8.

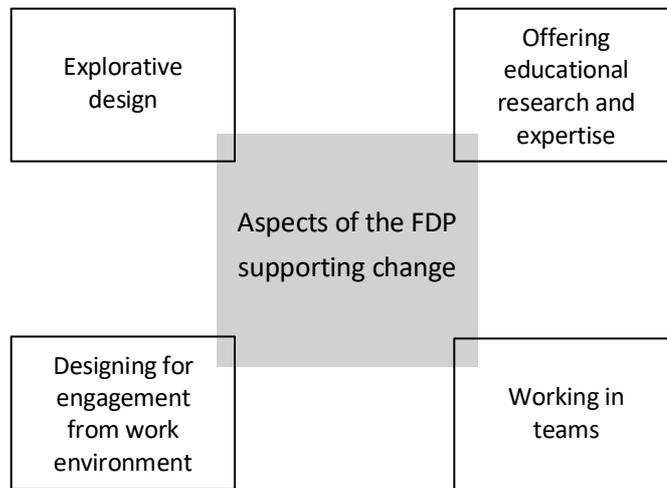
The first was the *explorative design of the programme*, where the focus on designing and developing an innovation was important to participants in relation to working with change in their workplaces. Also, the programme was based on a longitudinal and stepwise approach where time was provided during programme days, enabling a safe space for experimentation and reflection and the development and integration of the innovation.

The second aspect was that the *availability of educational research and expertise* enabled the participants to try new things while feeling supported, and also facilitated trust and legitimacy in the clinical community as innovations had been anchored in research and theory.

The third aspect, *working in teams*, was important for a number of reasons. It provided different perspectives on the innovation and the problem it was designed to target and, thus, enabled critical discussions as the participants was working to develop the innovation. It also facilitated the integration phase by providing a broader network in the community as well as offering support within the team.

Finally, *engagement and support from the work environment* was beneficial to the integration of the innovation. The programme had aimed for this by encouraging teams to actively invite

reflections and feedback from peers at an early stage, and by inviting managers to the last programme day when the teams were to present their innovations and the working processes behind them.



**Figure 8.** Key aspects of the faculty development programme (FDP) in supporting participants' change work.





## 7 DISCUSSION

This thesis explored faculty development and educational change in clinical settings. To do so, four studies were conducted which contributed complimentary insights into the phenomenon. To briefly summarise, *Study I* adopted an activity theoretical perspective and explored the influence of clinical workplaces on clinical educators' engagement in faculty development. *Study II* addressed the experiences of working with educational change among clinical educators who had undergone faculty development training. In *Study III*, activity theory was again applied to explore clinical educators' change work by studying how they integrated educational innovations developed within a specific faculty development programme into their workplaces. *Study IV* addressed what aspects of a faculty development programme had supported participants in working with educational change in practice.

Together, the four studies offer insights into the practice of educational change and faculty development within clinical settings and contribute a number of significant findings. First, what stood out was the tension between the activities of education, research and clinical service and the implications for faculty development and educational change. This was evident in *Study I*, which found that clinical educators' engagement in education and the development thereof was contested due to the contradictions between the activities of an academic hospital, where teaching and other educational activities were afforded less value. It is evident that this tension also permeated the findings from *Study II*, which suggested that the low priority afforded teaching limited the opportunities for clinical educators to work with educational change.

Second, the findings illustrate *what*, and may also offer some explanations as to *how*, aspects in the clinical workplace influence educational change practices. In large, many of these aspects constitute manifestations of the overall tension and hierarchy between the activities, and relate to the organisation of teaching, the resources available for teaching and the attitudes and beliefs around teaching within clinical settings.

Third, the findings highlight educational change as contextual, dynamic and collaborative. While *Study II* focused on experiences of educational change in general, illustrating the prominent influences from the clinical workplace, its findings were complimented by *Study III*, which focused on educators' experiences of integrating innovations developed within a faculty development programme into the clinical workplace. This study portrays innovations not as fixed objects to be transferred from the programme into clinical workplaces but as entities that are transformed as they are integrated into workplace practices through collaborative knotworking.

Lastly, summarising the findings from all four studies, and especially from *Study IV*, a number of key features of faculty development activities can be identified, which may benefit participants in working with change of teaching practices within their workplaces.

In the following sections, these main findings will be addressed together with a discussion of how they relate to and extends previous research and theory. The focus is on what the empirical studies may tell us about faculty development and educational change in clinical settings and how the findings can potentially inform theories of change and future faculty development in order to contribute to the improvement of clinical education. The discussion is structured around three key questions:

- What are the challenges to educational change and development in clinical settings?
- What do the studies tell us about how educational change may come about following faculty development?
- How can this research inform future faculty development in order to facilitate educational change in practice?

These questions are addressed in three sections below, followed by methodological and theoretical considerations, before the chapter ends with conclusions and implications.

## **7.1 CHALLENGES TO EDUCATIONAL CHANGE AND DEVELOPMENT IN CLINICAL SETTINGS**

What clearly stood out from *Studies I* and *II* was the tension between teaching, clinical service, and, to a lesser extent, research. In light of competing priorities with never-ending demands from clinical service, education appeared to be afforded a lower priority and less value compared to other activities. This was reflected in the norms, rules and ways of working within clinical settings and the attitudes and assumptions about teaching and learning within clinical communities, with a number of features being exemplified in the two studies. The tension between teaching and other activities has been described before, so have several of the workplace features, both within higher education in general and in healthcare professions education (Cantillon et al., 2016; Clavert et al., 2015; Houston & Hood, 2017; Jääskelä et al., 2017; McGrath et al., 2019; Stenfors-Hayes et al., 2010; Van Schalkwyk et al., 2015). As such, these findings are not to be considered or understood as unique; rather, the coherence with previous research offers credibility to the findings, something that the multi-institutional design of *Study II* also contributes with. However, what the findings do add to previous research is that they suggest how the tension between activities and its related workplace aspects influence educational change work in different yet interconnected ways, a point to which we now turn.

To begin with, both *Studies I* and *II* suggest that the overall contradiction between activities and its interconnected manifestations in the workplace impede teachers' opportunities to engage in faculty development and work with educational change. This corresponds with previous research suggesting that possibilities for development and change are limited and that initiatives have little chance of succeeding in settings where teaching is afforded a low status and does not align with the core priorities of the organisation (Cantillon et al., 2016; Clavert et al., 2015; Jääskelä et al., 2017; McRoy & Gibbs, 2009; Stenfors-Hayes et al., 2010). Rather, the studies included in this thesis, like others (e.g. Bank et al., 2019; McGrath,

2020; Van Schalkwyk et al., 2015), suggest that teachers' opportunities to work with change and the probability that a change initiative or innovation is accepted and incorporated into practice is influenced by the setting, its norms, values and structure. This relation between the clinical workplace and opportunities for change may be more or less obvious and direct. For example, the issue of time, which is negotiated in relation to the priorities of the workplace and, thus, distributed unevenly between activities as shown in *Study I*, seems to constitute a central problem for teachers in terms of engaging in faculty development and change efforts (Cantillon et al., 2016; Houston & Hood, 2017; Jääskelä et al., 2017; Kim et al., 2021; Van Schalkwyk et al., 2015). First, it means that teachers themselves struggle to find protected time for education, particularly for developmental work (*Studies I and II*). Second, it implies that colleagues and clinical staff lack time to engage in change initiatives (*Study II*). Another example described by the participants was that of incentives and recognition for educational work, which when missing, implies that faculty development and educational change work are not prioritised within the community and that, rather, people invest their time and effort elsewhere, as shown also in other studies (Cantillon et al., 2016; Houston & Hood, 2017; Jääskelä et al., 2017; Kim et al., 2021; Van Schalkwyk et al., 2015). Furthermore, the transient nature of educational employments implies limited opportunity to work to develop teaching in the long term.

Moreover, the issue of insufficient leadership and change agency as noted in this thesis deserves some consideration. Traditionally within higher education, the term change agent has been used to refer to individuals with official status as developers or change managers, but there have been suggestions towards broadening the concept to 'all pedagogically aware academics' (Clavert et al., 2015, p. 253), which would include the participants in this thesis. While the findings suggested that participants relied on indirect approaches to change, such as inspiration and sharing of knowledge, which indeed qualify as change agents' practices (Clavert et al., 2015), participants in *Study I* and especially *Study II* gave voice to not identifying with the role of being a change agent. Further, they tended to work with change on their own and seemed to refrain or shy away from practices that are often considered key to pedagogical change agency and leadership, such as leading and facilitating change within the community and forming networks for social support and mentoring (Bolander Laksov & Tomson, 2017; Clavert et al., 2015; Fields et al., 2019). Thus, the studies suggest that the participating clinical educators did not fulfil the role of change agent or educational leader, neither did they seem to view themselves as such.

This lack of agency and leadership, I argue, partly relates to the context in which clinical educators act, and, in essence, to the low priority and status afforded teaching within clinical settings. To begin with, research shows that teachers' identities and practices are negotiated in relation to their understanding of what the organisation values and prioritises (Cantillon et al., 2016; Roxå & Mårtensson, 2009; Trowler et al., 2005; Trowler & Cooper, 2002), suggesting that clinical educators may refrain from identifying as leaders or agents of educational change as this does not align with the goals of clinical settings. Moreover, this is further complicated by the individualistic nature of teaching, which was described by

participants in our studies as a private affair for which individual clinicians were themselves responsible. This aligns with previous studies suggesting that academic work is characterised by independency and that higher education settings and medical professionals favour autonomy, loyalty and consensual decision-making and disapprove of criticism and giving orders (Bank et al., 2019; Clavert et al., 2015; McRoy & Gibbs, 2009; Witman et al., 2011). As educational change initiatives might not align with the interests and priorities of many healthcare professionals, as suggested in this thesis, educational change work requires that educators negotiate and divert from such professional norms. In activity theoretical terms, this can be understood from the perspective of the activity system in which the rules, norms and regulations of clinical communities (e.g. favouring autonomy) and the division of power and work (e.g. teaching is performed individually) limit clinical educators' opportunities and abilities to work towards the object of educational change. As such, activity theory emphasises that an individual's opportunity to work with educational change does not only relate to that individual, their motivation and interest, but also to the system of which they are part.

Furthermore, other important aspects related to change agency and leadership are mandate and legitimacy. A common denomination is that between formal and informal mandates. A formal mandate is given to individuals by the organisation and can be connected to an assignment or role, and an informal mandate is that acquired by individuals through their interactions with the people they work with (Clavert et al., 2015; Mårtensson & Roxå, 2016). Both types of mandates are important in educational change work (Mårtensson & Roxå, 2016), and research indicates that they are required for brokering and mediating different perspectives in a workgroup (Clavert et al., 2015). This appears especially integral to change practices within higher education and health care where change has been described as being heavily reliant on consensus and voluntarism (Bank et al., 2019; Clavert et al., 2015; McGrath et al., 2019; McRoy & Gibbs, 2009; Onyura et al., 2017). Problematically, while the participants in our studies were appointed to educational positions including responsibility for the clinical education of students, they reported a lack of formal mandate to conduct change beyond administrative issues, such as scheduling. In addition, they described a lack of managerial support and that teachers or other educational representatives were absent from decision-making organs in clinical departments. Furthermore, the participants struggled to attain informal legitimacy and mandate to develop teaching within their communities due to the lack of priority and interest for teaching within the community. Coupled with few educational discussions, opportunities to promote joint engagement for education within the community were limited. This has been confirmed in other studies where academics have reported a lack of both formal and informal mandate and experienced challenges in creating alignment within the community (Clavert et al., 2015; McGrath et al., 2019). Consequently, when the organisation and management of teaching, the attitudes and beliefs around teaching and the incentives for teaching all reflect teaching as an activity of low priority and value, and when clinical educators lack mandate and legitimacy, then, naturally, consensus and shared goals will prove difficult for them to achieve. Rather, here and elsewhere (Clavert et al.,

2015), educators have noted that they have to remain sensitive and subtle when discussing educational issues with their community, thus risking that the scope of educational innovation and reform remains limited.

Consequently, the findings challenge notions of change where individual agency takes precedence over context and structure. Instead, based on the findings and the line of thought presented above, I concur with others (Jääskelä et al., 2017; Mårtensson & Roxå, 2016; McGrath, 2017; Roxå et al., 2011; Trowler et al., 2005; Trowler & Bamber, 2005) in suggesting that agency and social and organisational structures are not separate entities; rather, they are always in complex interplay. This aligns well with the basic tenets of activity theory where individuals and their actions are seen as part of social and cultural systems. From this perspective, individual agency is negotiated in relation to the system and its elements (Varpio et al., 2017), and therefore, the values, norms and priorities of clinical settings can partly explain why the educators in *Study II* refrained from actively leading change in the activity of others. This also support previous literature suggesting that teachers are part of local workgroups where set norms, meanings and ways of doing things work to preserve practice, thus limiting teachers' opportunities to implement change (Roxå et al., 2011; Trowler et al., 2005; Trowler & Cooper, 2002). In other words, individuals are not truly free agents, and agency is not something that resides completely within them, rather, the findings suggest that teachers' choices and actions are negotiated in relation to the settings in which they act. Similarly, the findings also support socio-cultural understandings of leadership as a phenomenon influenced by social, cultural and structural factors, where it is developed in interaction between the individual and their social setting (Fields et al., 2019; Mårtensson & Roxå, 2016; McGrath, 2017), and not something that individuals 'possess' as part of a specific role.

In terms of faculty development, the findings offer insights into what can possibly be expected regarding its impact and change in clinical settings. We know that faculty development participants report personal benefits such as increased knowledge and skills (e.g. Steinert et al., 2016), but we know less about change in practice. In relation to this, the findings of *Study II* raise the question whether trained individuals can have a significant impact on the teaching and learning practices and culture within their workplaces. Importantly, this study included the perspectives of clinical educators from two different settings in different counties, which can suggest that educators also in other settings may experience difficulties working with change following faculty development. Further, the findings support previous arguments that individual teachers have limited ability to influence the practices of their local contexts, and that they are less likely to change their practices if the surrounding community fails to do so (Trowler et al., 2005; Trowler & Bamber, 2005; Trowler & Cooper, 2002; Webster-Wright, 2009). Thus, this suggests that the impact of courses and whether new knowledge is integrated into practice is dependent on the local culture and context (Bolander Laksov, 2019; McGrath, 2017; Trowler et al., 2005), and challenges the reliance on individuals which is so widespread within faculty development.

In sum, the findings suggest that the tension between different activities in clinical settings, where teaching and other educational activities constitutes marginalised tasks, may be detrimental to clinical educators' opportunities to work with educational development and change beyond the individual and administrative dimensions of teaching. It is further argued that educators' change agency and ability to act as educational leaders are shaped by and contested due to the structures and priorities of clinical settings. Put differently, the low priority and value afforded education may offer an explanation for why educational development and change is difficult in clinical settings.

## **7.2 COLLABORATIVE KNOTWORKING AS AN ALTERNATIVE TO EXPLAIN HOW CHANGE MAY COME ABOUT**

The process of change was specifically addressed in *Study III*, which focused on clinical educators' integration of educational innovations developed within a faculty development programme into their clinical workplaces. The findings align with the previous discussion in highlighting the contextual conditions for change, but they also extend the findings from *Studies I* and *II* in exemplifying how change may come about through dynamic and collaborative processes of negotiation, reconceptualisation and reconciliation. Notably, the faculty development programme was specifically aimed at supporting the participants in working with change, and the innovations in focus differ from more common faculty development outputs such as increased knowledge and skills or changed attitudes and approaches to teaching. Naturally, the following question then arises; are the findings valid for change in relation to more typical faculty development activities? I argue that they are, at least to some extent, and this will be elaborated upon in the following sections.

In particular, drawing on activity theory and its associated concept of knotworking (Engestrom, 2000; Fenwick, 2007), *Study III* highlighted three important aspects that can potentially inform our understanding of educational change in relation to faculty development. First, the findings add to previous research suggesting that workplace settings are an important factor in influencing change (Bank et al., 2019; De Rijdt et al., 2013; Englund et al., 2018; Kumar & Greenhill, 2016; Onyura et al., 2017), by illuminating such settings as participating actors. The knotworking metaphor illustrates how faculty development participants and workplace staff come together in interaction, working on a knot where each actor contributes with threads, symbolising that all are involved in the knotworking. It further illustrates the dynamic and iterative nature of change as the knot can be continuously worked on, as actors sometimes pull in different directions, tightening the knot, but also as the knot is sometimes loosened and untied (Engestrom, 2000). Thus, the concept of knotworking helps to emphasise the dynamic and interactive nature of change where both those working to achieve change and those affected by change are actively participating. In this way, knotworking offers important insights into the interaction between systems and emphasises the workplace as an active agent in adapting the intended change, while knowledge transfer or implementation theories tend to frame the workplace as a passive adopter (Greig et al., 2012) or even as a confounder interfering with smooth

implementation (May et al., 2016). This concept of collaborative knotworking, as advanced in *Study III*, is further supported by findings from *Studies I and II*, which stressed the influence of the workplace context on educators' opportunities to engage in faculty development and work with educational change.

Second, *Study III* offers insights into the ways in which workplace practices and structures are negotiated as part of the knotworking and that they are transformed as innovations are integrated into the workplace. This confirms previous research findings (Kerosuo & Engeström, 2003), and coheres with activity theoretical notions stipulating that all elements within a system are interconnected (Engeström, 1987). Accordingly, when a new element is introduced, whether it is a tool, a rule or a new way of working, it will collide with existing practices, creating contradictions and forcing the system to transform if the new element is to be incorporated (Fenwick, 2007; Kerosuo & Engeström, 2003). This suggests that contradictions, tensions and resistance are natural parts of change processes and from the perspective of activity theory, they are not only to be expected but are necessary for triggering change (Engeström, 1987, 2001; Greig et al., 2012). As such, the tension and resistance that arises in response to a change initiative do not necessarily constitute a deadlock, but as illustrated in *Study III*, it can trigger negotiation between systems and their actors. This process serves to mediate and align different perspectives and explore solutions to contradictions, which may allow practices to transform. The importance of resistance and negotiation for change has also been emphasised elsewhere as it enables the engagement of colleagues and the creation of mutual understandings (Kerosuo & Engeström, 2003; McGrath et al., 2016). In this way, activity theory emphasises the importance of tensions and the value of recognising, analysing and attending to them as they arise, rather than trying to prevent or eliminate them, as this may prove deterrent to change and transformation of practices (Engeström, 2001; Engeström & Sannino, 2010; Greig et al., 2012).

Third, the findings suggest that faculty development outputs are not fixed entities that can be transferred from one system (the faculty development programme) to another (the workplace). Aligning with previous research on educational change showing that initiatives and new educational policies are often adapted by teachers to the local contexts (Barman, 2015; Barman et al., 2014; Lisewski, 2021; McGrath et al., 2016), *Study III* showed how the innovations were altered and reconceptualised in relation to workplace structures and practices; they were transformed, not transferred. As knowledge and skills – the more usual faculty development outputs – are highly bound to and interpreted in relation to context (Trowler & Bamber, 2005; Webster-Wright, 2009), this finding feeds well into how individuals may go from a faculty development initiative, where they have gained knowledge and skills, back into their workplaces, where the new knowledge is supposed to come into practice. Here, the term transformation serves to explain and illustrate this process at the same time as it challenges the idea of transfer. The notion of transformation further feeds into activity theoretical perspectives by acknowledging that initiatives and interventions will be implemented in different ways in different systems as each system will respond with local solutions to emerging tensions (Engeström, 2001; Engeström & Sannino, 2010; Greig et al.,

2012). Again, this alludes to the limitation of understanding faculty development outputs as stable entities and change as something predictable and uniform.

These findings raise intriguing questions about the nature of educational change and how faculty development may contribute with change in practice. Offering empirical support to previous literature and criticism of the transfer concept (Gibbs, 2013; Jones et al., 2017; Trowler et al., 2005; Trowler & Bamber, 2005; Webster-Wright, 2009), the findings reject rational understandings of change that stipulate that faculty development can lead to changed teaching and learning practices in the workplace through linear and unidirectional transfer. Instead, the findings suggest that faculty development programmes cannot in and of themselves result in change in practice but can offer opportunities for change. As eloquently expressed by Onyura et al. (2017, p. 167), ‘it is people who, when exposed to programmes, activate certain mechanisms and create change, depending on their capacity and context’. *Study II* and, in particular, *Study III* emphasise the complexity of change processes, illustrating them as interactive, dynamic and influenced by local context, a point that simplified theories of transfer fail to recognise. Instead, on the basis of the findings presented here, I propose the concept of collaborative knotworking as a better alternative to explain or theorise change practices in relation to faculty development.

To summarise the above, collaborative knotworking illustrates three important aspects, all of which address some of the limitations regarding ideas of transfer. First, emphasising the *collaborative* in collaborative knotworking, it shows how faculty development participants, here clinical educators, and workplace staff form knots where they work together and where all actors (and their systems) are actively engaged and influential. The separation between those who are working to implement a change and the workplace, which is to ‘passively adopt the change’, is thus not supported in this perspective. What triggers this collaborative activity are the contradictions that arise as new initiatives are presented to existing workplace practices. This pertains to the second aspect illustrated by knotworking, namely that resistance and tensions are important for initiating knotworking, and that the knotworking enables different perspectives to be negotiated and aligned, reaching new mutual understandings. Through this, current workplace practices may be transformed. Therefore, this perspective acknowledges the importance of recognising and attending to tensions rather than understanding them as hinders for effective transfer and adoption that need to be controlled. Third, in models of linear transfer, the idea is to move stable knowledge entities or products from faculty development into clinical settings. However, from the perspective of collaborative knotworking, innovations and interventions are transformed through negotiation and reconceptualisation as they are being integrated into practice, and so one intervention could result in different outcomes in different contexts. In sum, the concept of collaborative knotworking shifts the focus from linear, unidirectional and ordered transfer, to illuminating educational change in relation to faculty development as a collaborative process where faculty development participants and their workplaces are actively engaged, and through which both faculty development outputs and workplace practices are transformed.

### **7.3 SUGGESTIONS TO FACILITATE EDUCATIONAL CHANGE IN PRACTICE**

To reiterate, the findings discussed above suggest that educators' agency and room for manoeuvre to change teaching practices beyond an individual level is contested due to the structures and culture of clinical settings, in which education is afforded low priority. At the same time, the findings offer insights into how educational change may take form in a specific situation, where the concept of collaborative knotworking is suggested to describe how change may unfold. Based on these findings and previous research, I have argued that the theories of change underpinning much of today's faculty development practices are inadequate as they rely on individual agency and linear transfer. Consequently, they may not be optimally supporting clinical educators in working with change in practice. As such, this points to the need to transform and advance current faculty development for it to be efficient at improving the teaching taking place in clinical settings. This feeds well into ongoing developments within the field as well as the recurrent suggestions to reform the practice of faculty development (Boud & Brew, 2013; Gibbs, 2013; Steinert et al., 2016; Webster-Wright, 2009). Drawing on the findings of this thesis, this section includes suggestions for what such reform can include, both in terms of rethinking conceptual underpinnings and also more practical suggestions that may inform the design of future faculty development activities.

#### **Rethinking conceptual underpinnings and the practice of faculty development**

First and foremost, from the previous discussion of the findings, we can conclude that traditional faculty development might have to rethink the conceptual ideas on which it is founded, as the individualistic focus on off-site activities based in theories of transfer appears insufficient in contributing with change in practice. Instead, the findings lend support to previous recommendations that activities should be based in theories of change where complexity and context are considered if they are to support participants in actualising their learning and improve teaching and learning in practice (McGrath, 2020; Trowler et al., 2005; Trowler & Bamber, 2005; Webster-Wright, 2009). While this recommendation is not new and while there are indications that such a development is already taking place, especially in higher education (Gibbs, 2013), the findings indicate that the recommendation is still highly relevant within faculty development in the health professions, a claim that has also been supported by others (Proctor et al., 2020; Steinert, 2017; Steinert et al., 2019).

In this thesis, I have suggested collaborative knotworking and transformation as alternatives to conceptualise change processes in relation to faculty development, and the findings have stressed the influence of the workplace setting. In terms of designing faculty development activities, such work could also draw on the more interventionistic features of activity theory such as the Change Laboratory and the expansive learning cycle, which offer frameworks to develop work practices (Engeström & Pyörälä, 2021; Engeström & Sannino, 2010; Morris et al., 2021; Skipper et al., 2021). This interventionist approach starts by analysing current practices and their inherent contradictions and then supports researchers and practitioners in

re-designing and testing new ways of working in order to transform practice (Engeström & Pyörälä, 2021; Morris et al., 2021). This approach aligns well with suggestions to situate faculty development within practice theories (Barman, 2015; Boud & Brew, 2013; McGrath, 2017; Strand, 2017). Such practice perspectives shift the focus of faculty development from individual teachers, their learning needs and the acquisition of knowledge and skills, to their practice and how that practice might be developed. It also advocates moving faculty development from decontextualised settings to the workplace of participants, thereby locating it in practice (Boud & Brew, 2013; Strand, 2017).

In sum, I propose that if faculty development is to achieve the goal of improving teaching in practice, it ought to be founded on well-considered and -articulated theories of change that move beyond ideas of knowledge transfer. Here, collaborative knotworking is suggested as valuable food for thought when advancing current faculty development, and the Change Laboratory and practice theory are put forward as alternatives for informing the design of future activities. Nevertheless, no matter what framework or theory is chosen in a specific situation, the fundamental recommendation is that we rethink what faculty development is and can be. In line with the findings from *Studies III* and *IV*, and as others have pointed out (Boud & Brew, 2013; Clavert et al., 2015; Onyura et al., 2017; Steinert et al., 2016; Thomas & Steinert, 2014), we can and should shift from understanding faculty development as arenas for content delivery, where participants gain new knowledge and skills related to teaching and learning, to also considering it as arenas where it is possible to stimulate and support change in teaching and learning practices.

### **Supporting participants' change work**

Related to the above, faculty development activities should offer support and guidance on change theories, strategies and practices in order to prepare participants for the work to be done in their workplaces. Furthermore, aligning with the influence of the workplace context on educational change as emphasised in this thesis and elsewhere (Barman, 2015; McGrath, 2017; Onyura et al., 2017; Van Schalkwyk et al., 2015), it is important that faculty developers understand the context in which participants work in order to support them in their change work (Cilliers & Tekian, 2016; Lisewski, 2021). This includes being aware of the challenges and opportunities for faculty development and understanding the workplace structures that may or may not afford participants room for manoeuvre, insights that the findings of this thesis hopefully can contribute with. Such well-founded programmes and initiatives, where change practice is made an explicit part of the content and where faculty developers are knowledgeable about the workplace context, could hopefully assist participants in working with educational change in practice.

### **Longitudinal design and inquiry-based approaches**

The findings from *Study IV* suggested that the longitudinal design of the faculty development programme and the focus on problem-solving through innovation and projects facilitated participants' change work. This coheres with previous findings and suggestions that faculty

development should include inquiry-based approaches that depart from real-life problems in the practices of participating teachers (Boud & Brew, 2013; Jääskelä et al., 2017; Mårtensson & Roxå, 2016; McGrath, 2017; Stensaker, 2018). This includes allowing teachers themselves to identify the problems to be targeted, including the specific aims of the developmental effort, while being supported by faculty developers and their educational expertise. Not only does this enable change initiatives to be designed in relation to the local practices of teachers, but it also supports learning through creation and collaboration which speaks to the third metaphor of learning (Karlgrén et al., 2020; Paavola & Hakkarainen, 2005). In Chapter 2, two metaphors of learning (Sfard, 1998) were described. To reiterate, the acquisition metaphor understands learning as acquiring and accumulating transferable knowledge and is something that takes place inside an individual's mind. The participation metaphor highlights learning as an interactive process where individuals participate in practice (Baker et al., 2021). The third metaphor of learning – the knowledge creation metaphor – has been proposed to complement these (Karlgrén et al., 2020; Paavola & Hakkarainen, 2005). This perspective focuses on innovative aspects of learning and how individuals in interaction with others develop both conceptual and material artefacts. Thus, it focuses on collaboration between people and how common objects and practices are developed through that collaboration. Such a perspective on learning might prove useful in future faculty development as it highlights learning based in inquiry and supports people to work with solving authentic problems that are relevant to their own practice (Karlgrén et al., 2020; Paavola & Hakkarainen, 2005). Furthermore, faculty development initiatives based in this perspective on learning may offer interesting opportunities for future research.

Moreover, *Study IV* suggested that the longitudinal design of the programme offered time and a safe space for reflection and experimentation, which have been deemed important also elsewhere (Cilliers & Tekian, 2016). Through a longitudinal design that includes the implementation or integration phase, participants have the opportunity to practice working with change within the supportive frames of a programme. Such a design affords participants knowledge about teaching and learning that is pertinent to their practice while also offering valuable skills and experiences from working with change, which may facilitate them in continuing such change work also outside defined programmes. Notably, longitudinal programme designs have previously been reported as contributing to broader and better sustained changes (Steinert et al., 2016).

### **Focusing on teams**

*Study IV* found that an important aspect in supporting faculty development participants to work with educational change was the focus on teams. As such, one recommendation would be to move our focus in faculty development from individual educators to teams or workgroups, a point previously suggested by others (Bolander Laksov, 2019; McGrath, 2020; Söderhjelm et al., 2018; Steinert, 2010). This aligns both with activity theoretical perspectives, the knowledge creation metaphor and its focus on learning through collaboration (Karlgrén et al., 2020; Paavola & Hakkarainen, 2005), and previous literature

suggesting that it is systems and communities that create and sustain the norms, rules and culture around teaching and that individuals have limited ability to influence the assumptions and practice within a community (e.g. Lisewski, 2021; Mårtensson et al., 2014; Trowler & Cooper, 2002). Moreover, focusing on groups of colleagues would support the creation of communities of educators and subsequently encourage educational discussions within clinical workplaces, a finding that has been suggested, both here and elsewhere, as important for negotiation and creating shared understandings and impetus for change (Irby & O’Sullivan, 2018; McGrath et al., 2016, 2019; Pleschová et al., 2021).

Additionally, as emphasised in *Studies III* and *IV*, working with educational change in a team offers support within the team, makes implementation a collective act and increases legitimacy and mandate, which were found to be lacking in *Study II*. Relatedly, one might perhaps also consider designing programmes that stimulate management support and engagement, which was perceived as beneficial by the participants in *Study IV*. This could help in addressing important issues of mandate and priority and aid in legitimising faculty development within the clinical community (Fields et al., 2019; Jääskelä et al., 2017).

### **Addressing the workplace system**

Following the above suggestions to advance faculty development will likely only have partial effect in terms of enhancing educational change in practice, if the systems in which clinical educators work and where teaching ultimately unfolds are not also addressed. As shown in this thesis, clinical educators’ opportunities for working with development and change are influenced by the clinical setting in important ways, and so initiatives aimed at faculty development are suggested to be accompanied by actions targeting these settings. In particular, as found in *Studies I* and *II*, the low priority and value afforded teaching in clinical settings, which manifests in the organisational structures and cultures, challenges faculty development and educational change. While it may be tempting to jump to the conclusion that we thus should increase the value and status of teaching, the ways through which this might be achieved are less obvious and straightforward. Yet, based on the findings of this thesis, some suggestions can be made.

One way through which the low status afforded teaching could be targeted is the reward system within clinical workplaces. *Studies I* and *II* suggested that reward systems are currently meriting clinical service and research over teaching, which has also been indicated elsewhere (Irby & O’Sullivan, 2018; Stenfors-Hayes et al., 2010). Together with others (Irby & O’Sullivan, 2018), I argue that we must work towards a situation where teaching and the development thereof is valued and acknowledged as important by having clear reward structures and incentives for those engaging in such work. This includes establishing distinct career trajectories for teachers within clinical settings, where it is possible to pursue a career as a clinical educator in similarity to one as a clinical researcher and where faculty development is reflected in promotion structures. In *Study I*, it was noted that the transient nature of educational positions, which often rotated between staff members, limited continuity and the opportunity for long-term development and change, reflecting the

difficulties for clinical educators in advancing along an educational career path. Here, I also wish to stress the importance of ensuring that engaged teachers remain within the context of clinical settings and that it is here that they can build a career as educators. Thus, we need to provide incentives so that they do not leave clinical settings to work full time in universities, which would imply that we lose individuals with highly valuable knowledge and experience. As such, the importance of *clinical* in clinical educator cannot be underestimated. Some positive developments with regards to educational career trajectories have been noted (Irby & O'Sullivan, 2018) and, for example, more regions in Sweden are now beginning to offer educational internships for junior doctors where clinical work is combined with teaching and scholarly work within health professions education (Ström, 2021).

Another key point is that clinical educators appear to lack due mandate and legitimacy to work with change (*Study II*), which appears to be a central issue for educators also in other contexts (Clavert et al., 2015; Mårtensson & Roxå, 2016; McGrath et al., 2019). In part, an appointment as a clinical educator should follow with mandate to develop aspects of teaching outside administrative dimensions, and educational representatives should be included in management boards in clinical departments. Further, in relation to resource allocation, adding more time aimed at promoting development is probably insufficient, as it risks that time will again be distributed unevenly between activities due to the contradictions between them, as noted in *Study I*. At the same time, participants in *Study II* described having to rely on spare time for educational change work; thus, it appears reasonable to suggest that staff be allowed to take part in faculty development during worktime and that they are freed from clinical service to allow them due time to work with development and change outside programmes. However, allotting time may need to be accompanied by supplementary efforts addressing policies, including finances, to ensure that the engagement in the development of teaching is encouraged, as suggested elsewhere (Barman, 2015; Jääskelä et al., 2017).

Lastly, the findings support previous literature (Bolander Laksov, 2019; Jääskelä et al., 2017; Pleschová et al., 2021; Roxå & Mårtensson, 2009; Steinert, 2012) in emphasising the importance of educational discussions to enable collective learning and development within the workplace. Therefore, the focus on teams within faculty development to support the creation of communities of educators could be complimented by workplace efforts to ensure that such communities endure and continue to develop also after programmes. This could be achieved, in part, by safeguarding and promoting arenas for educational discussions among clinical educators, as suggested in *Study I*, and could include offering spaces in the workplace where clinicians can talk about teaching (Pleschová et al., 2021). These communities and educational conversations could offer opportunities for informal faculty development and the professional learning that takes place in the workplace as clinicians develop their teaching through experience and collaboration with each other (Cantillon et al., 2021; Irby & O'Sullivan, 2018; Steinert et al., 2016). How such learning can best be supported will have to be the focus of future research.

Summing up, clinical supervisors and educators have been recognised as fundamental to the clinical education in the health professions. However, they face a number of challenges in providing high-quality teaching, and faculty development has been championed as key to supporting teachers and enhancing the quality of clinical teaching – ultimately aiming to improve patient care. As suggested earlier, the practice of faculty development may need rethinking if it is to achieve this goal. However, advancing current faculty development is complex as there are no clear-cut answers as to how this should be done. Similarly, increasing the value and priority of teaching within clinical settings, and changing the organisational structures that both uphold the hierarchies between different activities, while also being a result of them, constitutes a very complex task. Nevertheless, efforts to do so are important to ensure that faculty development supports clinical teachers in working with change in practice and to enhance the clinical education of our future health professionals. This thesis has provided some important insights which can inform this work and hopefully contribute to tying the knot between faculty development and educational change.

#### **7.4 METHODOLOGICAL CONSIDERATIONS**

This thesis explored faculty development and educational change from the perspective of clinical educators. As such, it can be criticised for adopting a mono-level, mono-perspective approach to very complex issues. However, it was considered important to explore this phenomenon from the perspective of those with first-hand experience. In many cases, it is these individuals who participate in faculty development activities, constituting the embodied link between such activities and the workplace, and so it is they who initiate change in practice.

The present approach implies, however, that the perspectives of managers and colleagues in the workplace were not investigated, which can be considered a limitation, especially as the findings emphasised the interactive nature of knotworking, and the issues of leadership, agency and mandate. A related concern pertains to the triangulation of data sources, which is a highly regarded practice in the case study approach (Cleland et al., 2021). Lacking such data triangulation implies that the research does not cohere strictly or consistently to the case study methodology and is noted as a limitation. One of the many crossroads faced during this research was deciding whether to continue researching the specific programme on which *Studies I, III and IV* built. This would have included exploring the use of innovations developed in the programme and their impact on student learning at each workplace, using observations and interviews with students, clinicians and managers, and, thus, striving for data triangulation and allowing in-depth understandings of the workplace context and its influence on the use of innovations. The other alternative was to go beyond the specific programme to study other contexts. Due to feasibility, both alternatives could not be pursued. The latter was chosen because of the special nature of the programme studied in *Studies I, III and IV*, which differed from traditional faculty development activities. There was thus an interest in widening the perspective and exploring whether the experiences of the programme attendees were shared by educators in other contexts and situations. This interest informed

the design of *Study II*, collecting data across nations. As a whole, the present thesis includes the perspectives and experiences of clinical educators from different professions, workplaces, hospitals, universities and nations, which can be seen as a major strength.

The phenomena in focus in this thesis – change – posits challenges to anyone wanting to study it (Jones et al., 2017). Change is not an event or object that one can grasp; it involves complex processes that happen over time. Further, the focus was to specifically study change in relation to faculty development, although it can be reasonably assumed that clinical educators change their teaching practices even without taking part in faculty development initiatives. Therefore, as participants were asked to describe their experiences of working with change in relation to faculty development (*Study II*), it may have been difficult for them to discern changes prompted by faculty development and those prompted by experiences in the workplace, interactions with peers, or those that were top-down in nature. This relates to the issue of causality, which may be of greater interest in the context of evaluating the impact of programmes, which was not the aim of this thesis. Yet, the question of causality adds to the complexity involved in talking about faculty development and change with participants. A related problem is that of recall bias when people are asked about their experiences of working with changes which might have taken place months or years prior to the interview. Notwithstanding, time may have allowed for reflections and insights which might not have been possible if the interviews were performed in close proximity to a faculty development programme. In *Study III*, some of these issues, such as the abstract notion of change and recall bias, were (partly) circumvented by exploring the integration of tangible innovations developed within the setting of a specific programme.

On a related point, the programme serving as the case for *Studies I, III and IV* deserves some consideration. First, it differed from many traditional faculty development activities in its longitudinal design, focus on teams and the development and integration of innovations. As such, the insights gained from the programme may have limited applicability in other settings and situations. At the same time, the programme offered unique insights into processes of change (*Study III*) and the design of faculty development (*Study IV*), with the possibility to inform future faculty development. Second, three researchers involved in *Studies I, III and IV* were initiators of the programme and facilitated programme sessions. This may have created issues during the focus groups interviews due to power dynamics where participants might have refrained from sharing experiences or reflections that they believed would have reflected negatively on the programme. In efforts to reduce this risk, it was specifically noted before focus groups that the aim was not to evaluate participants and their work and that it was of interest to collect information on both negative and positive experiences. Furthermore, the analyses were performed in a group of researchers including individuals not involved in the programme.

Another aspect to consider relates to the literature drawn upon to frame the studies and interpret the findings. Specifically, there are vast bodies of literature, including those within the fields of organisation, management and psychology, which could have provided different

lenses and in-depth explorations of the notions of change, change agency and leadership. Also related to this, the present research did not look at mandate, agency and leadership from the perspective of power, which could have proved insightful in relation to the inherent power dynamics in healthcare settings and the clearly defined roles and professions within the communities of these settings. The fact that these perspectives were not considered is acknowledged as a limitation of the thesis, and such perspectives could have added theoretical grounding and another dimension especially in *Study II*, which was not anchored in activity theory.

As previously mentioned in the reflexivity section, throughout this research process, I have in some regards been an outsider, and in others an insider. What I did not address before were the potential differences between data collection in Sweden and South Africa (*Study II*). In Sweden, I am part of and understand the culture and context, while I was a stranger to the culture of South Africa. Both perspectives, those of the insider and the outsider, bring potential benefits and challenges. Although I have a good understanding of how things work in the Swedish context, it may also have contributed to taking things for granted. On the other hand, while being new to the South African context allowed me to openly explore participants' experiences, it may also have contributed to misunderstandings or not being sensitive to nuances. For this reason, and as previously mentioned, a researcher from the South African study site was included in the research group to allow for both insider and outsider perspectives during the data analysis. While the data from each site was initially analysed separately, the subsequent cross-case analysis identified striking similarities and minimal differences between the data sets. This is in itself an interesting finding, and the multi-institutional design of this study can be considered a particular strength of the thesis.

## **7.5 THEORETICAL CONSIDERATIONS**

An almost canonical story by now, is the one about a healthcare professional entering into the unknown field of educational and social science research and the challenges they experience in doing so: the mind-blowing clashes of worldviews (is there not one reality?), the unfamiliar language, terms and phrases (it's like they're speaking gibberish!), papers with such complex and complicated lines of thinking that they are almost impenetrable (I have to go get another cup of coffee...), the push to always relate everything to some more or less obscure theory (what's wrong with just simply describing the state of things?); the list can go on. I am not an exception, and like many others before me, I have traversed the deep valleys and high mountains of paradigms, theoretical frameworks, theories, qualitative methods, reflexivity and trustworthiness. There is especially one aspect that has been more challenging than others, namely, engaging with activity theory, and this relates to the main caveat I wish to address before considering other aspects of the use of activity theory in this thesis.

Activity theory has been advocated as a tool to explore a wide variety of research problems within education (Bligh & Flood, 2017; Engeström & Pyörälä, 2021; Varpio et al., 2017; Witkop et al., 2021). At the same time, it has been called esoteric because of the difficulties involved in explaining and summarising it (Bligh & Flood, 2017), and researchers have

cautioned against the ‘daunting task’ of applying the theory (Frambach et al., 2014). The theory is comprehensive in nature, and the basic unit of analysis (the activity system) rests upon complex notions of mediation, historicity, multivoicedness and contradictions (Engeström, 1987). These are demanding to identify and explore when studying one system and only increases in complexity as several activity systems are studied in interconnection. The theory involves developmental features through its expansive learning cycle and includes interventionist methodologies such as the Change Laboratory (Engeström, 2001; Skipper et al., 2021). Making sense of these founding principles requires researchers to engage in extensive theoretical readings of literature from other fields of research, again, entering unknown territory. While this is of course an enriching practice, it might prove challenging for researchers new to activity theory to go beyond the field of health professions education (or whichever their field) in their efforts to understand the theory, its basic tenets and how it may be applied to their context and problem. Moreover, what first catches the eye as one encounters activity theory is the triangular illustration of the activity system and its potential as a practical heuristic tool to explore individuals as part of systems and contexts. Yet, herein lies the danger. If one does not engage with those extensive readings just referred to, there is a risk of reductionistic fitting of data into the predefined elements of the system without taking notice of the underlying premises, thereby reducing the messiness and complexity of those real-life, social issues that are often studied in health professions education research. Such use of the activity system separately from the principles and theories upon which it builds has also been raised as a concern elsewhere (Bligh & Flood, 2017). In part, this risk of reductionistic and simplified application of the activity system may be decreasing in the face of growing use and awareness of activity theory within the field of health professions education, which has contributed to increasingly accessible literature and a developing community of activity theoretical scholars (e.g. Engeström & Pyörälä, 2021; Morris et al., 2021; Nisbet et al., 2021; Skipper et al., 2021; Witkop et al., 2021). This development may also assist with another issue which may prove challenging for those inclined to apply activity theory: the apparent lack of a prescribed methodology (unless the research has interventionistic intentions whereby the Change Laboratory can assist). Conversely, this lack of prescribed methodology may also be seen as an advantage in allowing researchers flexibility to design studies that fit their focus of inquiry.

Another rather interesting point that also concerns the all-encompassing nature of the theory is the potential difficulty of criticising it. A theory that offers a high level of abstraction through a focus on systems, while also including individuals and other components of those systems, does not only make it suitable for various purposes but can also make it difficult to assert when it does not fit the data or phenomenon under study. In fact, a study examining the use of activity theory in higher education concluded that only very few studies reviewed the limitations of using the theory (Bligh & Flood, 2017). While there may be many reasons for this, one may very well relate to activity theory’s all-encompassing perspective and the difficulties in understanding what is not seen using the theory.

However, during the use of activity theory in this thesis, potential limitations and causes for criticism surfaced. First, the interconnection between individuals and their context may be foregrounded at the expense of individual qualities such as personal motivation and values; thus, within the frame of this thesis, activity theory did not illuminate how such dimensions might have influenced development and change. Second, applying activity theory provided limited understanding of how the subjects interacted within their communities and how hierarchies might have influenced such interactions. Both of these aspects are limitations that other activity theoretical researchers have battled with (Bligh & Flood, 2017; Fanghanel, 2004). However, through the emphasis on contradictions, it was possible to illuminate hierarchies or priorities between activities, which proved useful in *Study I*. Third, activity theory has been critiqued for not offering tools to dissect individual agency and leadership and for neglecting issues of power including political and macro-social contexts (Bligh & Flood, 2017; Fanghanel, 2004; Martin & Peim, 2009). In partial agreement, I would recommend those aiming for an in-depth understanding of such issues to look elsewhere for explanatory and illuminating theories, as also noted previously. However, I would also propose that activity theory in fact not completely disregards the concept of agency but may rather conceptualise it differently. By focusing on individuals as parts of systems, agency may be understood in activity theoretical terms as a socio-cultural and collective construct that is negotiated between the individual and the activity system, and thus not something that resides only within the individual (Varpio et al., 2017). In the context of this thesis, which focused on faculty development and educational change and how change unfolds in social communities, such a perspective is considered a strength and it also aligns with findings from *Study II*, where activity theory was not applied to analyse data.

Lastly, a methodological consideration relating specifically to activity theory is that of data collection. While the theory was used to frame some research questions (*Studies I and III*) and interview guides (*Study I*), it was not used in the design of data collection in terms of deciding data sources and methods. As such, several potential sources of data that would have illuminated different aspects of the activity system were not explored. This includes tools such as worksheets, e-mails between teams and their workplace communities, other documents as well as observations or interviews with individuals other than the clinical educators to explore the system in greater detail. As of now, the findings are based entirely on the perspective of the subjects, which is acknowledged as a limitation in relation to the activity theoretical perspective applied.

Although the affordances of activity theory have been addressed throughout the discussion of the findings, it can be concluded that its use in this thesis contributed to a perspective on faculty development and educational change that went beyond cognitive notions of knowledge transfer where individuals' knowledge and actions are unrelated to context. Instead, it helped highlight the interactions between individuals and their social and cultural context and what happens when educational change unfolds in the clinical setting. In this regard, the concept of knotworking was especially helpful in recognising the workplace as participating and influencing the integration of innovations, depicting the workplace as

actively adapting the innovation rather than passively adopting it (*Study III*). Further, by emphasising contradictions between the activities of clinical settings (*Study I*), activity theory provided insights into the difficulties faced by clinical educators and how these shape their engagement in faculty development. It allowed a detailed exploration of the nature of these contradictions and, thus, offered insights into how one might begin to address them. By focusing on systems, it became evident that developing individual educators may not be sufficient and that there is also a need to address parts of the system, in a true activity theoretical spirit.



## 8 CONCLUSIONS

This thesis explored faculty development and educational change in clinical settings through an approach situated in activity theory and the socio-cultural tradition, focusing on the experiences of clinical educators. The following conclusions can be drawn from the findings and theoretical reasoning:

- The tension between the activities of education, research and clinical service implies that teaching is afforded a low value and priority within clinical settings and their communities. This challenges clinical educators' and clinical staffs' engagement in teaching and the development thereof, and implies that clinical educators experience limited opportunities to work with educational change beyond individual and administrative dimensions of teaching.
- Clinical educators' individual agency and approaches to change are shaped by social, cultural and organisational structures in their workplaces. As these structures reflect the tension between activities, they constrain individual educators' room for manoeuvre to work with change and development in teaching and learning within clinical settings. This alludes to the limitations with the widespread focus on individuals in current faculty development.
- Educational change is highly influenced by the context in which it unfolds, challenging the idea that faculty development can contribute with change in practice through linear and unidirectional transfer. Rather, this thesis suggests the concept of collaborative knotworking to illustrate the interactive and dynamic process of change in which both faculty development participants and their workplaces are actively engaged and where faculty development outputs as well as workplace practices are transformed.

In sum, this thesis suggests that the overreliance on individual approaches in faculty development may not be a tenable approach to developing teaching and learning in clinical settings and challenges the conceptual underpinnings emphasising the transfer of stable knowledge and skills. Instead, it argues that educational change is dynamic, interactive and bound to the context in which it takes place and that it is the social, cultural and organisational structures of that context that shape clinical educators' opportunities and approaches to change. Therefore, this thesis suggests that current faculty development may need rethinking if it is to tie the knot with educational change in clinical settings, and, in essence, if it is to enhance teaching in the health professions.

## **8.1 IMPLICATIONS FOR PRACTICE**

This thesis contributes with insights into educational change and faculty development, and it is my hope that these insights can be useful for a wide range of individuals: faculty developers designing and delivering activities, managers in clinical settings where teaching takes place, and clinical educators taking part in faculty development.

Regarding the practice of faculty development, this thesis offers some important insights into how current faculty development may be advanced in order to enhance its ability to contribute with change in clinical teaching practices. On a conceptual level, this includes moving beyond understandings of faculty development activities as means of content delivery to also viewing them as activities with the possibility to transform practice.

Relatedly, faculty development should be based on theories of change acknowledging change as complex, interactive and contextual, thus moving away from simplified notions of linearity and transfer. Further, it is essential that faculty developers understand the context in which participants work, including the structures influencing change and development efforts, so as to adequately support participants in developing teaching and learning in clinical settings.

On a practical level, the findings offer suggestions for faculty developers to design and offer activities that create opportunities for and stimulate educational change in practice. This includes incorporating content to intentionally build and develop change agency and educational leadership among participants, for example by addressing change theories and change management. Further, longitudinal programmes are recommended, targeting teams and focusing on inquiry-based approaches allowing innovation to address problems defined by participants.

Moreover, this thesis offers suggestions for policy and decision-making within clinical settings to support and facilitate the development of teaching and learning. This includes addressing the value and priority of teaching by establishing attractive and distinct career paths for clinical educators, creating incentives and increasing acknowledgement for engaging in developmental efforts, and working to strengthen the mandate of educational roles. Further, arenas for educational discussions and communities should be created and sustained in order to support collective learning and development within the workplace.

Finally, I hope that the insights into the complexities of working with educational change may offer reassurance to individual educators struggling to develop and improve the clinical education of our future healthcare professionals as well as afford them guidance and impetus for their work.

## 8.2 FUTURE RESEARCH

Several questions and ideas for future research have emerged during the work on this thesis, and I now present four major suggestions for further inquiry.

First, while this thesis offers some insights into change agency and educational leadership among clinical educators, these are important topics which render further exploration, for example, by more detailed studies with a thorough base in theories on agency, power and leadership. Here, one could explore both how individual teachers perceive and understand their agency, what they identify as influencing their agency and how they reason about exercising that agency. It would also be of interest to examine how this relates to other stakeholders' understanding of clinical teachers' agency, such as peers and managers.

Second, in line with the findings on the complex nature of change and the influence of context, it is suggested that research focusing on evaluating and measuring faculty development outcomes be complimented by research exploring how these outcomes are achieved, including what outcomes may not have been achieved and why. Such inquiries are recommended to be based in theories and frameworks that account for the complexity inherent to change rather than striving towards causal explanations. In this thesis, activity theory offered valuable insights into the interactions between individuals and systems, and I would suggest future studies that extend the use of activity theory. Other perspectives for consideration include realist reviews and complexity theory. While this thesis focused on change from a system perspective, it would be worthwhile to investigate change also from other perspectives such as exploring individual motivation and how it plays out in change work.

Third, future research could dive deeper into the practices of change by employing longitudinal and observational methods and by exploring the perspectives of other important stakeholders in change processes, such as managers or peers in the workplace. Investigating the understanding of change from the perspective of faculty developers would also be worthwhile, considering their role in designing and carrying out programmes and courses.

Fourth and finally, efforts to design faculty development activities that aim to contribute to change in practice, such as the programme in focus in this thesis, offer valuable research opportunities. Such initiatives may be studied using design-based research or action research methodologies. Specifically, the activity theoretical Change Laboratory could offer an approach to design, deliver and study future faculty development activities.



## 9 ACKNOWLEDGEMENTS

This thesis would not have been possible without support and encouragement from many others. I am forever grateful to everyone who contributed or took part in one way or another.

I wish to offer my deepest thank you to everyone participating in this research and for sharing your experiences with me. Without you, this thesis would not have been possible.

Klara Bolander Laksov, my main supervisor, words cannot express how grateful I am for your support and encouragement, for your care and for always being there. I cannot thank you enough for showing me the exciting and wonderful world of research, for everything that you have taught me and for allowing me to run free, always offering insights and guidance when needed. You are a true inspiration in all aspects of academia and life, and I could not have wished for a better supervisor and friend along this journey.

Erik Björck, my co-supervisor. Thank you for always being only one call away, for reminding me of the rules of academic writing, for your meticulous reading of texts and for never letting me publish a paper without a figure. I will carry this with me going forward. Thank you for showing me the world of clinical genetics and for encouraging me to also pursue my career as a physician. This has been immensely important to me.

Matilda Liljedahl, my co-supervisor. It was you who first opened the door to research and inspired and encouraged me to take the leap to do a PhD. For this, I cannot thank you enough. For your never-ending support in all aspects of life, for your thoughtfulness and inspiration, and for sharing all your knowledge with me, thank you. You are insightful, skilled, courageous and resolute, and for this, I admire you.

Juha Nieminen, my co-supervisor. I am forever grateful for your wit, joy, kindnesses, and innovative thoughts and insights. Thank you for believing in me all the way, and for always making me glad. Also, thanks for all the bad (read: amazing) titles about the Bermuda triangle and crashed marriages! (This goes for you too Erik!)

Julia Blitz, my co-author and supervisor at Stellenbosch University. I am forever grateful for your dedication, support and invaluable insights. Thank you for guiding me in unknown territory, and I am so glad that you are part of the work in this thesis.

A sincere thank you to my research group colleague and mentor, Cormac McGrath, for your important insights and encouragements along the way and for your critical, careful and very fast readings of my work.

Terese Stenfors, thank you for welcoming me into the research group, for your kind support during this process and for introducing me to the world of medical education.

Per Palmgren, my roommate and friend, thank you for your scholarly insights and inspiration, for your hands-on support and for always making our room smell good.

My dear friend Linda Sturesson Stabel, thank you for our writing dates, for honest feedback and warm support, for always being there in times of need and for the wonderful illustration on the front page of this thesis. I am so glad we got to share this journey.

A special thanks to Jan Östergren for valuable support, encouragement and advice as mentor during these years.

Special thanks to my research group friends – Zoe Säflund, Elizabeth Blum, Sivan Menczel, and Anna Bonnevier – for much appreciated discussions, support, good laughter and chocolate. For interesting and challenging discussions, for sharing knowledge and for offering feedback and support, I am grateful to all former and current research colleagues in medical education, Claire MacRae, Ralph McKinnon, Luke Woodham, Carina Georg, Javad Jafari, Karin Björklund, Malin Sellberg, Ani Henttonen, and all the rest taking part in the research seminars in medical education at LIME. Special thanks to Charlotte Silén and Klas Karlgren for being true inspirations and for your warm support. Thank you also to Max Scheja and the rest of the SHERN-group for much-appreciated discussions and feedback on my work.

Thank you to all colleagues at the Department of LIME, to Mats Brommels and Carl Johan Sundberg, former and current head of department, for support and cheering, and to Tomas Månsson and Ingrid Smedberg for invaluable guidance throughout the PhD process. Special thanks also go to Therese Wahlström for always helping with everything, and to Ludvig Andersson, Ludwig Berglund and Erik Attoff, for always helping with IT-‘things’.

To my friends, the LIME doctors and soon-to-be doctors – Filip Gedin, Olivia Ernstsson, Max Kleijberg, Mimmi Åström, Cecilia Dahlgren, Fanny Goude, Emma Granström, Marie Dahlberg and Anne Leppänen – thank you for being such good friends, for laughter and support. Special thanks to Filip for sharing the love of panerad fisk, and for the support during rough times, and to the running group for offering appreciated breaks from the desk.

My deepest gratitude to my extended research family at the Centre for Health Professions Education, Stellenbosch University. I cannot thank you enough for providing a nurturing and inspiring research environment and for all your support. Professor Susan van Schalkwyk, I am forever grateful to you for welcoming me into your research group and for taking such good care of me. Thank you for offering me the opportunity to work and do research in another context. I learned many lessons, which I will carry with me forever. Dr Alwyn Louw, my friend, mentor and guide, who is sadly no longer with us. My deepest thank you for your care and warmth, for always going the extra mile to ensure that I had everything I needed, and for all the smiles and laughter. You are truly missed. My roommates Kanita Brits and Darryl Pinetown, I had so much fun sharing a room with you guys, thank you for all the coffees and for taking such good care of me. Dene Marais, thank you for always lending kind help and support, and Dr Elize Archer, thank you for the bobotie recipe. My biggest thanks also go to everyone else not mentioned here. I miss you all very much!

Thank you to all colleagues in the Department of Clinical Genetics, Karolinska Universitetssjukhuset, for providing me with important insights into the practice of clinical work. Thank you to the former head of clinical department, Magnus Nordenskjöld, and the current head Maria Johansson Soller for the opportunity to pursue clinical work and research with such flexibility. Thanks also to my new clinical colleagues, 'AT-kollegor' Gosha Melnikov and Benny Wang, for being such great friends.

To my friend and colleague Caroline Olsson, one-third of the MM-group, thank you for good laughs, for inspiration and for our academic (and not so academic) discussions.

Yvonne Carlsson, my beloved friend, thank you for paving the way at Stellenbosch, for your encouragement in work and life and for your impeccable Amaretto sours. I miss you (and the sours)!

My dear friend and colleague Josefin Ivarson, I am so grateful for your support and cheering, and I am so glad that we share the interest of researching medical education. I look forward to seeing what the future holds for us.

Petra Roxå, although we were both disappointed about starting med school, we found common ground (literally the floor) on the first day at KI. In hindsight, that precise moment was crucial, and without you, this thesis would never have seen the light of day.

To my friends, Emma Danielsson, Lovisa Vildö, Jennifer Sandmark and André Jofré, for all the fun that we have together, thank you. I am so grateful to have you in my life. Now it's time to dance again!

Amanda Roos, thank you for always reminding me of the important things in life, for always being there despite the distance, and for serving me the best coffee when sitting at Rowena doing research. I miss you so very much.

My deepest gratitude and love for my family for always supporting me. Johannes, Henning och Felicia, tack för allt vi delar tillsammans och för all glädje ni ger mig. Alexandra, tack för att du är så påhittig och rolig, jag hoppas att du växer upp och gör det du vill i livet. Mamma och pappa, tack för er villkorslösa kärlek, för att ni stöttar och utmanar mig, och för att ni alltid uppmanat mig att göra det jag vill även om det känns svårt. Ni är min trygghet i livet. Min hund, min 'lilla' Pekka, tack för att du hållit mig sällskap under allt skrivande, och för att du tvingat mig att ta pauser.

Kai och Karin, tack för er generositet, för att ni alltid är nyfikna och positiva kring det jag gör, och för att ni alltid ställer upp.

Johan, min allra bästa Johan. Tack för allt du ger, för att du alltid stöttar och uppmanar mig att göra det jag vill, för ditt tålamod och din hjälp. Jag är så tacksam och glad över att det är just vi. Nu ska jag vila lite, sen ska jag hjälpa till med lägenheten!

*This work was financially supported by Karolinska Institutet, the Stockholm County Council (ALF) and the Swedish Society of Medicine.*





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